International REDD+ Standards and Financing:

Eligibility Requirements

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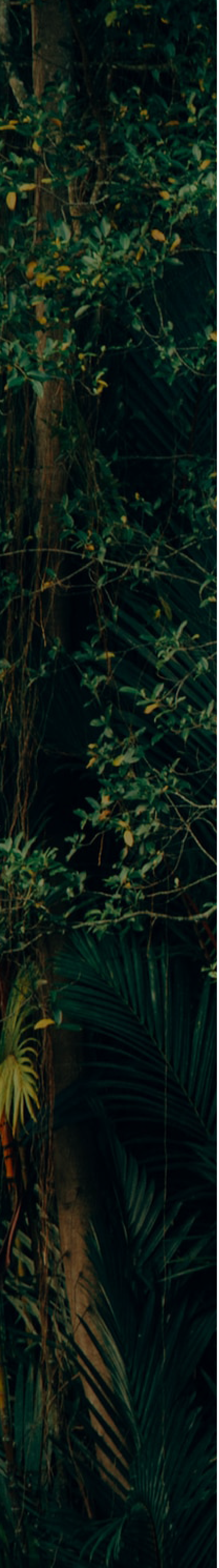
The Nature Conservancy

CONSERVATION INTERNATIONAL



Contents

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Front cover image: Palm trees, Singapore

Key Terms and Abbreviations

ART	Architecture for REDD+ Transactions
BMZ	German Federal Ministry for Economic Cooperation and Development
CA	Corresponding Adjustments
CDM	Clean Development Mechanism
CERF	Climate Emissions Reduction Facility
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
COP	Conference of the Parties to the UNFCCC
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
ER	Emission Reductions
ERPA	Emission Reductions Payment Agreement
ESS	Environmental and Social Safeguard
ETS	Emissions Trading System
FCPF	Forest Carbon Partnership Facility
FREL	Forest Reference Emission Level
FRL	Forest Reference Level
GCF	Green Climate Fund
GEF	Global Environment Fund
GHG	Greenhouse gas
GS	Gold Standard
HLFD	High Forest Low Deforestation
ICAO	International Civil Aviation Organization
IPCC	Intergovernmental Panel on Climate Change
ISFL	BioCarbon Fund Initiative for Sustainable Forest Landscapes
ITMOs	Internationally transferred mitigation outcomes
JCM	Joint Crediting Mechanism
JNR	Jurisdictional and Nested REDD+
MRV	Measurement, Reporting, and Verification
NDC	Nationally Determined Contribution
NGO	Non-governmental organization
ODA	Germany's Official Development Assistance
RBP	Results-based payment
REDD+	Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks
REM	REDD+ Early Movers Program
SIDS	Small Island Developing States
SIS	Safeguard Information System
TFS	California Tropical Forest Standard
TREES	The Environmental Excellence Standard
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	is the flagship UN knowledge and advisory partnership on forests and climate to reduce forest emissions and enhance forest carbon stocks
VCS	Verified Carbon Standard

Executive Summary

This paper aims to provide a summary of existing opportunities for REDD+ finance, specifically for result-based payments. Financial opportunities for result-based payments are often linked to specific methodological standards. This paper provides an overview of these standards as well.

In addition, the paper seeks to provide a general overview of how REDD+ finance may flow when different spatial scales of implementation are considered. For this purpose, we elaborate on the concept of nesting as a potential technical solution to harmonize carbon accounting, benefits sharing and crediting across spatial scales.

Further, to facilitate information exchange on these topics, we introduce the International REDD+ Finance and Standards Tool[1], a website to centralize information about financial opportunities and REDD+ standards and to provide tools to further understand REDD+ standards. This tool was developed by Conservation International, The Nature Conservancy and the United States Forest Service in 2022 with funding from the United States Department of State and United States Agency for International Development.

We acknowledge that the REDD+ finance landscape is varied and constantly evolving, especially now with the adoption of the rules and guidelines for Article 6 of the Paris Agreement. In this context we aim to facilitate access to information to jurisdictions, the private sector, and the general public on these matters.

Please visit the International REDD+ Finance and Standards Tool for more information.

The financial opportunities assessed were[2]:

- BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL) - *funds fully committed*
- Forest Carbon Partnership Facility at the World Bank (FCPF) - *funds fully committed*
- Green Climate Fund – Results-Based Payments for REDD+ Pilot Program (GCF) - *funds fully committed*
- Joint Crediting Mechanism (JCM)
- LEAF Coalition
- REDD+ Early Movers (REM) - *funds fully committed*
- Airlines under CORSIA
- Voluntary Carbon Market (VCM)

The REDD+ standards assessed were:

- FCPF Carbon Fund Methodological Framework[3]
- Green Climate Fund's REDD+ Result-Based Payments Request for Proposals Pilot Program
- The REDD+ Environmental Excellence Standard by ART
- Tropical Forest Standard
- UNFCCC REDD+ Framework
- Verra's Verified Carbon Standard – Project Scale Methodologies for REDD+
- Verra's Jurisdictional and Nested REDD+

Disclaimer 1: footnote for the word "Standards" in the title: Term "Standards": We use the term "standards" as an umbrella concept encompassing methodological frameworks, guidance and/or requirements, as well as REDD+ programs or frameworks. We acknowledge that the term "standard" is often used to refer to rules or methodological requirements leading to the generation of carbon credits for market purposes. Our definition of "standard" is much broader and generally indicates any set of rules defined by REDD+ programs, initiatives or frameworks that leads to the estimation, review, and verification of GHG emission reductions, removals, as well as additional accounting rules, safeguards and other programmatic elements.

Disclaimer 2: footnote for the term "UNFCCC REDD+ Framework": COP decisions for REDD+ outline the rules and requirements for the voluntary participation of developing countries for obtaining result-based payments without the need to transfer title, i.e. rights to the REDD+ results achieved. We assume, in all cases, that the UNFCCC REDD+ Framework sets out a non-market framework for REDD+, exclusively. For this purpose, we refer to paragraph 66, in decision 9/CP.19, which states that the COP "Considers that, in the light of the experience gained from current and future demonstration activities, appropriate market-based approaches could be developed by the Conference of the Parties to support the results-based actions by developing country Parties referred to in decision 1/CP.16, paragraph 73, ensuring that environmental integrity is preserved, that the provisions of decision 1/CP.16, appendices I and II, are fully respected, and should be consistent with the relevant provisions of decisions 1/CP.16 and 12/CP.17 and any future decision by the Conference of the Parties on these matters;".

Palm leaves, Singapore

Overview of REDD+

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Overview of REDD+

WHAT IS REDD+?

In order to meet the Paris Agreement goals global emissions need to effectively halve by 2030. Addressing tropical forest emissions will be critical to achieving this target. REDD+[4] is a framework for protecting, conserving, restoring and sustainably managing forest ecosystems in developing countries by valuing their carbon sequestration and storage, as well as other social and environmental benefits. The REDD+ framework was created under the United Nations Framework Convention on Climate Change (UNFCCC) and applies to all types of forests, including mangroves, if they are recognized in a country's definition of a "forest."

REDD+ was enshrined in Article 5 of the Paris Agreement, which expressly encourages Parties to take action to implement and support policy approaches and positive incentives for activities relating to REDD+. This short but impactful article is the only article of the Paris Agreement dedicated to a specific sector, demonstrating the political significance of forests and other ecosystems in addressing climate change. This recognition builds on previous agreement by negotiators around the role and rules of REDD+, laid out in the Warsaw Framework, which established requirements and guidance for results-based payments to national and interim[5] subnational-scale REDD+ efforts, noting that REDD+ action must occur with "adequate and predictable support" to developing countries.

EVOLUTION OF REDD+

For most of the past decade, and before the adoption of the Paris Agreement, developing countries prepared to participate in the REDD+ framework (i.e. readiness) under the UNFCCC. REDD+ finance was restricted to public finance channeled through bilateral agreements (e.g. Amazon Fund, REDD+ Early Movers Program). With the adoption of the Paris Agreement, the landscape has been shifting considerably, especially after COP26 in Glasgow where countries agreed on rules and guidelines for Article 6 of the Paris Agreement (see Box 1 for more information on Article 6).

The adoption of the Paris Agreement triggered the preparation and submission of NDCs, including nationally-determined mitigation targets. This has led to discussions on whether REDD+ results and mitigation outcomes through the market mechanisms under the Paris Agreement (see Box 1 for a description of Article 6) and other multilateral funds may be used for compliance of national goals if transacted. At the same time, the number of private companies and organizations pledging net-zero strategies has increased exponentially. This resulted in an increased interest in offsetting carbon footprints, elevating the demand for carbon credits in the Voluntary Carbon Market[6] (VCM). Due to all of these circumstances, the landscape in which REDD+ functions has gained tremendous complexity.

THREE PHASES OF REDD+

The COP defined three phases for REDD+ (Figure 1), which are also useful to understand REDD+ financing and the role of REDD+ standards in the context of national and sub-national result-based payments. This conceptual framework, however, is not directly applicable to project-based REDD+ for the VCM. These projects have their own project cycle, as defined by the specific carbon-crediting program.

PHASE 1:
Development of National Strategies or Action Plans, Policies and Measures (i.e. REDD+ readiness).

→

PHASE 2:
Implementation of National Strategies or Action Plans, Policies and Measures.

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PHASE 3:
Results-based activities, evolving into Result-based Actions that are fully Measured, Reported and Verified.

Figure 1 - Phases of REDD+ as set out in paragraph 73, decision 1/CP.16.

Waterfall, Batang, Central Java, Indonesia

PHASE 1:

is commonly referred to as "REDD+ readiness" as it includes preparatory activities and arrangements prior to implementing actions. Finance for REDD+ readiness focuses on supporting capacity building for the development of National Strategies or Action Plans, Forest Reference Levels [7], Forest Monitoring Systems and Safeguards Information Systems, as well as other technological infrastructure to track and register REDD+ results. In many countries, REDD+ readiness has taken longer than expected and is still ongoing due to the scale and complexity of issues such as clarifying land ownership, implementing robust safeguards, and setting up land use monitoring systems. Examples of REDD+ finance for readiness include the FCPF's Readiness Fund and the UN-REDD Programme, among others.

PHASE 2:

is the realization of REDD+ at a national or, in the interim, sub-national scale. Historically, national and sub-national governments, jointly referred to as "jurisdictions", often implemented policies and measures for REDD+ (phase 2) while simultaneously receiving funding and technical support for readiness (phase 1). Finance for phase 2 is scarce considering the full scale of National REDD+ Strategies or Action Plans needing financial support, including a wide range of policies and measures to be implemented over large extents of territory. Limited international funding is available through the Green Climate Fund (GCF), the Forest Investment Program (FIP), and the Global Environment Facility (GEF), as well as more specific programs by multilateral funds and inter-governmental bodies.

PHASE 3:

is when developing countries obtain result-based payments for their emission reductions and removals – if these are fully measured, reported and verified (MRV). However, there is no one-stop shop for such payments. Instead, countries may access a variety of market and non-market sources at various prices and conditions (not all of which are guaranteed)[8]. As payments for REDD+ are not guaranteed for any country, many countries and jurisdictions seek to identify and secure commitments for non-market or market-based payments before generating REDD+ results. To date (October 2022), 14 countries have reported REDD+ results to the UNFCCC[9], yet, only 7 have received result-based payments (Table 1)[10]. This only reflects countries reporting results to the UNFCCC through technical annexes as part of biennial update reports (BURs). Country participation in other programs, markets or bilateral agreements may not have been reported to the UNFCCC platform. This includes, for example, Costa Rica and Mozambique, which have received payments from the FCPF, or Gabon through an agreement with Norway.

Table 1 - REDD+ readiness and result-based payments in developing countries, as reported in the UNFCCC's Lima Information Hub.

