UNFCCC REDD+ Sovereign Carbon Credits: A Corporate Buyer's Guide

2ND EDITION 2023





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Redd+ Results Units Introduction

Introduction

The climate emergency is here! And it is happening more quickly than most scientists anticipated a few years ago. The adverse effects of climate change are much more severe than expected. The Intergovernmental Panel on Climate Change (IPCC) – the United Nations (UN) body for assessing the science related to climate change – recommends that the world attempt to limit global warming to 1.5°C compared with pre-industrial levels to reduce the challenging impacts on ecosystems, human health, and well-being. If we are to keep 1.5 degrees pathway alive, we must slow, stop, and reverse global deforestation.

The Paris Agreement shapes the global governmental efforts to combat the climate emergency and keep 1.5 degrees temperature target alive. It is an international climate treaty that defines how international law addresses the climate emergency. Implementation of the Paris Agreement requires economic and social transformation based on the best available science.

The Paris Agreement works on a 5-year cycle of increasingly ambitious climate action carried out by countries. By 2020, countries had to submit their plans for climate action, known as nationally determined contributions (NDCs). In their NDcs, countries communicate actions that they will take to reduce greenhouse gas emissions to reach the Paris Agreement goals. Countries also communicate in the NDCs actions they will take to build resilience to adapt to the impacts of rising temperatures.

For rainforest nations, especially lesser developed nations without a strong industrial base, climate action is largely possible through reducing emissions from deforestation of tropical forests. Further, protecting rainforests requires sovereign nations to forgo economic growth derived from revenues that accrue from government concessions for commercial agriculture and timber or postpone national infrastructure development.

To counter this, the Paris Agreement includes a dedicated article (Article 5) on the contribution of forests to mitigating climate change and recognizes *Reducing Emissions from Deforestation and Degradation (REDD+)* as an implementation mechanism that aims to *help slow, halt, and reverse forest cover and carbon loss*.

The REDD+ Mechanism is the only carbon emissions standard that can claim full compliance with the Paris Agreement. It was based on the principle of providing financial value for the carbon absorbed and stored in tropical rainforests – offering incentives for all rainforest countries to halt deforestation, increase their carbon stock, to lead on tackling the climate emergency. Therefore, it is critical that those acting to address this emergency understand this groundbreaking agreement and make their efforts consistent with its intent and methodologies.

Forest preservation efforts are measured and reported on a national scale to the United Nations Framework Convention on Climate Change (UNFCCC), which then verifies and publishes the emissions reductions. The REDD.plus platform provides businesses and individuals with access to these national emissions reductions in the form of REDD+ sovereign carbon credits. This guide will help you understand why the REDD+ Mechanism is critical for a sustainable future and will answer crucial questions about purchasing emissions reductions that count under the Paris Agreement and that are available on the REDD.plus platform.

The guide aims to answer the following questions:

- 1. Why tropical rainforests are the critical climate solution without which we cannot slow the climate emergency
- 2. How the UNFCCC's REDD+ Mechanism works as a standard to measure, report, and verify emission reductions from rainforests
- 3. How the REDD.plus platform provides businesses and individuals with access to national emissions reductions under the REDD+ Mechanism

This guide will raise additional questions, and we invite you to contact us at info@redd.plus to continue the dialogue. We all share the common goals of preserving and protecting rainforests and working to address the climate emergency.

If we are to keep 1.5 degrees pathway alive, we must slow, stop, and reverse global deforestation.



Redd+ Results Units The Climate Emergency & why Rainforests are Important

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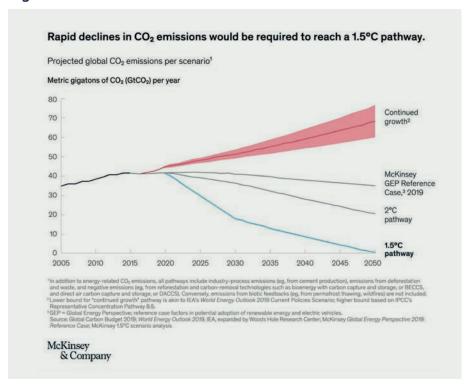
2.1 The Climate Emergency

The climate emergency is here! And it is happening more quickly than most scientists anticipated a few years ago. As a result, the adverse effects of climate change are much more severe than expected.

Scientists now believe that catastrophic climate change could render a significant portion of the earth uninhabitable because of continued high emissions, self-reinforcing climate feedback loops, and looming tipping points. We must reduce emissions and increase the removal of greenhouse gases to restore the melting Arctic and end the deadly cycle of damage that the current climate is delivering.

2.2 Achieving 1.5 Degrees by 2030

Figure 1: The Climate Curve

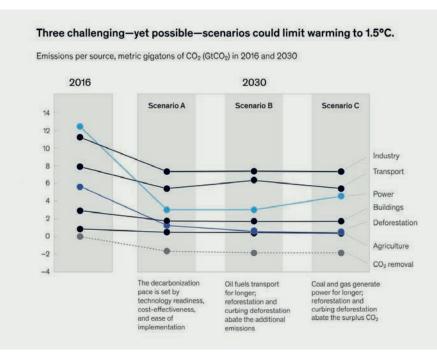


The Inter-Governmental Panel on Climate Change (IPCC) – the UN body for assessing the science related to climate change – recommends that the world attempt to limit global warming to 1.5°C compared with pre-industrial levels to reduce the challenging impacts on ecosystems, human health, and well-being.



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Figure 2: McKinsey's 3 scenarios for limiting warming to 1.5 degrees'



McKinsey offers
three scenarios
to reaching our
climate goals –
and all require
the immediate
curbing of global
deforestation

"Deforestation—quite often linked to agricultural practices, but not exclusively so—is one of the largest carbon-dioxide emitters, accounting for nearly 15 percent of global carbon dioxide emissions. Deforestation's outsize impact stems from the fact that removing a tree adds emissions to the atmosphere (most deforestation today involves clearing and burning) and removes that tree's potential as a carbon sink. Even after accounting for ongoing reforestation efforts, deforestation today claims an area close to the size of Greece every year", according to a McKinsey report in 2020.

McKinsey offers three scenarios for reaching our climate goals – and all require the immediate curbing of global deforestation:

"Achieving a 1.5-degree pathway would mean dramatically slowing global deforestation. By 2030, if all fossil fuel emissions were rapidly reduced (as in our first scenario), and all sectors of the economy pursued rapid decarbonization, deforestation would still need to fall by about 75 percent. In the other two scenarios, where reduced deforestation serves to help counteract slower decarbonization elsewhere, deforestation would need to be nearly halted as early as 2030. Either outcome would require a combination of actions (including regulation, enforcement, and incentives such as opportunity-cost payments to farmers)" (McKinsey, 2020).

2.3 Beyond Carbon: Other Benefits of Preserving Rainforests

Preserving and restoring rainforests and other land-use changes are a critical climate solution. But the benefit goes far beyond just their role in the global carbon budget. The loss of the rainforest would be catastrophic for many other reasons:

- Rainforests are home to 70% of the world's remaining biodiversity.
- They are crucial to human health, providing over 25% of the medicines we use.
- They support more than 1 billion people; their destruction adds to the climate migration crisis taking place across the globe.
- · Rainforests are vital to soil and water health.
- They are critical to food production.