Country	National REDD+ Strategy	Safeguards Information Summary	Technically Assessed Forest Reference Level	Technically Assessed BUR with REDD+ Results	Result-Based Payments Received	Financial Sources
Argentina	•	•	•	•	•	GCF
Bangladesh			•			
Belize			•			
Benin						
Bhutan			•			
Brazil	•	•	•	•	•	GCF, others[11]
Burkina Faso			•			
Cambodia	•	•	•	•		
Central African Republic						
Chad						
Chile	•	•	•	•	•	GCF
Colombia	•	•	•	•	•	GCF, others[12]
Congo			•			
Costa Rica	•	•	•	•	•	GCF
Côte d'Ivoire		•	•			
Cuba						
Democratic Republic of Congo		•	•			
Dominica						
Dominican Republic			•			
Ecuador	•	•	•	•	•	GCF
El Salvador			•			
Equatorial Guinea			•			
Ethiopia			•			
Gabon		•	•			
Ghana		•	•			
Guatemala						
Guinea-Bissau			•			
Guyana		•	•			
Honduras			•			
India	•		•			
Indonesia	•	•	•	•	•	GCF
Kenya			•			
Lao People's Democratic Republic	•	•	•	•		
Liberia			•			
Madagascar			•			
Malawi			•			
Malaysia	•	•	•	•		
Mali						
Mexico	•	•	•	•		
Mongolia			•			
Mozambique	•		•			
Myanmar		•	•			
Namibia						
Nepal			•			
Nicaragua			•			
Nigeria			•			
Pakistan			•			
Panama			•			
Papua New Guinea	•	•	•	•		
Paraguay	•	•	•	•		
Peru		•	•			
Saint Lucia			•			
Solomon Islands			•			
Sri Lanka			•			
Sudan			•			
Suriname	•	•	•			
Thailand			•			
Togo			•			
Uganda		•	•	•		
United Republic of Tanzania			•			
Uruguay						
Vanuatu						
Viet Nam		•	•			
Zambia			•			

Source *- Lima Information Hub checked on October, 2022. Countries in bold text have received result-based payments.*

Opportunities for REDD+ finance

Termas Geométricas, Coñaripe, Panguipulli, Chile

Opportunities for REDD+ finance

REDD+ became operational with the adoption of the Warsaw Framework at the UNFCCC. Following these COP decisions, and after "readiness" preparations, some countries and subnational jurisdictions were able to access non-market result-based payments through bilateral agreements (e.g. with the Government of Norway) or through the GCF. This type of non-market approach is similar to a philanthropic or donation-based model, where countries or sub-national jurisdictions receive payments without having to transfer titles to their REDD+ results.

Overall, non-market funding for REDD+ result-based payments has been very limited in relation to the REDD+ results achieved by developing countries. For example, the GCF committed 500 million USD as part of its first request for proposals in 2018 and has not replenished this fund since 2020, when the fund was fully depleted. A few programs outside the UNFCCC provided non-market result-based payments, e.g. Norway's International Climate and Forest Initiative (NICFI) through the Amazon Fund (and others) and the REDD+ Early Movers financed by the German Government. Overall, these financial sources amounted to only a few billion USD altogether.

Considering the limitations in funding through the GCF and bilateral agreements, there has been widespread interest in developing new financial opportunities for REDD+ through multilateral funds and private sector investments.

NEW FINANCIAL OPPORTUNITIES FOR REDD+

The Paris Agreement recognizes the need for "adequate and predictable financial support"[13], particularly for tropical forests[14]. However, it does not define the vehicle for delivering this finance to developing countries. In light of this, developing countries have expressed an interest in assessing all potential sources of finance, including financial opportunities[15] that operate outside of the Paris Agreement:

- BioCarbon Fund[16] - *fund fully committed*
- Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)
- FCPF Carbon Fund - *fund fully committed*
- Green Climate Fund REDD+ Result-Based Payments Pilot Program - *fund fully committed*
- Joint Crediting Mechanism (JCM)
- REDD+ Early Movers Program (REM) - *fund fully committed*
- The LEAF Coalition
- Voluntary Carbon Market[17] (VCM)

Forest, Kyoto, Japan

With the exception of the Green Climate Fund (GCF), these financial opportunities require the creation of a unit or carbon credit, based on legal ownership of the REDD+ results. Depending on the financial opportunity and its rules and objectives, these credits are later transacted or canceled/retired by one or both parties involved.

Another vehicle for forest finance may be the market- or non-market-based international cooperation under Article 6 (Box 1). Yet, the rules and requirements for participating in Article 6 are currently being defined and it will take some time for these mechanisms to become fully operational.

BOX 1 — Article 6 of the Paris Agreement.

In November 2021 in Glasgow, the COP agreed on the rules for Article 6, paragraphs 2, 4 and 8, which set out a global framework for market and non-market mechanisms for mitigation and sustainable development, with the aim to help countries achieve their NDCs:

Article 6.2 provides an overarching framework for countries to create and transfer mitigation outcomes[18] through bilateral and multilateral agreements, as well as provisions for safeguards, ensuring environmental integrity, reporting and accounting. Rules for Article 6.2 apply to Article 6.4 as well when mitigation outcomes are internationally transferred.

Article 6.4 creates a mechanism for mitigation and sustainable development, centralized at the United Nations. This is analogous and is meant to help transition out the mechanism established under the Kyoto Protocol known as the Clean Development Mechanism (CDM).

Article 6.8 covers avenues for cooperating without international transfers, known as "non-market approaches". These approaches cover technical support, capacity building, and result-based payments, among others, that do not require the transfer of legal titles to carbon credits.

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BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)

The BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL) is supported by donor governments and managed by the World Bank. The ISFL includes REDD+ efforts but also sustainable agriculture and land-use planning policies and practices.

The ISFL currently supports programs in Colombia, Ethiopia, Indonesia, Mexico, and Zambia, typically at a sub-national level. The ISFL is already fully commited so no new countries will be accepted. Private sector engagement is encouraged, however, instead of seeking private sector investors in carbon credits, ISFL has chosen to partner with select private sector companies that work in these regions. The focus is on greening their supply chains and policies, instead of focused on offsetting. The ISFL has a 232.6 million USD pledge for delivering results-based finance through the purchase of verified emission reductions, as well as to incentivize countries to shift toward sustainable development trajectories.

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PRICING The price per ton[19] is yet to be determined. A case-by-case discussion on price may be needed when the price makes a significant difference to the viability of a program. Other indicators will also be referred to, such as prices in the VCM or in other carbon funds.[20]

Forest Carbon Partnership Facility (FCPF) Carbon Fund

The FCPF was created as a public-private partnership that includes both market and non-market finance. Tranche B, comprising approximately 95% of the financial contributions, consists solely of public donors that have agreed to retransfer credits back to REDD+ host countries. These credits will not be sold on the market but may be used for REDD+ host countries' NDC compliance. Around 5% of the total FCPF contributions (~47 million USD) come from Tranche A, which consists of public, private and non-profit donors who may use credits as they wish, including for market purposes.

After launching in 2008, 15 countries[21] have signed Emission Reduction Payment Agreements (ERPAs) with the World Bank for a total contract value of 774.9 million USD. The FCPF reached an important milestone in 2021 with the first ever payments for jurisdictional REDD+ credits taking place, after more than a decade of supporting countries on REDD+ readiness. Until October 2022, only Mozambique and Costa Rica had received payments but all 15 Carbon Fund countries should received until 2025 when it sunsets. Each ERPA outlines commercial terms for the sale of credits between the World Bank and the REDD+ country once results are verified.

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PRICING The FCPF has a fixed price of $5 USD per ton. If countries generate additional REDD+ results that go beyond the agreed contract volume, the World Bank can choose to buy these additional credits ("call options") in some cases for USD 6 USD per ton (or to be negotiated at a later date). If the World Bank does not exercise these "call options", the host country may opt to transact these credits with a third-party.

Green Climate Fund – Results-Based Payments for REDD+ Pilot Program

Established in 2017, with a budget of $500 million USD, the GCF's Pilot Program for REDD+ has provided results-based payments for verified results generated between 2013 and 2018. The objective of this pilot program was to operationalize REDD+ results-based payments and to gather experience to further improve the procedural and technical elements of result-based payments using the Green Climate Fund's resources in the learning stage. The first finance window ran from October 2017 until the last meeting of the Board in 2022.

To date, the GCF has approved payments for Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Indonesia and Paraguay[22]. The GCF is a non-market mechanism, as the GCF does not require host countries to transfer the legal title to the REDD+ results. This allows for host countries to use them toward the achievement of their NDCs. Although the pilot phase ran from 2017 to 2022, funding for this pilot phase was exhausted by the end of 2020. The Green Climate Fund is now considering a second round of funding.

PRICING A maximum value of $5 USD per ton, that could be lower based on the results of the GCF Scorecards.

Joint Crediting Mechanism

Japan's Joint Crediting Mechanism (JCM) is a series of bilateral agreements between Japan and individual countries (now 21 countries) to reduce emissions. The mechanism requires a Japanese company to invest in the mitigation activity, a host-country project proponent, and an agreement and investment from both Japan and the host country. Credits are then split between the host country and Japan. In coordination with the government of Japan, host countries develop methodologies specific to each country and sector.

PRICING To be agreed by the Joint Committee formed by the government of Japan and the host country.

LEAF Coalition

The LEAF Coalition is a public-private partnership, administered by Emergent[23], that aims to channel finance for jurisdictional REDD+ from approved standards (currently, ART-TREES is the only approved standard). In 2021, the Coalition mobilized over 1 billion USD in financing through a mixture of commitments from the governments of Norway, the UK, the US, and private sector companies (e.g. Amazon, Salesforce, Delta, Airbnb, etc.). The LEAF Coalition has submission windows for interested jurisdictions to apply. In 2022, the Coalition launched its second submission window for expressions of interest (the "Second Proposal Window") through September 15, 2022.

Unlike previous REDD+ funds, which selected countries mostly based on their technical capacity and political will to engage, LEAF also requires a minimum interest from corporate buyers to select jurisdictions for its pipeline. Corporate buyers review and signal what jurisdictions they would be willing to buy credits from, adding a new selection criterion.

PRICING LEAF guarantees a floor price of $10 USD per ton, however, based on demand within the Coalition corporate buyers can offer to pay a higher price.

REDD+ Early Movers (REM)

The German Official Development Assistance (ODA) established the REDD+ Early Movers (REM) program in 2011 to provide results-based payments to the following select countries and sub-national jurisdictions: in Colombia, Ecuador, and the Brazilian states of Acre and Mato Grosso. More recently, the governments of Germany, Norway and the UK – the "GNU" – have formed a partnership to address deforestation and promote forest restoration. The GNU governments have issued several joint statements to support ambitious and credible action in the context of REDD+. The REM program is among several important instruments the GNU will use to deliver on its intentions to scale up financial support for REDD+.[24]

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PRICING The Program rewards emission reductions at a value of $5 USD per ton.

Airlines under CORSIA

In March 2020, the United Nations' International Civil Aviation Organization (ICAO) agreed to adopt the first set of carbon offset standards deemed eligible for airlines to purchase in meeting their climate goals, under their Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). In November 2020, ICAO adopted two REDD+ standards: Verra's Jurisdictional and Nested REDD+ (Scenarios 2a and 3) and ART-TREES. REDD+ credits from these two standards are now eligible for airlines to purchase in meeting their climate goals. This decision made CORSIA the first global market to accept REDD+ credits.

CORSIA is implemented in three phases: a pilot phase (2021-2023), a first phase (2024-2026), and a second phase (2027-2035). For the first two phases (2021-2026), participation is voluntary. From 2027 onwards, participation will be determined based on 2018 revenue ton kilometer (RTK) data. In terms of participating host countries, a total of 107 States will participate in CORSIA from 1 january 2022.

Note: with exceptions for micro-scale REDD+ projects generating fewer than 7,000 tCO_2e per year, only credits from jurisdictional REDD+ programs are eligible under CORSIA. The FCPF has also applied for recognition under CORSIA and is awaiting resolution by December 2022.

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PRICING Pricing is market-based, meaning it is dynamic. According to Ecosystem Marketplace, in 2021 the weighted average price was $11.76 USD/$tCO_2e$ for forestry and land use credits eligible for CORSIA.[25]

Voluntary Carbon Market (VCM)

REDD+ projects have produced the biggest share of credits in the VCM, representing 74% of the global voluntary market credits[26]. Most of these come from Verra's VCS standard. Currently, there are no globally agreed rules governing the VCM or how it will interact with other markets (such as those created domestically or via Article 6). As countries begin to explore how to meet their NDCs, there may be additional guidance regarding how investments meeting voluntary commitments are accounted for, claimed, and treated at the national level.

Additionally, there are evolving norms around best practice in the VCM, many driven by international initiatives and working groups. At the moment, there is no single set of guidance around the appropriate role of the private sector in purchasing voluntary credits or those developed by countries, but this may evolve over time. Informal guidance includes the Tropical Forest Credit Integrity initiative and the Integrity Council for the Voluntary Carbon Market (IC-VCM).

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PRICING Prices in the VCM climbed in 2021 by nearly 60% over 2020, reaching an annual global weighted average price per ton of 4.00 USD for all transactions reported by Ecosystem Marketplace Respondents.

Termas Geométricas, Coñaripe, Panguipulli, Chile

REDD+ Standards

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REDD+ Standards

Financial opportunities for REDD+ require jurisdictions to apply a specific set of rules included in methodological frameworks, process guidelines, templates and/or other forms of guidance, collectively known as “standards”.

Standards vary in their rules and requirements, but they all aim to ensure a certain quality of the REDD+ results. Most standards take inspiration from the UNFCCC’s REDD+ Framework, but all of them (even the Green Climate Fund) have added additional requirements, resulting in a diversity of standards and methodological rules across financial opportunities. This presents a challenge for jurisdictions trying to coordinate support at different levels of implementation.

Financial Opportunities	Eligible Standard(s)
BioCarbon Fund - *fund fully committed*	• ISFL Emission Reductions (ER) Program Requirements • ISFL Process Requirements[27]
CORSIA	• ART-TREES • Verra JNR Scenarios 2a or 3 • Verra VCS (limited)
FCPF Carbon Fund - *fund fully committed*	• FCPF Program or Standard
Green Climate Fund REDD+ RBP Pilot Program - *fund fully committed*	• UNFCCC REDD+ Framework along with GCF’s Board Decision B.18/07
Joint Crediting Mechanism	• Joint Crediting Mechanism’s guidelines and methodologies approved by the Joint Committee[28]
REDD+ Early Movers Program - *fund fully committed*	• As agreed by participating Parties
The LEAF Coalition	• ART-TREES
Voluntary Carbon Market	• ART-TREES • Verra VCS • Verra JNR • Others

UNFCCC REDD+ FRAMEWORK

With the adoption of the Warsaw Framework, the UNFCCC's Conference of the Parties (COP) set out the rules and guidelines for REDD+ result-based payments under the UNFCCC. These rules are contained throughout relevant COP decisions, including basic requirements for reference levels, reporting of REDD+ results, safeguards, and technical assessment procedures.

The COP did not agree on a stand-alone methodology for REDD+, however, the collection of relevant decisions, including rules and requirements, define a framework measuring, reporting, verifying REDD+ results and receiving result-based payments.

More specifically, throughout COP decisions, Parties are encouraged to use the guidelines and guidance from the IPCC when estimating emissions and removals. Further, the COP requests that Parties' REDD+ methods are consistent with the country's national GHG inventory, including its forest definition.

The following REDD+ standards are all inspired by COP decisions for REDD+, although they have added different rules and requirements.

Secretariat:	Program Launch Date:	Standard:	Who can generate REDD+ results:	Barriers to new participation:	Types of Finance:
UNFCCC Secretariat	2016, with the adoption of the Warsaw Framework.	Relevant COP decisions: 2/CP.13, 4/CP.15, 1/CP.16, 2/CP.17, 12/CP.17, 1/CP.18, 9-15/CP.19	National and sub-national governments (interim basis).	Open for participation, however, funding is usually channeled through the GCF.	Non-market.

FCPF CARBON FUND PROGRAM

The FCPF Carbon Fund created a normative framework for REDD+ result-based payments, including:

- FCPF Methodological Framework (updated on April 2020)
- Buffer Guidelines
- Guidelines on the application of the Methodological Framework
- Process Guidelines
- Validation and Verification Guidelines
- FCPF Glossary of Terms

The FCPF Carbon Fund also provides guidance on benefit sharing, ability to transfer REDD+ results, financing emission reduction plans, disclosing information, accounting of legacy emissions and removals, and estimating uncertainty using Monte Carlo simulations. Further, the Carbon Fund includes templates for preparing the Emission Reduction Program Document, Emission Reduction Monitoring Report, Technical Assessment Report, Validation/Verification Report, ER-Program Idea Note, ERPA General Terms and Conditions and ERPA Commercial Terms.

Secretariat:	Program Launch Date:	Standard:	Who can generate REDD+ results:	Barriers to new participation:	Types of Finance:
Facility Management Team (FMT)	2008	FCPF Carbon Fund Program or Standard (including the guidelines listed above).	National governments or subnational jurisdictions (geographical scale criteria apply).	Funds committed.	Market (Tranche A); non-market (Tranche B). Any excess REDD+ results may be sold to Third-Party Buyers.

GCF'S REDD+ RESULT-BASED PAYMENTS REQUEST FOR PROPOSALS (RFP) PILOT PROGRAM

The methodological and programmatic rules of the GCF's REDD+ pilot program are included in the Terms of Reference for the pilot program for REDD+ result-based payments. The terms of reference include eligibility criteria, modalities and scope, the process for approving proposals, monitoring and progress control and lessons learned. The size of funding and allocation of payments, i.e. the volume of REDD+ results offered, is calculated based on the total score achieved according to the GCF Scorecards. There is one scorecard for the Concept Note phase and another one for assessing the Funding Proposal. The scorecards include elements related to eligibility, carbon elements (reference level and reporting), non-carbon elements (safeguards, use of proceeds, and non-carbon benefits), the GCF Investment Framework and GCF Policies.

Secretariat:	Program Launch Date:	Standard:	Who can generate REDD+ results:	Barriers to new participation:	Types of Finance:
Green Climate Fund Secretariat	2017	GCF Board Decision B.18/07	National governments, or subnational jurisdictions (interim basis).	Funds committed. Replenishment pending on new board decision.	Non-market, i.e. the ownership of the REDD+ results is not transferred to the GCF.

THE REDD+ ENVIRONMENTAL EXCELLENCE STANDARD (TREES)

The purpose of the Architecture for REDD+ Transactions (ART) is to promote the environmental and social integrity and ambition of GHG emission reductions and removals from the forest and land use sector to catalyze new, large-scale finance for REDD+ and to recognize forest countries that deliver high-quality REDD+ emissions reductions and removals. The TREES standard provides countries and eligible subnational jurisdictions requirements for accounting and crediting, monitoring, reporting, independent verification, mitigation of leakage and reversal risks, avoidance of double-counting, assurance of robust environmental and social safeguards, and issuance of serialized units on a public registry. The latest version of the standard is TREES 2.0, approved in August 2021, which includes provisions for High Forest Cover, Low Deforestation (HFLD) and enhancing carbon removals. Besides the main standard document, the ART secretariat also has available the following resources:

- TREES Registration Document Template 2.0
- TREES Calculation Template
- TREES Variance Request Form 2.0
- TREES Monitoring Report Template 2.0 (including safeguards monitoring report template)
- TREES Safeguards Cross Reference Table
- TREES Validation and Verification Standard
- TREES Validation Report Template
- TREES Verification Report Template
- TREES Verification Statement Template

TREES also includes guidance for conducting Monte Carlo simulations and implementing safeguards, as well as detailed guidance for opening and managing an ART Registry account.

Secretariat:	Program Launch Date:	Standard:	Who can generate REDD+ results:	Barriers to new participation:	Types of Finance:
Architecture for REDD+ Transactions (ART) Secretariat	2018	TREES 2.0 (August, 2021)	National governments or subnational jurisdictions.	Open for participation.	The standard is eligible for multiple financial sources, some which require title transfer (market-based)[29]

TROPICAL FOREST STANDARD

The purpose of the Tropical Forest Standard by the California Air Resources Board, approved through Board Resolution 19-21, is to establish robust criteria against which to assess jurisdictions seeking to link their sector-based crediting programs that reduce emissions from tropical deforestation with an emissions trading system (ETS), such as California's Cap-and-Trade Program (although approval of eligibility is still pending by the Government of California). The standard builds on existing norms and requirements from the Intergovernmental Panel on Climate Change (IPCC), the UNFCCC, and other international bodies such as the World Bank's Forest Carbon Partnership Facility Carbon Fund, previous staff work evaluating recommendations from the REDD+ Offset Working Group (ARB 2015a; ROW 2013), voluntary carbon market organizations, and efforts from within member states and provinces of the Governors' Climate and Forests (GCF) Task Force.

The Tropical Forest Standard Includes 16 chapters outlining the rules and guidance on Applicability, the Sector Plan, Reference Levels, Crediting Periods, Crediting Baseline, Leakage, Monitoring and Reporting, Third-Party Verification, Social and Environmental Safeguards, Permanence and Reversal Risk, Enforcement, Registry and Public Access, Schedule for Updates, Nested Projects, and Recognition Process for Transitioning Sector-Based Offset Credits.

Secretariat:	Program Launch Date:	Standard:	Who can generate REDD+ results:	Barriers to new participation:	Types of Finance:
California Air Resources Board, State of California	2019	Tropical Forest Standard (September 19, 2019).	National governments or subnational jurisdictions.	Open for participation.	The Standard aims to create carbon offsets for emissions trading systems (i.e. market- based).

VERRA'S JURISDICTIONAL AND NESTED REDD+

Verra's Jurisdictional and Nested REDD+ (JNR) Framework provides a structure for developing jurisdictional REDD+ programs that integrate (or "nest") projects to facilitate private investment in REDD+ at multiple scales, with the purpose of engaging the private sector, while linking to national efforts, as well as providing emission reductions to emerging compliance and voluntary markets. The standard includes the following documentation:

- The JNR Program Guide, v 4.0
- JNR Scenario 1 Requirements, v 4.0
- JNR Scenario 2 Requirements, v 4.0
- JNR Scenario 3 Requirements, v 4.0
- The JNR Validation and Verification Process, v 4.0
- The JNR Registration and Issuance Process, v 4.0
- The JNR Non-Permanence Risk Tool, v 4.0
- The JNR Allocation Tool, including Guidance, v 4.0

Besides these, the JNR includes a series of templates for the program description, baselines, monitoring reports, validation reports, non-permanence risk report, program listing representation (single and multiple jurisdictional programs), reference level listing representation (single and multiple jurisdictional programs), program validation representation, reference level validation representation, program registration representation (single and multiple jurisdictional programs), program verification representation, program issuance representation (single and multiple jurisdictional programs), among other additional resources available through Verra's website.

Secretariat:	Program Launch Date:	Standard:	Who can generate REDD+ results:	Barriers to new participation:	Types of Finance:
Verra	2012	Jurisdictional Nested REDD+ Framework (v 4.0)	National governments, sub-national jurisdictions, and nested projects.	Open for participation.	The standard creates carbon credits that can be used for market or non-market purposes.[30]

VERRA'S VERIFIED CARBON STANDARD – PROJECT SCALE METHODOLOGIES FOR REDD+

VCS's methodologies for REDD+ set out detailed procedures for quantifying GHG benefits of a project and provide guidance to help project developers determine project boundaries, set baselines, assess additionality and ultimately quantify the GHG emissions that were reduced or removed. The following methodologies are relevant to REDD+:

- VM0006 Carbon Accounting for Mosaic and Landscape-scale REDD Projects, v2.2
- VM0007 REDD+ Methodology Framework (REDD+MF), v1.6
- VM0009 Avoided Ecosystem Conversion, v3.0
- VM0015 Avoided Unplanned Deforestation, v1.1
- VM0037 Implementation of REDD+ Activities in Landscapes Affected by Mosaic Deforestation and Degradation, v1.0

On March 31, 2022, Verra initiated a public consultation on proposed changes to the requirements and tools related to Avoiding Unplanned Deforestation and Degradation (AUDD), with the objective of consolidating a REDD+ methodology in line with the jurisdictional, nested REDD+ requirements and tools. These modifications are meant to foster project "nesting" into government programs in support of the Paris Agreement's goals, including NDCs. For more information please visit Verra's website.

According to Verra, VCS REDD+ projects may choose to use the consolidated REDD methodology at any time after it is published in 2023. By 31 December 2025, all VCS REDD projects must use this new methodology.