2.4 Causes of Deforestation

The main drivers of deforestation are:

- Population growth. To meet the demands of a rapidly growing population in developing countries, forests are converted for agricultural lands, new living settlements, and infrastructure-building of roads.
- Mining. The increase of mining for gold and other valuable minerals in tropical forests
 is furthering damage due to the rising demand and high mineral prices. This causes
 environmental impacts like soil erosion, the formation of sinkholes, and contamination of soil,
 groundwater, and surface water by chemicals from mining processes.
- Logging or cutting of trees for paper production, firewood, building materials, and furniture making.
- · Commercial agriculture, such as palm oil, which destroys mangrove plantations.
- Livestock ranching. Conversion of forests to cattle ranching and deforestation are most vital in Central and South America.

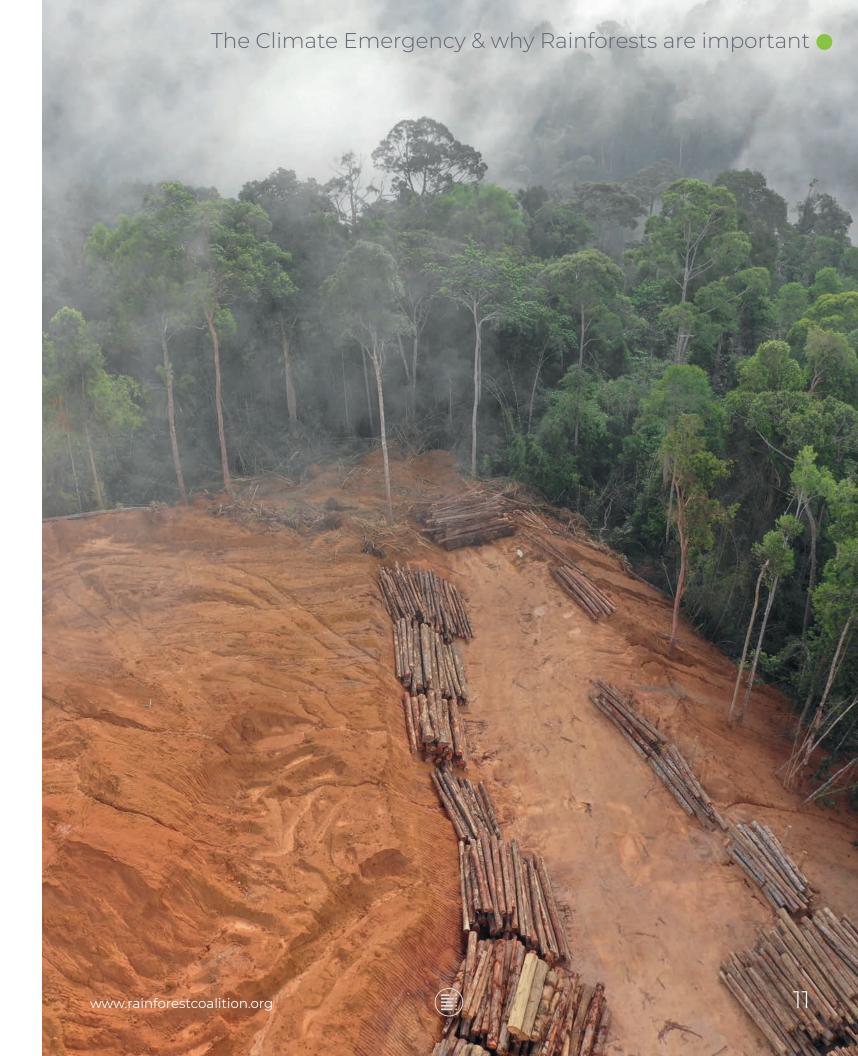
Agricultural expansion is the main driver of deforestation in Africa, Latin America, and subtropical Asia. Agriculture is especially responsible for deforestation in Latin America, where it accounts for over 90% of deforestation (whereas in Africa and subtropical Asia, it accounts for 70% to 75%).



2.5 Why Stopping Deforestation Is More Effective Than Planting Trees

Many believe that planting trees, or afforestation, is the most effective way to protect rainforests and that paying to prevent deforestation is "paying somebody to do nothing." This debate is called the removals vs. reduction distinction. It sounds good in theory, but it won't work in practice. Firstly, it takes years for reforestation and afforestation efforts to replace the carbon currently found in standing forests. A recent study found that at least 260 billion tons of carbon stored in nature is irrecoverable on any timescale relevant to avoiding dangerous climate impacts. Secondly, for the Paris Agreement, it is the net emissions that count. It makes no sense to plant trees in one location, only to destroy them in another. Also, when you are paying to stop deforestation, you are not "paying for nothing." Financial support goes to proven and successful forest conservation that has worked. Tropical rainforests provide vital natural services, such as carbon storage, water purification, and species habitats — so let's pay for that. In addition, the biodiversity lost in native rainforests would never be restored, simply by replanting trees.

When you are paying to stop deforestation, you are not "paying for nothing." You are paying for successful conservation efforts that have worked and preserved the rainforests – now and for future generations.



^{1. &}quot;Climate Math: What a 1.5-Degree Pathway Would Take," McKinsey & Co, April 30, 2020, https://www.mckinsey.com/business-functions/sustainability/our-insights/climate-math-what-a-1-point-5-degree-pathway-would-take.



3.1 United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC is an international treaty addressing climate change that was opened for signature in May 1992 at the Earth Summit in Rio de Janeiro.

The 198 countries that have ratified the Convention are called "Parties" to the Convention. The ultimate objective of the Convention is to prevent "dangerous human interference with the climate system" by stabilizing and reducing greenhouse gas emissions (GHGs)³. It is under this convention that both the Kyoto Protocol and Paris Agreement were negotiated and approved.

The UNFCCC, Kyoto Protocol, and Paris Agreement are supported by the Secretariat that oversees and provide administrative duties for those treaties.

A core principle of the UNFCCC is that developed countries, the source of most past and current GHG emissions, must do the most to cut emissions and are best situated to finance the transition to net-zero. This is summarized in the principle that Parties consider "their common but differentiated responsibilities and their specific national and regional development priorities, objectives, and circumstances." This principle is restated in the preamble and Article 1 of the Paris Agreement.

3.1.1 What are the COP, CMP and CMA?

It is common to refer to all decisions at the annual meeting of the UNFCCC as COP decisions, but there are three governing bodies that meet annually at the "COP Meetings:

- COP (Conference of the Parties) is the governing body for the UNFCCC
- CMP (Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol) is the governing body of the Kyoto Protocol
- CMA (Conference of the Parties serving as the meeting of the Parties to the Paris Agreement) is the governing body for the Paris Agreement²

Thus, while it is common to refer to the decisions on Article 6 and other elements of the Paris Agreement as COP decisions, the CMA governs this international agreement and issues the decisions. The CMA is thus the ultimate governing body of the REDD+ Framework.

³ https://unfccc.int/process-and-meetings/what-is-the-united-nations-framework-convention-on-climate-change



² CMA: Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement

The COP/CMP/CMA normally meet yearly, but substantive discussions take place throughout the year. Bonn, Germany, is the seat of the UNFCCC Secretariat and hosts the annual summer session, the Bonn Climate Change Summit. The location of the COP changes yearly as it rotates among the five recognized UN regions – Africa, Asia, Latin America and the Caribbean, Central and Eastern Europe, and Western Europe and others.

To learn more, check out UNFCCC's website here.4

The Paris Agreement's goal is to limit global warming to well below 2°C, and preferably to 1.5°C, compared to pre-industrial levels.

3.1.2 What Is IPCC?

The Intergovernmental Panel on Climate Change (IPCC) is an independent body founded under the auspices of the World Meteorological Organization and the United Nations Environment Program. It assesses the scientific literature and provides vital scientific information about the climate change process.