Secretariat:	Program Launch Date:	Standard:	Who can generate REDD+ results:	Barriers to new participation:	Types of Finance:
Verra	2012	Methodologies VM0006, 7, 9, 15, 37	Project-scale.	Open for participation.	The standard creates carbon credits that can be used for market or non-market purposes.[31]

Cathedral fig tree, Queensland, Australia

Financial flows for REDD+ payments

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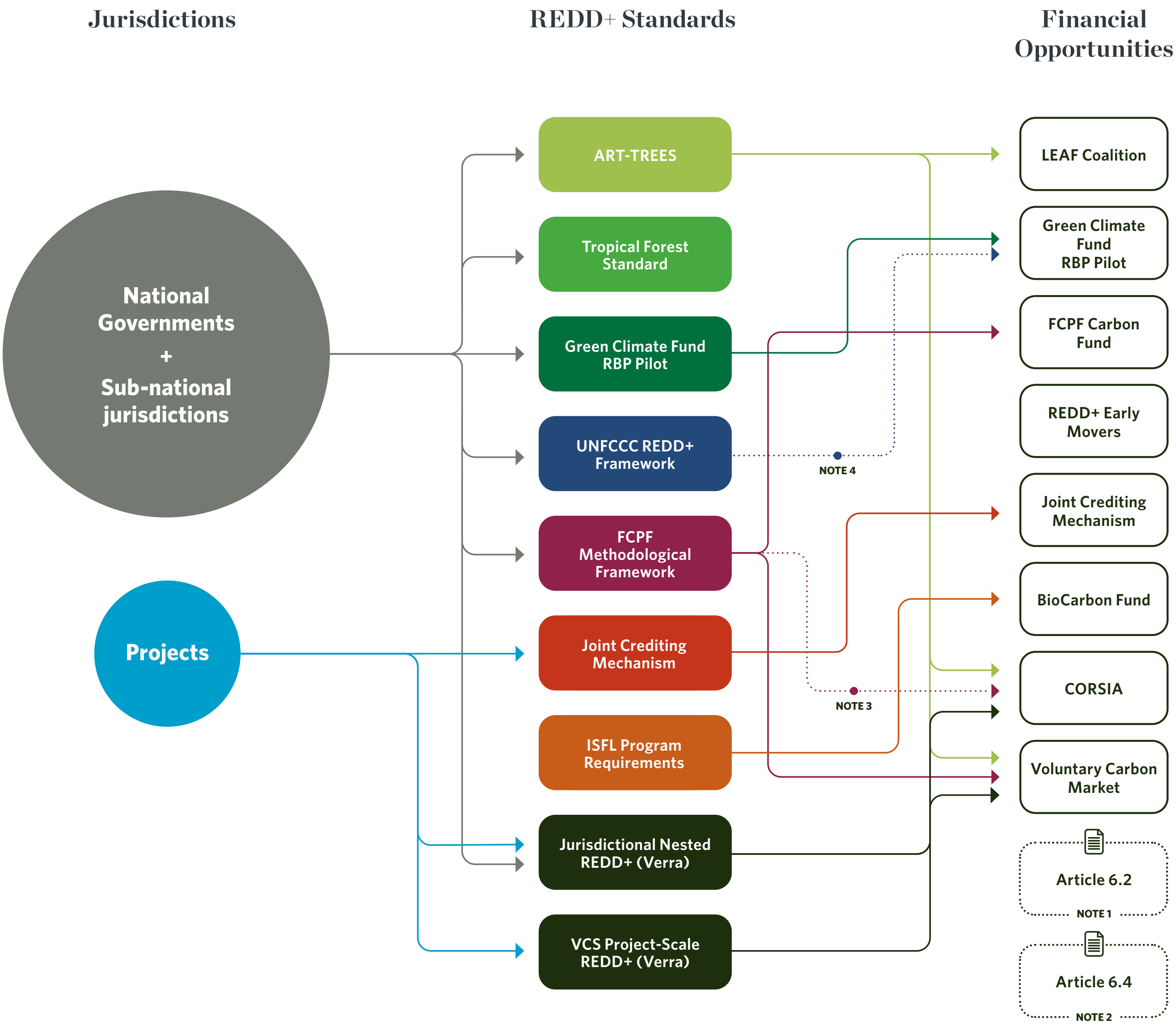
REDD+ Standards - Forest Finance Diagram



NOTE 1:
REDD+ results achieved as part of the programs and financial sources listed above may be eligible for cooperative approaches under Article 6.2 if they comply with the requirements in decision 2/CMS.3.

NOTE 2:
The REDD+ Standards listed on the left may be eligible for approval by the Supervisory Body of Article 6.4 mechanism.

NOTE 3:
The FCPF Carbon Fund has been conditionally approved and is awaiting resolution by CORSIA, shown as a dotted line.

NOTE 4:
This line reflects the decision of the COP to designate the Green Climate Fund to have a key role, to collectively channel adequate and predictable results-based finance for REDD+, according to decision 9/CP.19. This lines also recognizes that the additional rules defined by the GCF - compared to COP decisions for REDD+ - are minimal versus REDD+ standards such as ART-TREES and the FCPF Methodological Framework and Process Guidelines.

Financial flows for REDD+ payments

Financing REDD+ includes two crucial steps: the first is securing funding, while the second is determining how that funding is used, i.e. distributed and/or re-invested. The latter includes important equity and stakeholder engagement elements, and touches on topics such as carbon rights and benefits-sharing.

National governments or subnational jurisdictions may develop benefit sharing plans to detail who gets what. These decisions usually rest on a number of factors, including legal considerations (land and resource ownership), stakeholder priorities as reflected in the implementation plan, and other arrangements negotiated between Indigenous Peoples, Local Communities (IPLCs), and/or other stakeholders, as well as the participation of project-scale REDD+.

Jurisdictional approaches must contend with overlap by REDD+ projects or by other jurisdictional REDD+ programs (i.e. multiple programs occurring on the same territory). Figuring out how these different activities overlap and, crucially, ensuring there is no double counting is called “nesting”. Nesting REDD+ describes an approach or model for achieving a harmonized REDD+ implementation and accounting framework across different scales and governance levels within a country. Nesting as a concept has existed for some time, but countries are just beginning to integrate nesting elements as part of their REDD+ implementation plans and frameworks.

There are many technical and strategic considerations to “nest” REDD+ appropriately, and these vary from place to place according to the jurisdictions’ circumstances. The role of the national government is key, i.e. will it centralize REDD+ finance or merely facilitate finance flows to lower-level jurisdictions and/or projects? How will the finance be received and then distributed? What is the role of IPLCs and how will they receive benefits? These approaches consider multiple considerations, and benefit sharing may include criteria that go beyond mitigation potential or outcomes, such as investing in the protection of intact or old-growth forests with a lower deforestation or degradation risk. Finally, other strategic considerations may play a role when selecting a nesting approach, i.e. if there is access to a specific financial opportunity (an opportunity to enter into a bilateral agreement with a specific donor).

Nesting involves all aspects of REDD+ implementation: carbon accounting, reference levels, benefit sharing, safeguards, among many others. In this paper we focus on REDD+ finance and how nesting serves as a tool to support multi-scale benefit sharing or investments.

OPTIONS FOR NESTING

One way to understand the spectrum of nesting approaches or models is to consider where REDD+ implementation happens and the role of the national government. If the national government is actively involved in planning and implementing REDD+, receiving and distributing payments and ensuring compliance with REDD+ safeguards, then we refer to this as a **jurisdictional program**. A jurisdictional program is overarching and encompasses all scales of REDD+ implementation, and therefore, requires ample stakeholder coordination across the country or subnational areas.

Jurisdictional programs may allow and incentivize REDD+ implementation at lower-levels[32] by paying for performance. This may be done through a benefit allocation approach. If this allocation approach is quantitative and is based on the performance of lower-level jurisdictions or projects, then this could be considered a **centralized nesting** approach. It is called centralized because all REDD+ results are monetized and then distributed by the national government.

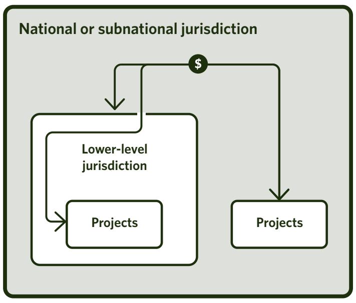
In the case a national government allows for independent crediting of lower-level jurisdictions or projects, that is, if they participate in carbon-crediting programs and can receive payments, then we may call this a **decentralized nesting** approach. This approach still requires the participation of the national government in ensuring that there is no double-counting across scales and that REDD+ safeguards are being implemented.

At the other end, jurisdictions may opt to implement a fully decentralized or **project-based approach**, where only projects receive payments. This is equivalent to saying that there is only one scale of REDD+ implementation, i.e. project-level. This approach is not eligible under the UNFCCC and is the most common under the Voluntary Carbon Market (VCM).

Jurisdictions with multiple levels of REDD+ implementation (and crediting) without an operational nesting approach may incur risk of double-counting, double-use, and double-claiming. This is currently a challenge for many countries that have jurisdictional programs under bilateral agreements or multilateral funds and projects in the VCM.

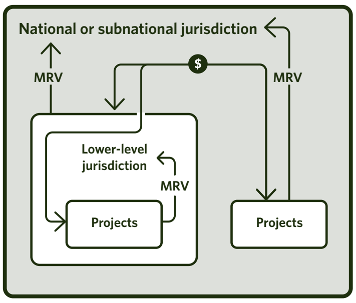
Yet, these are just categories of nesting approaches. National circumstances vary significantly, and nesting approaches will need to be sufficiently adaptable to address them. Also, nesting goes beyond receiving and distributing REDD+ finance, it also touches on all aspects of REDD+ implementation, especially safeguards and coordination of REDD+ activities.

Jurisdictional Program



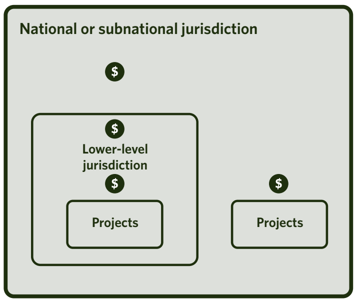
REDD+ payments are received and distributed by the national or subnational government. REDD+ performance is measured at national or subnational level. Monetary benefits may be shared with lower-level jurisdictions or projects based on a benefit sharing mechanism.

Centralized Approach



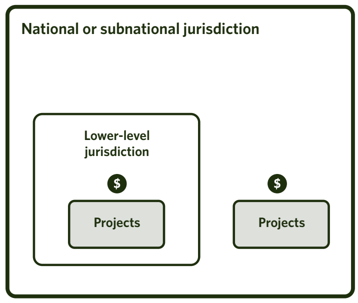
REDD+ payments are received and distributed by the national or subnational government. REDD+ performance is measured at national or subnational level, and at project level. Performance of lower-level jurisdictions and projects is used for distributing payments.

Decentralization Approach



REDD+ payments are received and distributed by the national or subnational government, lower-level jurisdictions or projects.

Project Crediting Only



REDD+ payments are received and distributed by projects only.

International REDD+ Standards and Finance Tool

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International REDD+ Standards and Finance Tool

In addition to this report, the complex landscape of REDD+ standards and finance options has been crafted into an interactive online tool for policymakers to explore their options. Explore the tool here: International REDD+ Standards and Finance Tool.

The International REDD+ Standards and Finance Tool includes the following sections:

REDD+ Standards: provides direct access to the latest version of REDD+ standards. It includes a description of each standard and a link to visit the official site. The REDD+ standards included are:

- FCPF Carbon Fund
- Green Climate Fund's REDD+ Request for Proposals
- Joint Crediting Mechanism
- Jurisdictional Nested REDD+
- The REDD+ Environmental Excellence Standard
- Tropical Forest Standard
- UNFCCC REDD+ Framework

Search Standards by Topic: provides a quick comparison across all standards for 30+ topics, including carbon accounting, programmatic, and legal considerations (Annex 1).