The *IPCC* is the United Nations Body for assessing the science related to climate change. They provide governments with critical information to guide them in policies to address climate change and key inputs for climate negotiations. IPCC guidance on getting to net-zero is now a key driver in determining which companies have credible net-zero programs.

One can think of the IPCC as a clearing house for scientific knowledge around climate change, it reviews thousands of pieces of research to find the consensus on an array of topics. The regular assessments provided cover three main areas: the physical basis of climate change; climate change impacts, adaptation, and vulnerability; and the mitigation of climate change. The IPCC also produces special reports such as *Climate Change and Land*.



3.2. The Paris Climate Agreement



The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 parties at COP21 in Paris, on 12 December 2015 and entered into force on 4 November 2016.

Its goal is to limit global warming to well below 2°C, and preferably to 1.5°C, compared to pre-industrial levels.

To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate-neutral world by mid-century.

The Paris Agreement is a landmark in the multilateral climate change process because, for the first time, a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects. It sets out the first-ever framework for global action against greenhouse gas emissions from developed and developing countries. It represents elements of previous climate action plans and agreements within the UNFCCC.

Unlike the Kyoto Protocol, which established legally binding reduction commitments for developed countries, the core of the new agreement puts forth a bottom-up approach, built upon the 2009 Copenhagen Accord, and founded upon Nationally Determined Contributions (NDCs).

3.2.1 How Does the Paris Agreement Work?

Implementation of the Paris Agreement requires economic and social transformation based on the best available science. The Paris Agreement works on a five-year cycle of increasingly ambitious climate action, carried out by countries. By 2020, countries had to submit their plans for climate action known as nationally determined contributions (NDCs). In their NDCs, countries communicate actions they will take to reduce their greenhouse gas emissions to reach the goals of the Paris Agreement. Countries also communicate in the NDCs actions they will take to build resilience to adapt to the impacts of rising temperatures. To better frame the efforts toward the long-term goal, the Paris Agreement invited countries to formulate and submit by 2020 long-term low greenhouse gas emission development strategies (LT-LEDS). LT-LEDS provides the long- term horizon to the NDCs. Unlike NDCs, they are not mandatory. Nevertheless, they place the NDCs into the context of countries' long-term planning and development priorities, providing a vision and direction for future development.

Specifically, the Paris Agreement confers on national governments the freedom to determine, at their own discretion, their ambition to contribute toward the fight against climate change.

In addition, the Paris Agreement establishes an Enhanced Transparency Framework (ETF) for action and support that is designed to increase confidence and trust about climate action and support provided and received. Under the ETF all Parties must submit a national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases as well as information to track progress made in implementing and achieving NDCs.

3.2.2 The Challenge Ahead

One of the challenges facing the Agreement will be how to strengthen the Parties' NDCs, as the combined effect of current commitments is insufficient to hold global temperature rise below 2°C. The years to come will determine whether the structure and rules of the new treaty form a workable framework to tackle the climate emergency and keep the global temperature well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

Although climate action needs to be massively increased to achieve the goals of the Paris Agreement, the years since its entry into force have already sparked low-carbon solutions and new markets. More countries, regions, cities, and companies are establishing carbon neutrality targets. Zero-carbon solutions are becoming competitive across economic sectors representing 25% of emissions. This trend is most noticeable in the power and transport sectors and has created many new business opportunities for early movers. By 2030, zero-carbon solutions could be competitive in sectors representing over 70% of global emissions.





3.3 Reducing Emissions from Deforestation and Degradation (REDD+)

For rainforest nations, especially lesser developed nations without a strong industrial base, climate action is largely possible through reducing emissions that occur from the deforestation of tropical forests. Further, protecting rainforests requires sovereign nations to forgo economic growth derived from revenues that accrue from government concessions for commercial agriculture and timber or postpone national infrastructure development.

To counter this, the Paris Agreement includes a dedicated article (Article 5) on the contribution of forests to mitigating climate change and recognizes *Reducing Emissions from Deforestation and Degradation (REDD+)* as an implementation mechanism that aims to help slow, halt and reverse forest cover and carbon loss.

REDD+ is a global conservation mechanism aiming to make tropical rainforests worth more alive than dead by overcoming the financial incentives that destroy and degrade them for timber, agriculture, and livestock grazing. The mechanism accomplishes its goals by measuring the carbon captured and stored in rainforests, which is the best method to value this resource.

3.4 Article 5

The Paris Agreement includes a dedicated article on the contribution of forests to mitigating climate change. Article 5 refers to the contribution of the conservation and enhancement of sinks and reservoirs of greenhouse gases in general:

- Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, Paragraph 1(d), of the Convention, including forests.
- Parties are encouraged to take action to implement and support, including through results- based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention for policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches.

Article 5 Paragraph 2 encourages Parties to implement and support REDD+ on the basis of already agreed decisions. It is therefore now the duty and commitment of all rainforest nations to give REDD+ the necessary relevance by supporting its implementation in line with all UNFCCC decisions.

Article 5, Paragraph 2, also clearly formalizes the architecture of the REDD+ mechanism and all methodological details and guidance adopted under the UNFCCC up to the Paris Agreement.

A reference to REDD+ is also included in Decision 1/CP.21, notably in Paragraph 55, which "recognizes the importance of adequate and predictable financial resources, including for results-based payments, as appropriate, for the implementation of REDD+; while reaffirming the importance of non-carbon benefits associated with such approaches; encouraging the coordination of support from, inter alia, public and private, bilateral and multilateral sources, such as the Green Climate Fund, and alternative sources in accordance with relevant decisions by the Conference of the Parties."

The implementation of REDD+ activities in developing countries at the national level still varies in many respects and depends strongly on national circumstances. What is certain is that all countries must follow the set of principles and requirements established at international level under the UNFCCC process and now defined by Article 5 of the Paris Agreement.

There are no legal or regulatory reasons why results-based payments under Article 5.2 of the Paris Agreement cannot be made via carbon offsets in the form of RRUs. For clarity, the Paris Agreement does not use the term "carbon offsets" in its text [nor did the Kyoto Protocol] but seeks to measure, report, and verify emission reductions and removals as other carbon standards claim to do. From a legal and regulatory perspective, REDD+ sovereign carbon credits can be issued, held, and retired as carbon offsets.

3.5 Article 6

Following the example set by the Kyoto Protocol to respond to the climate emergency through a market-based approach, the Paris Agreement recalls concepts in Article 6 on cooperative approaches. Article 6 could be critical to efficiently achieving the goals of the Paris Agreement. The purpose of Article 6 is straightforward, providing methods for "Parties to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions..." (Paris Agreement 6.1).

For rainforest nations without a strong industrial base, climate action is largely possible through reducing emissions that occur from deforestation of tropical forests.

Specifically:

Article 6.2 provides for an accounting framework using cooperative approaches between Parties, and for other purposes (companies), for the international transfer of mitigation outcomes (ITMOs) to achieve the respective NDCs. Carbon credits can be used as an ITMO, and a key priority when they are transferred is to prevent the emissions reductions or removals they represent to be claimed only by one entity. Coalition countries have been negotiating to ensure that the transfer of units derived under REDD+ are included in this cooperation scheme. REDD+ implementation responds perfectly to Article 6.3, which stipulates that the use of internationally transferred mitigation outcomes to achieve NDCs under this Agreement shall be voluntary and authorized by participating Parties.

Article 6.4 establishes a new mechanism to contribute to the mitigation of GHG emissions. This mechanism will replace the Clean Development Mechanism from the Kyoto Protocol. The CMA will have authority over this mechanism and the carbon credits it will produce will be commonly referred to as 6.4 ERs (emission reductions).

Article 6.8 recognizes the importance of non-market approaches to achieving NDCs. This would include technology transfer, finance for adaptation, and capacity building.

Application of Article 6

Both CMA4 in 2021 and CMA5 in 2022 adopted two sets of key decisions on operationalizing the Article 6 mechanisms and left unresolved business to be finalized in 2023 and 2024.

In particular, decision 2/CMA.3 on 6.2 guidance and decision 3/CMA.3 on the Rules, modalities and procedures for the 6.4 mechanism indicates the following requirements shall be fulfilled by the Parties to participate in the Article 6 mechanisms:

- Ensuring consistency with CMA decisions
- Apply CMA guidance to all corresponding adjustments (CAs) and cooperative approaches
- Be a Party to Paris Agreement
- Prepare, communicate, and maintain an NDC (art.4.2)
- Arrangements in place for authorizing and tracking ITMOs
- Provide the most recent National Inventory Report
- Participation in Art. 6 contributes to NDC implementation, long-term low-emission development strategy, and long-term goals Paris Agreement





Key elements of the Article 6 CMA decisions are:

- Nature ITMOs must be emission reductions and/or removals that are real, verified and additional
- Authorization The host governments authorize what mitigation activities can be used as an ITMO under 6.2 and what projects and activities are recognized under 6.4
- ITMOs Rules governing ITMOs are to be applied to all international transfers, not just those between parties.
- Corresponding Adjustment The host country must adjust its NDC if another entity claims the emission reduction. It makes no difference if the buyer is another Party to the Agreement or a private entity, if they are making an "offsetting" claim, then the host country must adjust
- Reductions versus Avoidance The CMA wisely differentiated between mitigation activities that lead to reductions versus avoidance of potential emissions
- Vintage Only mitigation that comes from activities post 2020 can be used at ITMOs

Achieving the Goals of the Paris Agreement with Carbon Credits

To comply with the Paris Agreement and ensure that their purchases help achieve the goal of global net zero, buyers of carbon credits should follow the following principles:

- Sovereign and Sector Based Carbon credits should be authorized and/or issued by sovereign entity covering net-emissions from an entire sector using a methodology approved under Article 5.2 or 6.4 of Paris Agreement
- Part of Global Carbon Budget Sector from which the credits have been purchased are included in national GHG inventories and NDCs of the host country, and thus part of the Enhanced Transparency Framework (Art. 13) and Global Stock Take (Art. 14)
- Host Country Adjustment If the buyer is making a claim of offsetting its emissions, the host
 country must have authorized the use of the carbon credit for such purpose and adjust its NDC
 to prevent double counting
- **Historical Baseline** The crediting baseline for emissions reductions should be calculated using historical emissions to ensure that incremental reductions/removals are taking place
- **Vintage** Only purchase post 2021 vintages and properly roll forward vintages purchased to align with the concepts of the global stock take

3.6 Sharm El-Sheikh Implementation Plan

COP27 Sharm El-Sheikh Implementation Plan

At COP27, the Sharm El-Sheikh Implementation Plan reaffirmed previous COP decisions that paved the way for developing nations to finance forest preservation through both bi-lateral country payments and private equity in return for REDD+ emissions reductions, called REDD+ Results. REDD+ results are now available as REDD+ sovereign carbon credits in a market historically dominated by US, UK, and European carbon project developers who offer low levels of finance back to communities in rainforest countries for small projects.

In the Sharm El-Sheikh Implementation Plan, REDD+ is enshrined in section XVI. The section, titled Forests, provides a clear reference to REDD+ in paragraph 80 and recalls Article 5, paragraph 2 of the Paris Agreement in which REDD+ was agreed:

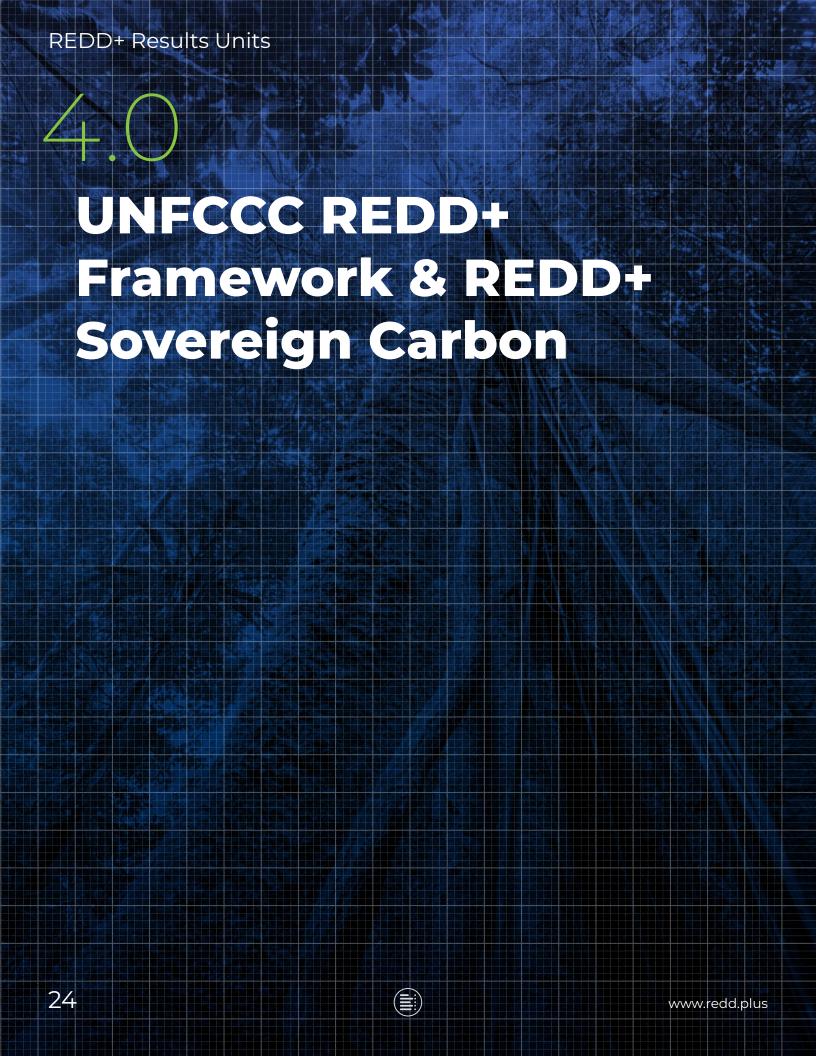
80. Recalls Article 5, paragraph 2, of the Paris Agreement, whereby Parties are encouraged to take action to implement and support, including through results-based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention 36 for: policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches;..."

Most importantly, the section was strengthened with the game-changing inclusion of a footnote (*36) referring to previously recognized COP decisions (1/CP.16 and 9/CP.19.) that permit private sector finance to flow to countries for their accomplished emissions reductions through the REDD+mechanism:

The footnote 9/CP.19 refers to the decision CP.19 Work Programme on Results-Based Finance to Progress the Full Implementation of the Activities referred to in decision 1/CP.16, paragraph 70, and:

"...Reaffirms that results-based finance provided to developing country Parties for the full implementation of the activities referred to in decision 1/CP.16, paragraph 70, that is new, additional and predictable may come from a variety of sources, public and private, bilateral, and multilateral, including alternative sources, as referred to in decision 2/CP.17, paragraph 65;"

Sharm El Sheikh Implementation Plan



The Global Rainforest Conservation Mechanism - REDD+

The UNFCCC's REDD+ Mechanism provides a global conservation standard aiming to make tropical rainforests worth more alive than dead by overcoming the financial incentives that destroy and degrade them for timber, agriculture, and livestock grazing. The REDD+ Mechanism accomplishes its goals by measuring the carbon captured and stored in rainforests, which is the most sustainable method available for valuing this resource. Countries and communities can then be compensated for the benefits their forests provide to all humanity.