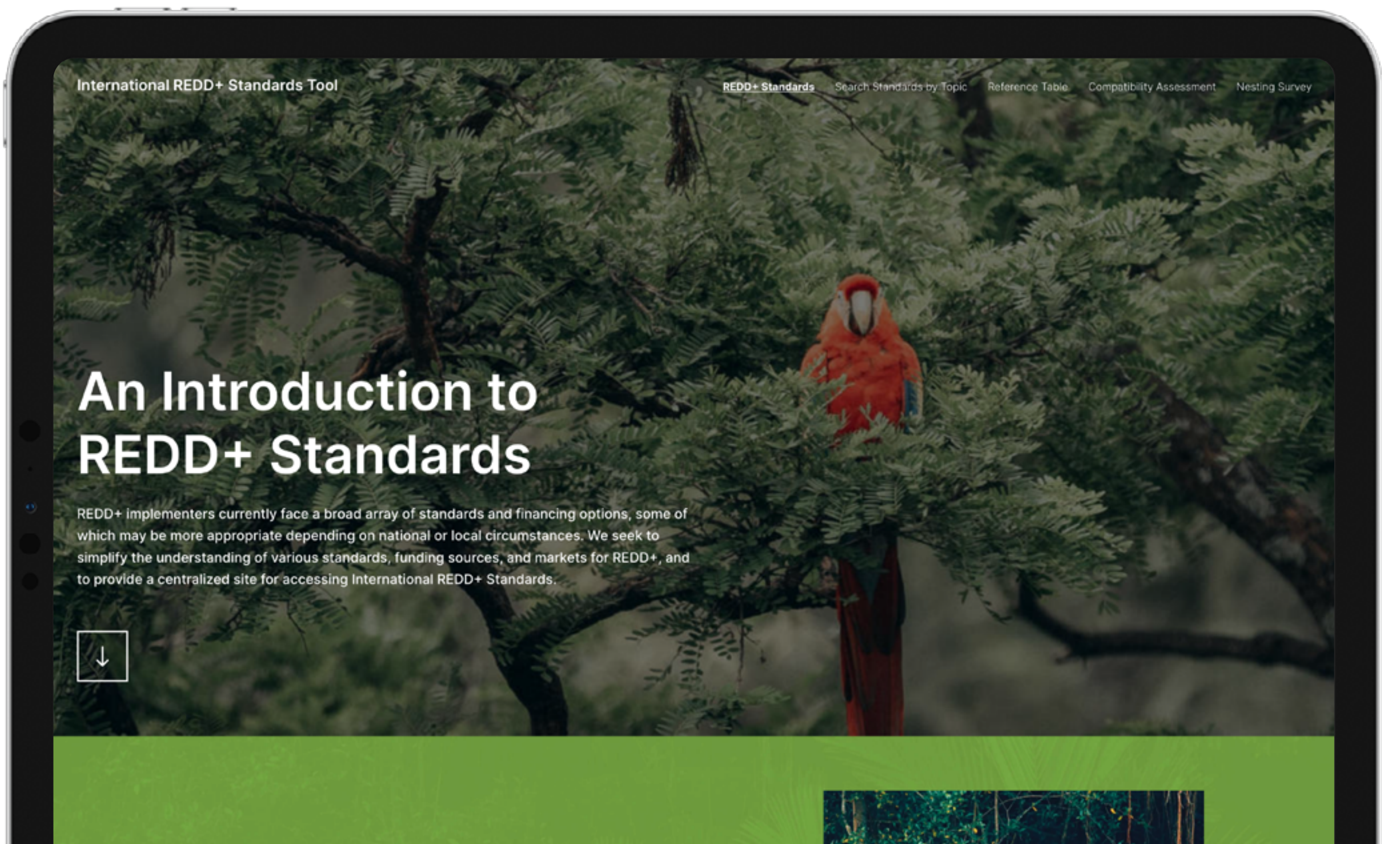
A Reference Table: is available for quick reference to the specific sections in each standard for users wanting to learn more about each topic.

Compatibility Assessment: after responding to 32 questions, users will receive an general indicator of their adherence to each REDD+ standard and a summary table showing compliance and non-compliance by topic.

Nesting Survey: this section is based on the World Bank's 2021 Nesting of REDD+ Initiatives: Manual for Policy Makers. © World Bank. Firstly, users will be asked six questions to determine a potentially appropriate nesting model. Once a model is selected, users will be able to download specific checklists to identify areas of compliance and non-compliance, useful in guiding them to implement the selected nesting model.

Please visit the International REDD+ Standards and Finance Tool for more information.

This tool was developed by Conservation International, The Nature Conservancy and the United States Forest Service in 2022 with funding from the United States Department of State and United States Agency for International Development.



Annex 1. Comparisons across REDD+ standards for selected topics

For more information please visit the International REDD+ Standards and Finance Tool website.

Annex 1. Comparisons across REDD+ standards for selected topics

ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Authority						
The legal authority of the entity representing the country/ jurisdiction shall be described. Where the TREES Participant is a subnational government, the national government must provide the Participant with a letter from the relevant national entity authorizing the Participant's application to and participation in ART.	The Emission Reduction Program demonstrates its authority to enter into an Emission Reduction Payment Agreement.	Written consent for participation must be provided by the REDD-plus national entity or the focal point to the UNFCCC, as well as a no-objection letter provided by the National Designated Authority or focal point.	The host government and the government of Japan establish a Joint Committee to develop Rules of Implementation and to authorize third-party designation and verification activities.	(Scenario 1) In the case of jurisdictional proponents, there are no requirements with respect to authority and rights to GHG emission reductions since no credits are issued to the higher-level jurisdiction. Nested lower-level jurisdictional proponents seeking credit have program authority over the jurisdictional program and can demonstrate rights to the GHG emission reductions resulting from it.	No explicit requirements apply.	Parties designate a national entity or focal point to serve as liaison on the coordination of support. National entities of focal points to nominate their entities to obtain and receive RBP, consistent with operational modalities of the financing entities.
Carbon Pools and GHGs						
Eligible • Above-ground live tree biomass • Soil organic matter in peat soils • Below-ground biomass • Standing deadwood • Down deadwood • Litter/forest floor • Non-tree live biomass • Soil organic matter (mineral soils) **Non-eligible** • Harvested Wood Products	**Eligible** All pools that are significant, i.e. collectively >10% of total forest-related emissions. Note: excluded pools and GHGs do not over-estimate total emission reductions.	**Eligible** All pools and GHGs that are a significant source of emissions Note: exclusion of C pools should be justified based on their significance.	**Eligible** CO_2, CH_4, N_2O and the pools proposed as part of the selected methodology approved by the Joint Committee.	**Eligible** • Above-ground biomass • Below-ground biomass • Litter • Deadwood • Harvested Wood Products • Soil carbon in peatlands, only when leakage occurs in wetlands **Non-eligible** • Soil organic carbon Note: exclusion of C pools is allowed if their exclusion leads to conservative estimates or if they collectively amount <10%.	**Eligible** • Above-ground live biomass • Below-ground live biomass • Above-ground dead biomass • Below-ground dead biomass • Lying dead biomass **Non-eligible** • Soil carbon	**Eligible** All pools and GHGs that are a significant source of emissions Note: exclusion of C pools should be justified based on their significance.
Carbon Rights & Title Transfer						
Rights shall be obtained according to domestic law. Participants demonstrate the agreements in place for title transfer or benefit allocation agreements with resource right holders. Credits will only be issued for demonstrated clear ownership or rights.	Emission Reduction Programs assess land and tenure rights, any ambiguities or gaps, and identify areas with conflicts or competing claims. The Programs demonstrate their ability to transfer title to emission reductions to the Carbon Fund while respecting rights.	Ownership of the emissions reductions paid for by the GCF will not be transferred to the GCF.	Credits are only issued to emission reductions or removals that are calculated by the project participants and verified by a third-party based on the methodology approved by the Joint Committee.	Scenario 1) Nested lower-level jurisdictional proponents seeking credit can demonstrate rights to the GHG emission reductions resulting from it. Rights to GHG emission reductions are the right to participate in jurisdictional benefit-sharing or transact GHG emission reductions.	The sector plan must include a demonstration of public participation and a description of how the rights of forest- dependent and other local communities are fully respected, including their rights to participation, public consultation, lands, territories, and resources, through the implementation of social and environmental safeguards.	Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples.

ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Discounts						
Non-permanence Minimum 25% of total emission reductions and/or removals which can be lowered if mitigation factors exist. **Leakage or Displacement** Risk is classified as: high, medium or low. The percentage of deduction is in the range of 0-20%. **Uncertainty** Estimated based on total uncertainty of emission reductions and removals and a 90% confidence interval.	**Non-permanence** 40% is the default risk, which is reduced with mitigation factors. **Leakage or Displacement** No discounts apply. Note: ER Programs have to assess the risk of leakage and implement mitigation measures where this risk is significant. **Uncertainty** Based on the level of uncertainty of total emission reductions from deforestation, in the range of 0-15%. For forest degradation a fixed 15% only if proxy methods are applied.	**Non-permanence** No discounts apply. **Leakage or Displacement** No discounts apply. **Uncertainty** No discounts apply.	**Non-permanence** Discount rate adopted by the Joint committee is applied. In case of Cambodia, it is 20%. **Leakage or Displacement** No discounts apply. **Uncertainty** No discounts apply.	(Scenario 1) **Non-permanence** Buffer credits are canceled to cover carbon known, or believed, to be lost[34]. **Leakage or Displacement** Carbon lost due to leakage is subtracted out from the net GHG emission reductions. **Uncertainty** Jurisdictional reference levels are conservatively discounted by applying the JNR Allocation Tool, before allocating project baselines and lower-level jurisdictional reference levels, in the range of 0-25.92%. Allocated project baseline and lower-level jurisdictional reference levels are not required to apply a further discount for uncertainty. However, monitored GHG emissions should be dis-counted in the range of 0-25.53%.	**Non-permanence** Minimum 10% of total emission reductions per year or the result of a reversal risk assessment, whichever is higher. **Leakage or Displacement** No discounts apply. **Uncertainty** Estimated based on total uncertainty of emission reductions and removals prior to issuance.	**Non-permanence** No discounts apply. **Leakage or Displacement** No discounts apply. **Uncertainty** No discounts apply.
Environmental Integrity						
TREES requires the disclosure of any verified or issued emission reductions in the same accounting area, including credits from projects, which will be deducted from TREES issuance volume, checks of duplicate registration under other programs (including offset programs) and requirements for disclosure of other registrations, as well as for cancellation of the units on one registry prior to re-issuance on another (exceptions apply for credits used towards domestic compliance markets).	To prevent double-counting, ERs generated under the ER Program shall not be counted or compensated for more than once. Any reported and verified ERs generated under the ER Program and sold and/or transferred to the Carbon Fund shall not be sold, offered or otherwise used or reported a second time by the ER Program Entity. Any re-ported and verified ERs generated under the ER Program that have been sold and/ or transferred, offered or otherwise used or reported once by the ER Program Entity shall not be sold and transferred to the Carbon Fund.	Payments should be recorded in the UNFCCC web portal and recipient countries' national counterpart, and corresponding results will no longer be eligible for RBPs under the GCF or in any other arrangement. Countries can consider, at their own discretion, to use the emission reductions towards achievement of their NDCs. Host countries will be expected to covenant that no other party has a competing claim to the results proposed to the GCF for payment, in accordance with national policy, legal or regulatory framework and provide information in the funding proposal about how such results will be treated or used.	Neither side uses projects registered under JCM for the purpose of other international climate mechanisms to avoid double counting. Credits issued by each side can be used to achieve emission reduction targets of both sides. The host country applies a corresponding adjustment to the JCM credits issued in the JCM registry of the Japanese side.	(Scenario 1) Under Scenario 1, there are no requirements with respect to participation under other GHG programs and other forms of REDD+ incentives since no credits are issued to the higher-level jurisdiction. However, projects and lower-level jurisdictional programs that adhere to specific market criteria (including those related to double counting) set out under Paris Agreement Article 6 rules and procedures and international Paris-related programs such as CORSIA are identified via VCU labels.	The Sector Plan describes how the implementing jurisdiction's sector-based crediting program is compliant with, fits within, and avoids double counting with any other voluntary or mandatory program's efforts to reduce emissions from deforestation and forest degradation, including NDCs under the UNFCCC.	REDD+ activities should be consistent with the objective of environmental integrity and take into account the multiple functions of forest and ecosystems. The construction of forest reference levels and forest emission reference levels is to be flexible so as to accommodate national circumstances and capabilities, while pursuing environmental integrity and avoiding perverse incentives.

ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Forest definition						
The forest definition or definitions listed in the TREES Registration Document must be consistent with the most recent definition used by the national government in reporting to the UNFCCC. The same forest definition must be used for each full TREES Crediting Period.	The definition of forest used is specified for Emission Reductions Programs. If there is a difference between the definition of forest used in the national greenhouse gas inventory or in reporting to other international organizations (including an Forest Reference Emission Level or Forest Reference Level to the UNFCCC) and the definition used in the construction of the Reference Level, then the ER Program explains how and why the forest definition used in the Reference Level was chosen.	The forest definition in the reference level is consistent with the definition in the National GHG Inventory.	A JCM guideline adopted by a Joint Committee provides forest definition. In the case of Cambodia, the national definition of forest designated by the Kingdom of Cambodia is applied.	The definition of forest used in the construction of the reference level shall be specified and shall be consistent with the forest definition used for reporting under the UNFCCC. Where there is a difference between the most recent definition of forest used in UNFCCC reporting and the definition of forest used in the construction of the FREL, the jurisdictional proponent shall explain how and why the current forest definition was chosen.	"Forest" or "tropical forest" means native forests within the tropics. Species types and forest types will depend on each specific subnational jurisdiction. "Native forest" means forest occurring naturally in an area. Native forest must maintain a diversity of native species and multiple ages. Native forest do not include monoculture or industrial plantations.	The definition of forest used in the construction of forest reference emission levels and/or forest reference levels and, if appropriate, in case there is a difference with the definition of forest used in the national greenhouse gas inventory or in reporting to other international organizations, an explanation of why and how the definition used in the construction of forest reference emission levels and/or forest reference levels was chosen.
GHG Reporting						
Participants shall monitor and submit a TREES Monitoring Report following calendar years 1, 3, and 5 of the crediting period. A Participant may optionally submit a TREES Monitoring Report following years 2 and 4 of the crediting period.	The Emission Reductions Program monitors emissions by sources and removals by sinks included in the ER Program's scope using the same methods or demonstrably equivalent methods to those used to set the Reference Level. Activity data are determined periodically, at least twice during the Crediting Period, and allow for ERs to be estimated from the Crediting Period Start Date.	The REDD+ results reported through a biennial update report are consistent with the reference level, and are transparent, complete (enables reconstruction), consistent over time and accurate. Reporting is guided by the most recent applicable IPCC guidance and guidelines as adopted by the COP.	Project participants shall prepare a monitoring report and send the report to a third-party entity for verification. Reports shall document key logical and assumptions, choice of eligibility criteria, default values and reference emissions. Reporting periodicity shall follow the adopted methodology as approved by the Joint Committee.	(All Scenarios) Monitoring shall be carried out at least every two years starting from the reference level start date or the end of the last reference level validity period). The jurisdictional proponent shall use the JNR Monitoring Report Template. The jurisdictional monitoring report de-scribes all the data and information related to the monitoring of GHG emission reductions.	The implementing jurisdiction must monitor emissions and prepare a report reflecting GHG emissions for each reporting period. Reporting must be conducted in a manner consistent with IPCC methodologies and ISO 14064-1:2006.	The results of implementing REDD+ activities should be provided through biennial update reports as part of a technical annex, including the assessed reference level and a demonstration that the methodologies are consistent. Reported information shall allow for the reconstruction of the results.
High Forest, Low Deforestation (HFLD)						
In order to qualify as an HFLD Participant under ART and use the optional HFLD Crediting Level approach, national or subnational Participants must demonstrate that they meet the HFLD Score threshold in each year of the historical reference period for their accounting area, which may include recognized Indigenous territories. This must be demonstrated at the beginning of each Crediting Period and the HFLD designation remains applicable for all five years of the Crediting Period. TREES Credits, using the HFLD crediting approach, will be labeled as such upon issuance in the ART Registry.	The Reference Level may be adjusted upward above average annual historical emissions if long-term historical deforestation has been minimal across the entirety of the country, and the country has high forest cover, and if national circumstances have changed such that rates of deforestation and forest degradation during the historical Reference Period likely underestimate future rates of deforestation and forest degradation during the Crediting Period. If the requirements are met, an adjustment of the Reference Level above the average annual historical emissions during the Reference Period is allowed, and may not exceed 0.1%/year of Carbon Stocks.	For countries that have consistently maintained high forest cover and low deforestation rates an adjustment is allowed which does not exceed 0.1% of the carbon stock over the eligibility period in the relevant national or subnational area, and does not exceed 10% of the reference level.	No specific provisions.	No specific provisions.	No specific provisions.	Developing country Parties in establishing forest reference emission levels and forest reference levels should do so transparently taking into account historic data, and adjust for national circumstances, in accordance with relevant decisions of the Conference of the Parties.

ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Leakage or Displacement						
Where Participants submit a subnational crediting level, then negative leakage of emissions to outside the accounting area can occur. Participants must apply specified TREES leakage deductions.	The Emission Reductions Program is designed and implemented to prevent and minimize potential Displacement. The ER Program has in place an effective strategy to mitigate and/or minimize, to the extent possible, potential Displacement, prioritizing key sources of Displacement risk.	The summary of information on safeguards provide information on the actions to reduce displacement of emissions.	The displacement belt is defined as the area outside the project area where net emissions are displaced by project activities and is monitored.	(Scenario 1) Leakage requirements apply only to nested projects and lower-level jurisdictional programs. A nested project shall apply the leakage requirements set out in the VCS Standard and applied methodology to calculate project leakage. Lower-level jurisdictional programs shall follow the relevant requirements in the JNR Scenario 2 Requirements or the JNR Scenario 3 Requirements, as appropriate.	The implementing jurisdiction must include a framework and mechanisms for managing and mitigating activity-shifting leakage and market-shifting leakage and for detecting and accounting for any remaining leakage outside the implementing jurisdiction's borders.	Subnational monitoring and reporting as an interim measure includes monitoring and reporting of emissions displacement at the national level, if appropriate, and reporting on how displacement of emissions is being addressed, and on the means to integrate subnational monitoring systems into a national monitoring system. When undertaking REDD+ activities, to promote and support actions to reduce displacement of emissions.
Nationally Determined Contributions (NDCs)						
TREES Participants, or the Participant's national government, shall include forests in their NDCs. Forests must be included as part of the overall NDC target. A specific NDC target for forests is not required. ART requires Participants to calculate GHG reductions based on the 100-year Global Warming Potentials (GWPs) in the IPCC Assessment Report that is used by the host country in NDC reporting, with the goal for all reporting to include GWPs in the IPCC Fifth Assessment Report.	No specific provisions.	Countries receiving REDD+ results-based payments through accredited entities must reinvest the proceeds in activities in line with their current of next NDC. Countries can consider, at their own discretion, to use the emission reductions towards achievement of their NDCs.	Both governments mutually recognize that part of JCM credits issued from emission reductions and removals may be used towards the achievement of Japan's nationally determined contribution and the rest of the said JCM credits may contribute to the achievement of nationally determined contribution of the host country, while ensuring that double counting is avoided on the basis of corresponding adjustments.	No specific provisions.	No specific provisions.	No specific provisions.
Non-Carbon Benefits						
REDD+ activities are consistent with the conservation of natural forests and biological diversity, ensuring that REDD+ activities are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits.	The Emission Reductions Program outlines potential Non-Carbon Benefits, identifies priority Non-Carbon Benefits, and describes how the ER Program will generate and/or enhance such priority Non-Carbon Benefits. Such priority Non-Carbon Benefits should be culturally appropriate, and gender and intergenerationally inclusive, as relevant. Stakeholder engagement processes carried out for the ER Program design and for the readiness phase inform the identification of such priority Non-Carbon Benefits.	Optionally, countries may provide a description of non-carbon benefits associated with the implementation of REDD-plus activities during the eligibility period. Information is provided in the Funding Proposal on how the proceeds are used in a manner that contributes to the long-term sustainability of REDD-plus activities, including non-carbon benefits.	No specific provisions.	No specific provisions.	The sector-based crediting program generates additional, positive impacts on the long-term livelihood security and well-being of Indigenous Peoples and local communities, with special attention to women and the most marginalized and/or vulnerable people.	REDD+ activities are consistent with the conservation of natural forests and biological diversity, ensuring that REDD+ activities are not used for the con-version of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits, taking into account the need for sustainable livelihoods of indigenous peoples and local communities and their interdependence on forests in most countries,

ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Non-Carbon Benefits (continued)						
	The ER Program indicates how information on the generation and/or enhancement of priority Non-Carbon Benefits will be provided during ER Program implementation, as feasible.					reflected in the United Nations Declaration on the Rights of Indigenous Peoples, as well as the International Mother Earth Day.
Reference Levels						
For each crediting period Participants shall calculate an emissions crediting level from the average of emissions during a historical period. The reference period for the crediting level under TREES shall be 5 calendar years. The reference period may not overlap with the crediting period and there may be no gaps between the end of the reference period and the start of each TREES crediting period. The initial crediting period start date shall not be more than four calendar years prior to the year of submittal of the TREES Concept. The TREES Crediting Level shall be updated every five calendar years starting with the first year of crediting. An updated crediting level may not be high-er than the previous crediting level. If a new crediting level value is greater than the previous crediting level value, the previous crediting level must be used for the new crediting period. When a new pool or activity is added the new crediting level must be calculated with the new pool or activity included in the 5-year reference data. This represents the only circumstance in which a crediting level could rise from one crediting period to the next.	The development of the reference level is informed by the development of a reference level for the UNFCCC. The reference level is expressed in tons of CO_2 per year. The ER Program explains how the development of the reference level can inform or is informed by the development of a national reference level to the UNFCCC, and the steps intended in order for the reference level to achieve consistency with the country's existing or emerging GHG inventory. The FCPF Carbon Fund defines specific rules for the start and end dates of the reference level, as included in criterion 11, as well as relevant guidance included in criteria 12 and 13.	The reference level and REDD-plus results reported on the UNFCCC REDD-plus web platform will be considered using the relevant criteria defined in the scorecard, building on the UNFCCC Technical Assessment of the reference level and Technical Analysis of the BUR Technical Annex. The reference level shall be transparent, complete, consistent and accurate, so far as can be judged, and adhere to the guidelines in decision 12/CP.17. The historical reference period is between 10-15 years. (Note: periods of 5-9 or 16-20 are acceptable with a discount). Later reference levels shall reflect a lower emissions level or higher removals. Uncertainty shall be reported as part of reference level submission to the UNFCCC.	Methodologies for setting baselines shall list all emission sources and GHG types included in the calculation of the reference emissions, as well as a description of "emission sources". Participants shall adopt only one procedure for establishing reference emissions, and elaborate a method to calculate the reference emissions with specificity and completeness. The reference emissions shall comply with all applicable national regulations. Participants describe how the reference emissions are derived and how the reference emissions are below the Business as Usual emissions.	(Scenario 1) A jurisdictional reference level may cover an entire country or a subnational jurisdiction. A national government may deter-mine the boundaries of subnational jurisdictional reference levels and may submit such boundaries to the Verra registry. Jurisdictional proponents shall not exclude from the reference level boundary areas within the administrative boundaries of subnational jurisdictional reference level where GHG emissions from deforestation or forest degradation may be reasonably expected to increase with respect to the historical reference period during the reference level validity period. Where a nested project straddles a jurisdictional reference level boundary, the jurisdictional reference level proponent shall decide how to encompass such project for nesting and follow the requirements for transitioning to a nested system.	The implementing jurisdiction must develop a reference level defined as the quantity of GHG emissions that have occurred during a designated period of time within the geographic boundaries of the implementing jurisdiction. To ensure integrity in reducing emissions, the reference level must be based on historical data rather than projections of future deforestation rates. The reference level shall represent an historical average of gross emissions from deforestation and, if applicable, degradation, over a 10 consecutive year period referred to as the reference period. To ensure that the reference period represents a 10-year period absent any influence from the jurisdictional sector-based crediting program, the 10 consecutive year period specified above shall end no more than 48 months prior to linkage with an ETS.	Developing country Parties aiming to undertake REDD+ activities shall develop a reference level or, as an interim measure, a sub-national reference level. Reference levels shall maintain consistency with the National GHG Inventory. Reference levels shall be subject to technical assessment under the UNFCCC. Parties shall submit information and the rationale for the development of the reference level(s), including details for national circumstances and any adjustments. A step-wise approach may be used to improve data quality, methodologies, and/or add carbon pools. Updates should take into account new knowledge, new trends, and any modification of scope and methodologies.
Reversals (non-permanence)						
Under TREES, a reversal is when a Participant's annual reported emissions are higher than the crediting level at any time after TREES credits are issued to the Participant. To maintain conservativeness under TREES, reversals are reported and a volume	The Emission Reduction Program is designed and implemented to prevent and minimize the risk of Reversals and address the long-term sustainability of ERs. The ER Program has undertaken an assessment of the	The summary of information on safeguards provide information on how the following safeguard was addressed and respected in a way that ensures transparency, consistency, comprehensiveness and effectiveness:	The annual project emission reductions to be credited are calculated using a discount factor, considering internal risks (such as risks arising from inadequate project management, loss of financial viability,	(Scenario 1) Non-permanence risk and natural disturbances requirements do not apply to jurisdictional reference levels, because there is no crediting to the jurisdiction. Nested projects and	A sector-based crediting program must ensure the permanence of any GHG emissions reductions. GHG emissions above the implementing jurisdiction's crediting baseline will constitute a reversal.	When undertaking REDD+ activities, the following safeguard should be promoted and supported: Actions to address risk of reversals.