The mechanism is designed to be national in scope; it was formalized in the Paris Agreement and currently covers 90% of the planet's rainforests and over 65 rainforest countries. The methods used to measure, report, and verify emission reductions were ratified at 21 separate decisions at the yearly meeting of the UNFCCC, known as the COP. REDD+ was formalized in the Paris Agreement, which over 195 countries have approved.

Note: The UNFCCC publication Key Decisions Relevant for Reducing Emissions from Deforestation and Forest Degradation provides a summary of the actions the COP took to create the REDD+ Mechanism.

4.2. What Is REDD+?

The REDD+ framework offers the only globally agreed standard to other carbon market standards, such as Verra, Gold Standard, Plan Vivo, or American Carbon Registry. The standards for the REDD+ framework were designed and approved using normal UNFCCC processes and procedures. At the COP's request, the guidance, modalities, and procedures for measurement, reporting, and verification (MRV) under the REDD+ Mechanism were developed by the two Subsidiary Bodies of the UNFCCC (SBSTA and the Subsidiary Body for Implementation [SBI]) and ad hoc working groups. These groups rely on guidance and guidelines from the IPCC. The COP then meets to approve – or not – these recommendations.

The REDD+ framework is a well-defined process for countries to generate verified emission reductions that qualify for compensation or results-based payments. The Mechanism's methods and procedures were agreed upon by countries under UNFCCC, and independent third-party experts verified the emissions reductions. The REDD+ Mechanism has defined requirements for the MRV of emissions reductions, and it provides safeguards against environmental and social risks. It is unique because it is national in scope and fully complies with the Paris Agreement.



The REDD+ framework is a well-defined process for countries to generate verified emission reductions that qualify for compensation or results-based payments.

The UNFCCC Secretariat administers the REDD+ Mechanism. It determines if a country has fulfilled all the requirements and then posts the emission reductions to the *REDD+ Info Hub* as REDD+ Results. Emissions reductions are verified by independent experts from the UNFCCC Roster of Experts. There is representation from both developed and developing countries, and none of the experts can come from the country seeking verification.

4.2.1 Which Activities Qualify under REDD+?

National REDD+ programs can cover both actions to reduce emissions (preserving) and to remove carbon (restoring):

- Reducing emissions from deforestation
- Reducing emissions from forest degradation
- Conservation of forest carbon stocks
- Sustainable management of forests
- Enhancement of forest carbon stocks

4.3 What makes REDD+ Unique?

It is a national scope emission reduction program created under and administered by the UNFCCC. It is formalized in Article 5 of the Paris Agreement, and as such, it has been approved by over 197 countries. No other emissions program can make these claims. National programs – combined with the rigorous measurement, independent verification and global record-keeping required under the Paris Agreement – have delivered results on a global scale, unmatched by any other voluntary program.

The two key elements of the REDD+ Mechanism – national in scope and compliant with the Paris Agreement – are intertwined, and together create the atmospheric integrity needed to save rainforest and avoid a climate crisis. One without the other cannot do the job.

As negotiated and agreed upon, the REDD+ Mechanism unequivocally vests the authority for measuring and reporting emission reductions from forest activities with national governments, not projects or jurisdictional programs. National scope requires net emissions accounting across all forest areas in a nation. This means no credits are granted for projects in one area of the country if logging is ongoing elsewhere in the country. Subnational programs could previously be used as an "interim" measure to a national program, it was agreed that subnational scales could not be used for markets. To ensure atmospheric integrity, the REDD+ label was never intended to be used for individual projects.

4.4 The Impact of REDD+

The REDD+ Mechanism is the most successful voluntary emissions-reduction program created.

- To date, ten countries have generated 9.0 billion tons of emissions reductions verified by the UNFCCC.
- Fifty countries have submitted a Forest Reference Level, which acts as the crediting baseline for calculating reductions and is a critical step in generating REDD+ Results.
- The UNFCCC has completed 45 technical assessments of REDD+ programs.
- Unfortunately, countries have been rewarded for less than 4% of their REDD+ Results, which is why we need REDD.plus.

4.5 Why REDD+ is Important

REDD+ makes rainforests worth more alive than dead, overcoming the financial incentives to destroy and degrade them for timber, agriculture, and livestock grazing. Measuring and pricing the carbon captured and stored is currently the best method to value this critical resource. This is what the REDD+ Mechanism accomplishes. Through the creation of national programs, global record keeping, and rigorous international measurement and verification, REDD+ is the only mechanism proven to slow deforestation on a global scale.



4.5.1 What REDD+ Offers Developed Countries

REDD+ can help countries meet their Paris Agreement targets or NDCs. Under the Paris Agreement, all countries have agreed to reduce their emissions according to the national targets they've set for themselves. These countries can use REDD+ to meet their NDCs – it delivers emissions reductions cost-effectively while protecting their forests.

The Paris Agreement also recognizes that some countries will want to transfer and trade to meet those NDCs. Therefore, the REDD+ framework specifies a system for tracking, measuring, and verifying carbon reductions and carbon removals submitted by rainforest nations. After the results and removals have been verified, they can be publicly listed on the *UNFCCC REDD+ Info Hub*.

4.5.2 What REDD+ Offers Businesses

With many of the world's largest corporations pledging to eliminate all their emissions, the REDD+ Mechanism provides credible carbon emission reductions to help them. Corporations can achieve zero emission goals by exclusively purchasing renewable energy. If the necessary renewable energy is not available, comprehensive energy efficiency measures can be undertaken in the meantime. They can also drive down emissions from their entire supply and value chain through green policies.

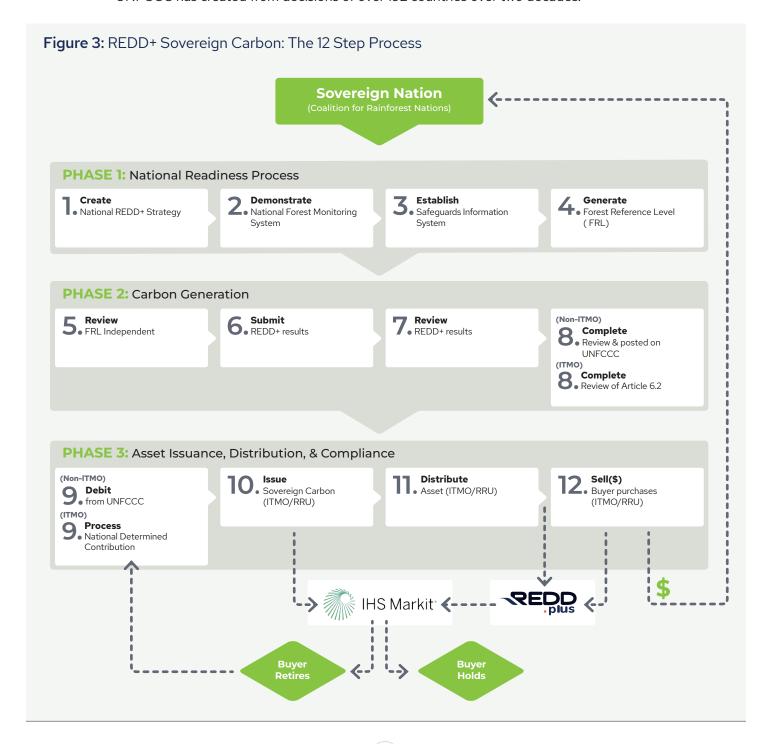
REDD+ allows corporations to positively contribute to the environment when they cannot reduce their emissions directly from their own measures. Businesses can purchase emissions reductions from tropical rainforest conservation under the REDD+ Mechanism – which also helps preserve and restore a vital natural resource and protect endangered species. You can support our countries' national efforts to stop deforestation by purchasing their emissions reductions on REDD.plus.