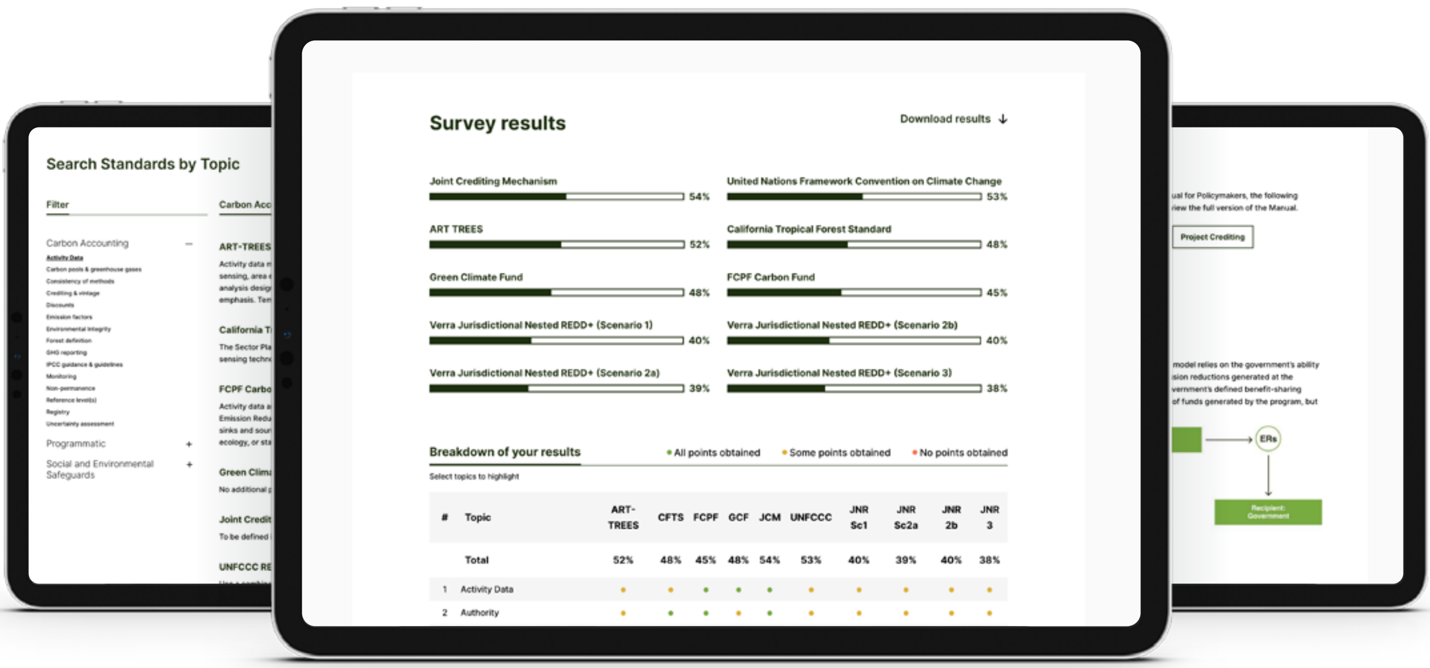
ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Reversals (non-permanence) (continued)						
of credits from the buffer pool equivalent to the reversed volume is retired to permanently remove the credits from circulation and negate the reversal. If a Participant exits ART, any unused buffer pool contributions are retired to account for any possible future reversals.	anthropogenic and natural risk of Reversals that might affect ERs during the Crediting Period and has assessed, as feasible, the potential risk of Reversals after the end of the Crediting Period. The ER Program demonstrates how effective ER Program design and implementation will mitigate significant risks of Reversals. At the latest 1 year before the end of the Crediting Period, the ER Program will have in place a robust Reversal management mechanism or another specified approach that addresses the risk of Reversals beyond the Crediting Period. The ER Program reports to the Carbon Fund within 90 calendar days after becoming aware of any emissions in the Accounting Area or changes in ER Program circumstances that, in the reasonable opinion of the ER Program, could lead to Reversals of previously transferred ERs.	Actions to address risk of reversals.	increased opportunity costs, and reduction of project longevity), external risks (such as risks caused by issues associated with land ownership and resource use rights, community engagement, and political matters) and natural risks (such as risks associated with unprecedented forest fires, pests and disease outbreaks, extreme weather patterns, and geological events). The default value of the discount factor is 20 percent in the case of Cambodia.	lower-level jurisdictions shall follow non-permanence risk requirements set out in the VCS Standard, except where requirements in JNR Scenario 2 or JNR Scenario 3 Requirements take precedence.	The sector-based crediting program must include a mechanism to compensate for any reversal. Such a mechanism must include a contribution of sector-based offset credits to a jurisdictional buffer pool. The ETS shall establish its own Sector-Based Crediting Program Buffer Pool to accept sector-based offset credits transitioned from the jurisdictional buffer pool.	
Safeguards						
TREES requires Participants to demonstrate they have implemented REDD+ actions defined in the REDD+ implementation plan in consistency with Cancún Safeguards ensuring activities do no harm. It is the goal of this Standard to provide concrete guidance on how a Participant can demonstrate that it has addressed and respected all the Cancún Safeguards, while drawing on the step-wise nature of REDD+ implementation. At the start of the first crediting period, Participants must demonstrate conformance with Cancún Safeguards by reporting against all structure and process indicators. In addition, at the beginning of the first crediting period, Participants must either demonstrate conformance with the outcome indicators	The ER Program meets the World Bank social and environ-mental safeguards and promotes and sup-ports the safeguards included in UNFCCC guidance related to REDD+. Safeguards Plans address social and environmental issues and include related risk mitigation measures identified during the national readiness process, e.g., in the SESA process and the ESMF, that are relevant for the specific ER Pro-gram context (e.g., land tenure issues), taking into account relevant existing institutional and regulatory frameworks. The Safeguards Plans are prepared concurrently with the ER Program Document, and are publicly disclosed in a manner and language appropriate for the affected stakeholders.	By the time of submission of a Concept Note, a safeguards information system should be in place and made publicly available, including information on how the safeguards are addressed and respected, and a summary of information on how all the Cancun REDD-plus safeguards were addressed and respected during the period for which payment for results is being requested. Proposals shall comply with relevant Green Climate Fund policies and procedures, including the Interim Policy on Prohibited Practices, Gender Policy, and GCF's Environmental and Social Safeguards (due diligence, stakeholder engagement, and grievance redress).	An environmental assessment shall be conducted according to national or local regulations. Participants shall describe the process by which comments from local stakeholders have been invited for the proposed project. Further, Participants identify stakeholders that have made comments and provide a summary of these comments. The Joint Committee may withdraw a project if negative impacts on sustainable development or human rights.	(Scenario 1) Jurisdictional reference levels shall be developed and documented in a transparent manner and in consultation with stakeholders. Stakeholders include, inter alia, project proponents of existing REDD projects, private landowners, rural and/or indigenous communities, as well as relevant government agencies, private sector, academy representatives, and NGOs. Principle 6 of the REDD+ Social & Environmental Standards (REDD+SES); the Guidelines on Stakeholder Engagement in REDD+ Readiness of the Forest Carbon Partnership Facility and/or the UN- REDD Programme may be used to guide the stakeholder consultation process.	The implementing jurisdiction must demonstrate that forest-dependent communities, including indigenous communities were consulted during and participated in the design and ongoing implementation of the jurisdiction's sector plan in a manner that adheres to the Governors' Climate and Forests Task Force Guiding Principles for Collaboration and Partnership Between Subnational Governments, Indigenous Peoples and Local Communities. The implementing jurisdiction's sector plan must include social and environmental safeguards that are consistent with the safeguards for activities reducing emissions from	Developing country Parties aiming to undertake REDD+ activities shall develop a system for providing information on how the Cancún safeguards were addressed and respected. Also, when developing and implementing national strategies or action plans, to address, inter alia, the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and the safeguards, ensuring the full and effective participation of relevant stakeholders, inter alia indigenous peoples and local communities. Developing countries seeking to obtain and receive results-based payments should provide the most recent summary of information on how

ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Safeguards (continued)						
or present a plan for achieving conformance with the outcome indicators by the end of five years from the time the Participant joined ART. Within five years of joining ART, Participants must demonstrate conformance with all structure, process and outcome indicators under all themes under each of the Cancún Safeguards.	During ER Program implementation, information on the implementation of Safe-guards Plans is included in an annex to each ER monitoring report and interim progress report. This information is publicly disclosed, and the ER Program is encouraged to make this information available to relevant stakeholders. This information is also made available as an input to the national systems for providing information on how safeguards are ad-dressed and respected (SIS) required by the UNFCCC guidance related to REDD+, as appropriate.			Nested projects registered under the VCS Program shall comply with the requirements set out in the VCS Standard. Lower-level Jurisdictional programs shall follow the requirements in this Section 3.8 of the JNR Scenario 2 Requirements or Section 3.8 of the JNR Scenario 3 Requirements, as appropriate.	jurisdiction's sector deforestation agreed by all country parties to the UNFCCC specified in Appendix I of the UNFCCC Cancun Agreement. To demonstrate consistency, the sector plan and safeguard reports prepared for each reporting period must identify principles, criteria, and indicators that conform with the REDD+SES Version 2. The implementing plan must include a requirement for third-party verification of the social and environmental safeguard reports.	all of the safeguards referred to in decision 1/CP.16, appendix I, paragraph 2, have been addressed and respected before they can receive results-based payments, to be provided periodically and be included in national communications or communication channels agreed by the COP.
Scale or Geographical Scope						
Participants shall be national governments (i.e., the highest level of government that exists in the country), or subnational governments no more than one administrative level down from national level. No scale thresholds apply to national participants with national accounting areas. During an interim period through December 31, 2030, subnational accounting areas may be registered under ART as a recognized step to national-level accounting. After the interim period, accounting shall be at a national level. Sub-national areas must be comprised of at least 2.5 million hectares.	The Accounting Area matches a government-designated area that is of significant scale and aligns with one or more jurisdictions; or a national- government-designated area (e.g., ecoregion) or areas.	Per UNFCCC guidance for REDD-plus, the proposals must represent tonnes of emissions reductions or enhanced removals at a national or, on an interim basis subnational level. Any subnational program proposal should be of significant scale, one political or ecosystem level down from national scale and defined by each country, demonstrating that an aggregation of such subnational scales can constitute the national level (e.g. states, provinces, biomes, etc.). Subnational level proposal should also demonstrate ambition to scale up to national level and should demonstrate a contribution to national ambition for emissions reductions, for example, the NDC and/or the implementation of the national REDD-plus strategy.	JCM assumes a project as the scale.	All Scenarios) A jurisdictional FREL may cover an entire country or a subnational jurisdiction. Subnational boundaries may follow existing administrative boundaries or may be based on ecosystems (e.g., ecoregions). Jurisdictional proponents shall not exclude from the reference level boundary areas within the administrative boundaries of subnational jurisdictional reference levels where GHG emissions from deforestation or forest degradation may be reasonably expected to increase. Multiple administrative subdivisions, such as several municipalities, may form one jurisdiction for the purposes of a jurisdictional reference level.	The California Tropical Forest Standard applies to subnational jurisdictions that have developed jurisdiction-scale programs to reduce emissions from deforestation and degradation, if applicable, of tropical forests within the geographic boundaries of the jurisdiction. The California Tropical Forest Standard can also be modified as appropriate to apply to national jurisdictions.	Subnational reference level(s) may be elaborated as an interim measure, while transitioning to a national reference level. The interim reference level mat cover less than its entire national territory or forest area.
Uncertainty						
Uncertainty shall be assessed on both activity data and emission factors. Errors shall be propagated between sources using Approach 2 (Monte Carlo simulation). Monte Carlo simulations shall use the 90%	Sources of uncertainty are systematically identified and assessed in Reference Level setting and Measurement, Monitoring and reporting. All assumptions and sources of uncertainty	Countries provide information on aggregate uncertainties, taking into account national capabilities and circumstances.	Participants should reduce, as far as is practical, uncertainties related to the quantification of emission reductions.	(Scenario 1) Jurisdictional reference levels shall undertake an analysis of uncertainty in estimating GHG emissions. A qualitative uncertainty analysis shall be undertaken	The sector plan must establish a quantitative uncertainty measurement methodology that calculates any error in data measurement and any error in remote sensing technology. The	Robust and transparent monitoring sys-tems provide estimates that are transparent, consistent, as far a possible accurate and that reduce uncertainties.

ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Uncertainty (continued)						
confidence interval and a simulation n of 10,000. The bootstrapping method may be used where the probability density function is unknown. Under TREES, uncertainty shall be quantified in terms of the half-width of the 90% confidence interval as a percentage of the estimated emissions. Sampling errors must be estimated and included in the uncertainty calculation. Model and allometric errors are excluded, as such errors are considered consistent between emissions in the crediting level and crediting periods, and thus the transaction cost and capacity building needed to include far outweigh any benefit in uncertainty determination.	associated with activity data, emission factors and calculation methods that contribute to the uncertainty of the estimates of emissions and removals are identified and their relative contribution to overall uncertainty assessed. Uncertainty associated with activity data and emission factors is quantified using accepted international standards, for example by providing accuracy, confidence interval, distribution of error, and propagation of error. Where errors in data and methods are considered large as defined in IPCC Guidelines, Monte Carlo methods (numerical simulations) should be used to estimate uncertainty. Uncertainty of the estimate of Emission Reductions is quantified using Monte Carlo methods. Underlying sources of error in data and methods for integrated measurements of deforestation, forest degradation and enhancements (e.g., as in a national forest inventory) are combined into a single combined uncertainty estimate and are re-ported at the two-tailed 90% confidence level. Uncertainty of Emissions Reductions associated with deforestation, forest degradation and enhancements are re-ported separately if measured through separate (i.e., non-integrated) approaches and when degradation is estimated using proxy data.			that lays out how systematic uncertainty and random uncertainty are reduced as far as possible. A quantitative analysis of remaining random uncertainty shall be undertaken. Jurisdictional proponents shall calculate error propagation for the GHG emissions estimated for the historical reference period and for the monitoring period, where monitoring is carried out. Uncertainties shall be reported referring to the half width of the two-sided 90% confidence interval. Uncertainties should be reported in the units of measurement for the estimate in question and as a percentage of the mean estimate. The uncertainty of GHG emission estimates shall be determined based on the uncertainties of activity data and of emission factors. Nested projects and lower-level jurisdictional programs shall undertake an analysis of uncertainty in estimating GHG emissions. Nested projects and lower-level jurisdictional programs shall follow the requirements set out in JNR Scenario 2 or JNR Scenario 3, as appropriate. A qualitative and a quantitative uncertainty analysis shall be undertaken, where use of Monte Carlo simulation is optional.	error calculation resulting from this quantitative uncertainty measurement methodology must be up-dated annually in the greenhouse gas emissions reports.	
Verification						
Validation and Verification of all carbon and safeguard requirements is required following calendar year 1 of each crediting period. Verification is required after calendar years 3	Please check the new [Validation and Verification Guidelines](#) (v 2.4, August 2021).	The Board will consider RBP Funding Proposals based on the Secretariats' assessment and the recommendations from the Independent Technical Advisory	A third-party entity validates the project as described in the project design document, including the verification of emission reductions or removals achieved	(Scenario 1) The full validation process for jurisdictional FRELs is set out in the VCS Program document JNR Validation and Verification Process.	The implementing jurisdiction must establish requirements for employing the use of independent third-party verifiers to ensure data quality and conformance	Each proposed reference levels is technically assessed when submitted or updated. REDD-plus results are also technically assessed as part

ART-TREES	FCPF Carbon Fund	Green Climate Fund RFP	Joint Crediting Mechanism	Jurisdictional Nested REDD+[33]	Tropical Forest Standard	UNFCCC REDD+ Framework
Verification (continued)						
and 5 of each crediting period. Verification is optional after years 2 and 4 but no credits will be issued without verification. Validation and Verification Bodies shall be accredited for validation and verification by an accreditation body that is a member of the International Accreditation Forum (IAF) as outlined in the TREES Validation and Verification Standard. Validation and Verification Bodies shall also complete an application and an Attestation of Validation and Verification Body to be an approved ART Validation and Verification Body. TREES Validations and Verifications shall be conducted in accordance with the TREES Validation and Verification Standard.		Panel (ITAP). After the second-level due diligence and completion of the review against the relevant sections of scorecard included in Annex III related to GCF policies and procedures done by the Secretariat, the independent Technical Advisory Panel (TAP) will assess the funding proposal using the scorecard provided in Annex III. The independent TAP should ensure relevant expertise for the review of the proposal, through the use of LULUCF experts selected from the UNFCCC roster of experts and with experience in REDD-plus assessment and analysis.	as described in the monitoring report prepared by the project participants. Further, third-party entities records the verification result in a verification report and sends the report to the project participants.	For nested projects and lower-level jurisdictional programs the non-permanence risk analysis shall be assessed by a validation/verification body in accordance with the VCS Standard. (Scenario 2 and 3) The full validation and verification process for jurisdictional programs is set out in the VCS Program document JNR Validation and Verification Process. The non-permanence risk analysis shall be assessed by a validation/verification body in accordance with the VCS Standard (Optional for Scenario 2b).	with the sector plan. Each GHG emissions data report and social and environmental safeguard reports must undergo third-party verification, in which a third-party verification body issues a verification report. Third-party verification bodies shall be accredited in conformance with ISO 14064-3:2006 Greenhouse gases (Part 3) and ISO 14065:2013 Greenhouse gases. A third-party verification body shall conduct verification of the implementing jurisdiction's sector plan in a manner that is consistent with the ISEAL Assuring Compliance with Social and Environmental Standards Code of Good Practice Version 2.0	of the Technical Analysis of BURs (or biennial transparency reports as part of the Paris Agreement). As a result of these assessments, two land use, land-use change and forestry experts will develop, under their collective responsibility, a technical report to be published by the secretariat via the web platform on the UNFCCC website.

For more information please visit the
International REDD+ Standards and Finance Tool



Endnotes

1 Website: https://www.internationalreddstandards.org

2 This report does not include other exchange platforms where forest-related credits may be transacted.

3 For the purposes of this paper, we assessed the FCPF Methodological Framework only, however, we acknowledge that the FCPF Program includes further guidance as part of its Process Guidelines and other requirements. Readers are encouraged to check the FCPF's Process Guidelines for further information.

4 Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

5 The COP decided that countries may voluntarily submit forest reference levels for sub-national areas, as an interim basis, and while transitioning to national coverage, for the purpose of receiving result-based payments (decisions 1/CP.16, 12/CP.17, 13/CP.19 and 14/CP.19).

6 The market value of the VCM quadrupled between 2020 and 2021 – reaching a high of nearly 2Bn USD transacted https://www.ecosystemmarketplace.com/articles/the-art-of-integrity-state-of-the-voluntary-carbon-markets-q3-2022

7 Forest Reference Emissions Levels/Forest Reference Levels, or FREL/FRL

8 Under Decisions 2/CP.17 and 14/CP.19 of the Warsaw Framework for REDD+, countries agreed that results-based payments for REDD+ may come in the form of non-market- or market-based finance. In the case of market-based finance, the COP may decide on further specific modalities for verification (para. 15, decision 14/CP.19).

9 Argentina, Brazil, Cambodia, Chile, Colombia, Costa Rica, Ecuador, Indonesia, Lao People's Democratic Republic, Malaysia, Mexico, Papua New Guinea, Paraguay, and Uganda.

10 Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, and Indonesia.

11 Government of Norway, Petróleo Brasileiro S.A., Government of Germany- KfW.

12 REDD+ Early Movers Program– Colombia Visión Amazonía.

13 Article 1, Paris Agreement.

14 Paragraph 54, decision 1/CP.21; Article 5, Paris Agreement.

15 Despite their inherent differences, here we refer to financial opportunities as an umbrella concept to include multi lateral funds, bilateral agreements, compliance and voluntary markets, as well as other forms of private and public funding for REDD+.

16 The BioCarbon Fund provides results-based payments for verified emission reductions through an Emission Reductions Purchase Agreement (ERPA). The BioCarbon Fund also supports grant-based technical assistance and capacity-building efforts in jurisdictions.

17 In some instances buyers cancel the credits purchased in the VCM or allow host countries to use them for their own compliance purposes. In these cases, the approach is non-market since there is no trading. However, more commonly, buyers use these credits for their own accounting, representing a transaction. Further trading of these credits may happen too, corresponding to a market-based approach.

18 Internationally Transferred Mitigation Outcomes or ITMOs

19 For the purposes of this report, a ton represents a ton of CO_2 equivalent.

20 https://biocarbonfund-isfl.org/sites/isfl/files/2020-04/BioCF%20ISFL%20FAQ%20Updated.pdf

21 ERPAs have been signed with Chile, Costa Rica, Côte d'Ivoire, Dominican Republic, Democratic Republic of Congo, Fiji, Ghana, Guatemala, Indonesia, Lao PDR, Madagascar, Mozambique, Nepal, Republic of Congo, and Viet Nam.

22 https://www.greenclimate.fund/redd

23 Emergent is a non-profit intermediary acting between tropical forest countries and the private sector—creating a new marketplace in large-scale transactions at the jurisdictional level.

24 https://www.kfw-entwicklungsbank.de/International-financing/KfW-Development-Bank/Topics/Climate/REDD/

25 https://www.ecosystemmarketplace.com/articles/now-available-corsia-eligible-carbon-market-data-from-ecosystem-marketpla ceicao-environment-corsia-newsletter/

26 Forest Trends' Ecosystem Marketplace. 2022. The ART of Integrity: State of the Voluntary Carbon Markets, Q3 Insights Briefing. Washington DC: Forest Trends Association.

Endnotes

27 To be included in a future update of this report and the International REDD+ Finance and Standards Tool.

28 The JCM is not included as a standard since the methodologies and rules are agreed on a case-by-case basis in the Joint Committee composed of the host country and the Japanese government.

29 Depending on how TREES credits are used by the buyer, the standard may also allow non-market finance. Credits may also be purchased by buyers who wish to provide result-based finance and do not wish to take ownership or transfer of credits.

30 Depending on the final use of the credit, whether it is used for offsetting or canceled and retired.

31 Depending on the final use of the credit, whether it is used for offsetting or canceled and retired.

32 In a nested system, the terms “lower -” or “higher-” levels are used to describe the multiple scales within a jurisdiction. For example, a state-level jurisdictional program is a lower-level jurisdiction compared to the national level. Conversely, the state-level jurisdictional program is higher-level compared to local REDD+ implementation (e.g. municipality). These are just examples and will vary from place to place.

33 For information on all JNR Scenarios, please visit the International REDD+ Standards and Finance Tool.

34 Note 1: For nested projects, the buffer credits are calculated by multiplying the non-permanence risk rating (as deter mined by the AFOLU Non-Permanence Risk Tool) times the change in carbon stocks only. Note 2: For lower-level jurisdictional programs, Buffer credits are calculated by multiplying the non-permanence risk rating, determined in accordance with the VCS Program document JNR Non-Permanence Risk Tool, by the total number of GHG emission reductions that may be issued to the jurisdictional program only.

The Nature Conservancy

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