4.5.3 Offset Personal Carbon Footprints

Finally, you can also use REDD+ to offset personal carbon footprints. Carbon emissions from lifestyle choices – from transportation to diet – affect the climate. This is a global problem, but you can be a part of the solution. Reduce it by purchasing REDD+ carbon credits from our countries on REDD.plus.

4.6 How does UNFCCC REDD+ work?

The REDD+ framework is the only initiative to slow, stop, and reverse global deforestation today. It is a difficult system because it is strong, requiring approximately 54 different metrics to be evaluated. This rigor lies in the UNFCCC REDD+ measuring, reporting and verification system which the UNFCCC has created from decisions of over 192 countries over two decades.



UNFCCC REDD+ Mechanism & REDD+ Sovereign Carbon •

Countries need around four years to go through the whole process from first submission to getting their REDD+ Results. Countries take between 18 months to two years to complete each independent review, and there are two independent reviews by a roster of UNFCCC experts. Each review comprises a rigorous process and results in reports. And only when all the requirements from UNFCCC are met is the country or party eligible to seek REDD+ Results and receive results-based payments from public, multi-lateral or private finance.

REDD+ is a three-phase process that a country must undergo before it can issue REDD+ sovereign carbon credits.

Phase One & Two: National Readiness Process

In the first phase of the REDD+ Mechanism, countries or parties must show the UNFCCC that they have the capacity and strategy to undergo the REDD+ process before they can receive REDD+ Results and create sovereign carbon credits. During the readiness phase, the country must make four key submissions for UNFCCC Measuring, Reporting and Verification (MRV) process – which are audited by the UNFCCC roster of experts

Step 1 - Create a National strategy or action plan

A national strategy or action plan is one of the elements to be developed by developing country Parties implementing REDD+ activities (according to paragraph 71 of decision 1/CP.16). This national strategy or action plan is highly dependent upon national circumstances.

During the development and implementation of national strategies or action plans, developing countries should address, inter alia: the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and the *REDD+ safeguards* including the full and effective participation of relevant stakeholders, inter alia indigenous peoples and local communities. At the same time, the COP recognized the importance and necessity of adequate and predictable financial and technology support for developing the national strategy or action plan.

In seeking to obtain and receive results-based payments for their REDD+ results-based actions, developing countries should have a national strategy or action plan in place, by decision 9/CP.19, and a link to the national strategy or action plan should also be provided in the Lima REDD+ Information Hub.

Read More: Most relevant COP decisions: 1/CP.16, 9/CP.19



Step 2 - Demonstrate a National Forest Monitoring System

A national forest monitoring system is one of the elements to be developed by developing country Parties implementing REDD+ activities (according to paragraph 71 of decision 1/CP.16). The COP recognized the importance and necessity of adequate and predictable financial and technology support for developing the national forest monitoring system. The system defines what is monitored, how it is being conducted, and why the approach was chosen.

The key to any functional measurement and reporting of forest carbon is reliable data of forest area and forest area changes. Already in 2009, the COP adopted guidance on establishing robust and transparent national forest monitoring systems. Depending on national circumstances, these systems may also be a result of combining sub-national systems as part of national forest monitoring systems. As an interim measure only, subnational monitoring and reporting can be implemented in accordance with a stepwise approach.

National forest monitoring systems should be flexible, allowing for improvement and building upon existing systems, as appropriate. They should reflect the phased approach of REDD+ implementation and enable the assessment of different types of forest in the country according to national definitions, including natural forests. They may also provide relevant information to the safeguards information systems.

The data and information provided by national forest monitoring systems should be transparent, consistent over time, and suitable for measuring, reporting and verifying, considering national capabilities and capacities. To achieve this, the systems should also use a combination of remote sensing and ground-based forest carbon inventory approaches for estimating anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes.

Having the national or, as an interim measure, subnational forest monitoring system in place is one of the requirements to be eligible for results-based payments in accordance with decision 9/ CP.19, and information on the forest monitoring system should also be provided in the Lima REDD+ Information Hub.

Read more: Most relevant COP decisions: 4/CP.15, 1/CP.16, 11/CP.19

Step 3 - Generate a Forest Reference Level (FRL)

The Forest Reference Level (FRL) uses historical data to project expected baseline emissions against which actual emissions will be compared to estimate emissions reductions. The FRL then undergoes analysis and verification by independent third parties chosen from the UNFCCC Group of Experts. Their report is published on the *REDD+ Info Hub*.

Independent UNFCCC Forest experts undertake two separate verification processes and draft detailed reports on the:

- · Technical assessment of the forest reference level as a baseline for REDD+ activities
- · Technical analysis of the submitted REDD+ results.

The UNFCCC has a robust review system. The verification process entails independent experts who have been trained by the UNFCCC. Before a reviewer can qualify as an expert the individual first must study a 1000-page document on which they are tested before they can review a country's submissions. The UNFCCC independently selects experts to do a review, one from a developing and one from a developed country. The UNFCCC reviewers are not compensated, and they must be independent, and cannot be from any country that is under review.

"Countries need first to measure the estimates of land use areas and carbon stocks. They need to compile that and then the UNFCCC review process or the verification process takes some time. They first go through the review process for the forest reference level, which sets up the baselines. Then, the baseline on estimates of emissions and removals in the country must be verified under the UNFCCC. This takes around nine months for the UNFCCC reviewers to go through the reports, discuss results with the countries, request improvements – and for countries to then improve the report and resubmit as a new modified forest reference level," Eloise Guidi, REDD+ Technical Expert, CfRN



Step 4 - Publish REDD+ Safeguards

A country or Party provides a summary to UNFCCC of information on how the seven REDD+ safeguards are being addressed and respected throughout REDD+ activities. The submission details how a country addresses the environmental and social risks created by a REDD+ program. The REDD+ Mechanism is clear that preserving and protecting rainforests cannot cause negative social and environmental impacts.

A system for providing information on how the safeguards are being addressed and respected is one of the elements to be developed by developing country Parties implementing REDD+ activities (according to paragraph 71 of decision 1/CP.16). The COP recognized the importance and necessity of adequate and predictable financial and technology support for developing such safeguards information systems.

The following safeguards should be promoted and supported when implementing REDD+ activities:

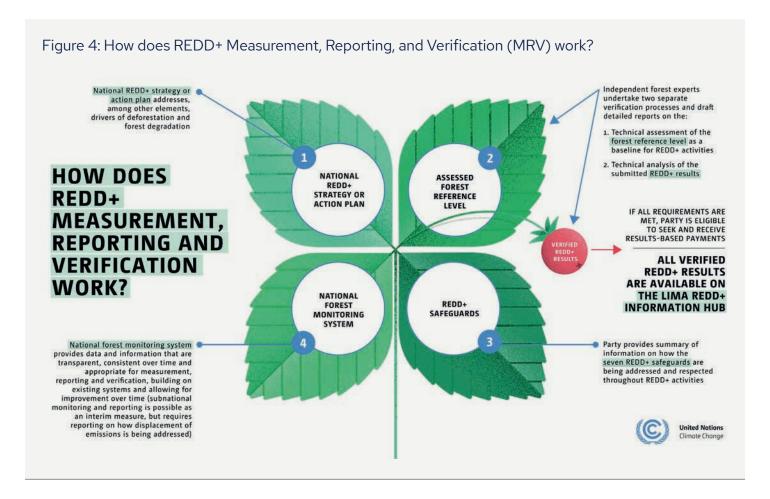
- 1. That actions complement or are consistent with the objectives of national forest programs and relevant international conventions and agreements;
- 2. Transparent and effective national forest governance structures, taking into account national legislation and sovereignty.
- 3. Respect for the knowledge 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;
- 4. The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of this decision;
- 5. That actions are consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of this decision 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, taking into account the need for sustainable livelihoods of indigenous peoples and local communities and their interdependence on forests in most countries, reflected in the United Nations Declaration on the Rights of Indigenous Peoples, as well as the International Mother Earth Day.
- 6. Actions to address the risks of reversals;
- 7. Actions to reduce displacement of emissions.

Taking into account national circumstances and respective capabilities, recognizing national sovereignty and legislation, relevant international obligations and agreements, and respecting gender considerations, the safeguards information systems should provide transparent and consistent information that is accessible to all relevant stakeholders and updated regularly. The systems should build upon existing systems, be implemented at the national level and be transparent and flexible to allow for improvements over time.

Developing country Parties implementing REDD+ activities should periodically provide a summary of information on how the safeguards are being addressed and respected. This summary should be included in *national communications* or be provided, voluntarily, via the REDD+ Web Platform.

The provision of the most recent summary of information on how the safeguards are being addressed and respected is one of the requirements to be eligible for results-based payments by decision 9/CP.19, and the summary should also be provided in the Lima REDD+ Information Hub.

Read more: Most relevant COP decisions: 1/CP.16, 12/CP.17, 12/CP.19, 17/CP.21



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Steps 5-7

So, a review is undertaken on the forest reference level. Two international experts are hired that are trained by the UNFCCC and they conduct an independent review.

That report is then sent to the applying government. The government and the reviewers solve any questions that they have between them and when they're satisfied that.

When they're satisfied that report is issued and it is publicly available to anyone. But that's just the first review.

Fast forward now. The country carries out action to slow deforestation and reduce emissions under its reference level. Those results are then reviewed a second time. Two different reviewers are hired. They look at the reference level, they look at the data on the emissions, and they assess the results or the reductions of the removals.

And then there's a second review and another expert report is written with questions and areas to improve. This report is presented to the government, and the government then works with the reviewers to get to a level of satisfaction.

Actual emissions during the crediting period are measured and reported in a Technical Annex to the country's Biennial Update Report. Commonly referred to as the BUR, this report is a key element in a country's obligations, showing how the REDD+ mechanism is integrated into and compliant with the Paris Agreement. The estimate of emission reductions then undergoes analysis and verification by the UNFCCC Roster of Experts. Their report is published on the *REDD+ Info Hub*. The UNFCCC Secretariat reviews all documentation that the country presents to ensure that the requirements of the REDD+ mechanism have been met. The emissions reductions are then posted to the REDD+ Info Hub as "REDD+ Results".

Key Topics

Reference Levels

UNFCCC Reference Levels must consider historical data, be transparent, and allow flexibility to accommodate national circumstances and capabilities, while pursuing environmental integrity and avoiding perverse incentives. Information should be transparent, complete, consistent with guidance agreed by the COP. Emission reductions and removals must demonstrate additionality.

There are two generally accepted methods to produce a national reference level under the UNFCCC, calculate a) a Historical average or b) a regression of historical data. Reference levels must be updated, using the lower numbers achieved in the last reference level, every 5 -10 years – best practice being five years.

Countries are encouraged to go through a rigorous Quality Assessment and Quality Control process (Q/A Q/C). Over 80% have. Further, quality is increasing as satellite data become available with higher frequency and higher resolution.

Independent Verification

Independent assessments, part of the UNFCCC verification process, are required of both reference levels and results -- two separate independent verification assessments.

Both are led by independent UNFCCC experts selected from a roster of accredited experts. Final Technical Assessments are posted for public review. The UNFCCC independently selects each expert, one from a developing and one from a developed country. The reviewers are not compensated, and they must be independent. They cannot be nationals from the country that is under review. Before a reviewer qualifies as an expert, the individual must pass a UNFCCC course of study based on a 1000page reading list. Rarely do experts pass the first time.

The UNFCCC Secretariat may request a country make necessary improvements and resubmit, effectively rejecting a submission. In instances where a country's data, such as the Forest Reference Emissions Level (FREL), are rejected, the entire process must begin again.

Fact Box 1: Myth busting: Can countries ignore UNFCCC reviews?

Some critics say that that sovereign governments can ignore the UNFCCC review. Countries as sovereign countries, in theory, have the right to ignore the UNFCCC review. The fact is that no country has ever ignored a review. Now, why would a country ignore a review when they know that the quality of the credit is going to impact the price that they receive for it? Also, it makes no sense for a country to ignore a review and not respond to their comments because the REDD+ MRV process is fully transparent. Everyone can read country submissions and reports on UNFCCC REDD+ hub. Buyers will know that a country has ignored the reviewers.

Further, there is no standard within the carbon markets that has more criteria and has a more robust review system than the REDD+ mechanism. In fact, since inception, 85% of the countries that have submitted under REDD+ have been knocked back because the submission wasn't approved by UNFCCC. They have had to re-apply for the Forest Reference Emissions Level (FREL). Similarly, about 48% of the countries that have submitted for REDD+ Results have also been knocked back and had to resubmit.

Proportion of Modified FREL/FRLs and REDD+ Results under UNFCCC

1. Modified FREL/FRL submitted to UNFCCC after Technical assessment week

Modified FREL/FRL	Value	%
Modified	64	85%
Non-modified	3	4%
Ongoing	8	11%
Total	75	100%

2. Modified REDD+ TA submitted to UNFCCC after Technical analysis week

Modified FREL/FRL	Value	%
Modified	13	48%
Non-modified	10	37%
Ongoing	4	15%
Total	27	100%





Reductions. Removals. Netted.

The Paris Agreement only credits real reductions and removals which are only approved after the emission reductions can be proven based on an independent review of past emissions levels. *Article 6.2* allows only emissions reductions or removals. While there are ongoing discussions around *avoidance*, it has never been permitted under the Paris Agreement, nor should it ever be.

The UNFCCC REDD+ does not allow cherry-picking areas either. Rather, all emissions and removals must be netted out across the entire country and be reported in subsequent reporting cycles – thereby netting out leakage and addressing permanence.

Scale

Many miss the importance differences around national, jurisdictional and project scales.

The Paris Agreement requires national-scale action for REDD+. While countries were permitted to 'demonstrate' with smaller areas, submissions are now almost exclusively national. National-scale accounting avoids leakage, and the Paris Agreement requires reporting in subsequent NDC cycles to address permanence and negate the need for buffers.

Table 1 - A Comparative Analysis of UNFCCC REDD+ VERRA REDD+ and Art TRees REDD+

	UNFCCC REDD+ Mechanism	Verra REDD+	ART/TREES & LEAF
Administrator	UNFCCC Secretariat	VERRA	ART & Emergent
Standards for MRV	Approved by COP, enshrined in Article 5 and subsequently approved by 190 countries	Verra sets overall standards, VVBs and project developers can create different methodologies.	ART
National program	Yes	No	Sub-national allowed until 2030
Baselines calculated with historical emission not counter-factual BAU	Yes	No	Yes
Avoidance	No	Yes	Yes for HFLD
Verification	Independent experts selected by the UNFCCC Secretariat from the UNFCCC Roster of Experts	Third party businesses - Verification & Validation Bodies	Third party businesses - Verification & Validation Bodies
Permanence/reversals	No buffer pools. Reversals addressed in subsequent submissions	Buffer Pools	Buffer Pools
Safeguards	Cancun Safeguard Required	Cancun Safeguards not required	Cancun Safeguard Required
Leakage	National programs solve leakage issues	Buffer zones and pools	Buffer pool

Both the *World Bank and ART-Trees* allow jurisdictional or subnational scale action. This encourages gaming and exposes credits to leakage and permanence risks. Countries have picked small areas for crediting and are permitted to largely ignore deforestation in other parts of the country. Further, they also allow gaming for counties with low deforestation by allowing creative baselines. Sadly, our atmosphere can't ignore those additional emissions.

Steps 10 & 11: Issue & Distribute

After achieving the UNFCCC REDD+ results, a country must create a national registry system to show the emission reductions they have saved or reduced before any sales of sovereign carbon credits.

So let's assume a country has a million credits on the UNFCCC REDD+ hub, they have to transpose those credits onto their national registry.

REDD.plus is simply a piloting tool to help countries build the capacity around important elements, such as national registries, that are required under the Paris Agreement in order to create climate finance to support their REDD+ actions

The country has to serialize each carbon credit, give them unique identifiers, and then they have to track them through their entire life cycle. So when were they issued? When were they sold? When were they retired or when were they cancelled?

And we must have a public and transparent record of the life cycle of every emission reduction that is put on the UNFCCC REDD+ hub. So, the job of the national registry is to track the life cycle of every credit. But that's just a report.

Now, that registry must be plugged into an exchange platform where a country has to put its credits from its registry into the exchange if somebody wants to buy a credit.

The European Environment Exchange is an example, and they need to be electronically linked so that as a transaction occurs, automatically, the record is kept in the registry system.

REDD.plus registry is an online infrastructure tool to track environmental credits through their lifecycle and is designated the official National Registry of the relevant country under the Paris Agreement rulebook. Only government accounts may issue RRUs, known as sovereign credits, authorized under the Paris Agreement.

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Step 12: Sell

Now if you're a corporate and you're interested in buying Paris compliant UNFCCC REDD+ credits, the first thing you do is you have to apply to the REDD.plus platform

Then, S&P Global will complete a Know Your Customer process. They want to know: Are you a real company? Are you the right person to engage? And once you've been approved, you will get an account on the REDD.plus platform that then allows you to do one of two things:

You can either go on the market and see what credits are available for sale and what price they're at. And you can buy or you can do the reverse. You can put out a bid which is 'I want 100,000 credits at this price' to see who will give you an offer. And so the platform allows for both of those actions.

All those transactions are reported back in the registry, and then the registry will report those transactions to the UNFCC on a biannual basis.

Any transfer of the carbon credit is subject to approval by REDD.plus. Any retirement must be reported to REDD.plus prior to retirement becoming effective. The Registry also acts as Reporting Agent, ensuring RRUs have been duly authorized by the country and tracks them through their lifecycle, reporting to the UNFCCC as required.

Step 9: Debit the Credit from National Registry

Then a buyer would buy those credits which would have to be reported back to the registry, meaning the credits went out of the country's account into the corporate account and a report on the price.

And now every two years, those summary reports have to be sent to the UNFCCC.

So for the registry system used is S&P Global; they have been the most acclaimed registry provider over the last decade.

Keep in mind, this is this is a sovereign asset. We must have excellent record-keeping.





4.7 The REDD+ Sovereign Carbon Approach

Forecasts suggest that meeting the current target of limiting the rise in global temperatures to 1.5° will need deep and sustained reductions in carbon emissions. This can be achieved by reducing emissions from existing activities and improving methods to remove existing carbon from the air (carbon capture or sequestration). Continued carbon capture will be necessary to achieve a "net zero" world through offsetting residual carbon emissions from existing activities. Better management of natural resources (as we increasingly embrace the idea of "nature as capital") will make nature-based solutions particularly important in reducing carbon emissions and improving carbon capture.

Natural resources are not being effectively managed now. The Intergovernmental Panel on Climate Change (IPCC) estimates that deforestation was the main contributor to substantial net positive CO₂ emissions from Agriculture, Forestry and Other Land Uses (AFOLU) from 2007-2016. Sovereign carbon credits can help provide capital to fund the transition that takes the AFOLU contribution from being a net emitter to a net sequester of carbon. The likely scale and momentum of this market should offer a range of advantages over the existing fragmented project-byproject approach. It could improve our ability to mobilise capital towards nature and towards local communities/indigenous communities as protectors of nature.

Forests offer an important way to use this "nature as capital" approach to reducing emissions. At present, deforestation and forest degradation account for an estimated six gigatons of greenhouse gas emissions (mostly CO₂) a year-putting it not far behind the two leading sources of global carbon emissions, China and the U.S. Conversely, forest expansion and conservation also offer the potential to increase carbon removal, possibly equivalent to five gigatons per year. However, there is some uncertainty about how sustainable this carbon capture rate will be. As part of the Paris Agreement, Article 5, we already have a system to reduce carbon emissions from forests –REDD+ (Reducing Emissions from Deforestation and forest Degradation plus the sustainable management of forests, and the conservation and enhancement of forest carbon stock).

Carbon credits will remain one of the most important tools to mobilise capital toward mitigating climate change. An estimated 22% of global greenhouse gas (GHG) emissions are in effect already covered by carbon markets, almost entirely through the compliance (or regulated) markets created and run at a national or sub-national level on a mandatory basis for large-scale, high polluting companies required by statute to reduce their greenhouse gas (GHG) emissions. The residual 78% of emissions currently remain unaccounted for. As we move towards global net zero, capital needs to be deployed to close this emissions gap. Voluntary carbon markets, by contrast, are at a much earlier stage of their evolution. These voluntary markets -which allow businesses, private investors, governments, and non-governmental organizations (NGOs) to purchase carbon offsets for their own emissions -had a turnover of around USD1bnin 2021, up sharply on 2020 levels, but still equivalent to only a tiny share of overall carbon markets turnover.

Following UNFCCC guidelines, REDD+ sovereign' carbon credits are generated by slowing and eventually reversing rainforest deforestation. Their purchase allows institutional investors and corporates to align their Net-Zero targets with the Paris Agreement.

At present, this is not happening: in compliance markets, most of the investment from sale of the carbon credits is used in technical/engineering solutions and reinvested in the country of the regulator. More obvious channeling of funds to nature and local/indigenous communities could also help improve public perceptions around carbon trading.

In their current form, the voluntary carbon markets (VCM) have not been able to provide the necessary scale (they represent carbon credits equal to just 0.2% of global emissions), integrity (emissions reductions are not accounted for within the Paris Agreement), and transparency (carbon price and revenue allocation) required by institutional investors. Nor do they unlock the hundreds of billions of dollars needed each year to reverse global rainforest deforestation.

Sovereign carbon is a new institutional asset class that seeks to bridge that gap, offering institutional investors and corporates the ability to reverse deforestation at scale through Paris Agreement-compliant carbon credits. For corporate buyers purchasing REDD+ sovereign carbon allows the buyer to:

- Support sovereign action to slow, stop and reverse deforestation and reduce emissions.
- Avert double counting by purchasing emissions reductions included in NDCs and part of global carbon accounting under the Paris Agreement.
- Avoid the folly of 'avoidance' to ensure real emission reductions and removals.
- Stop leakage by participating in a national-scale emissions reduction system.
- Ensure permanence through the NDC process.
- Secure best-in-class MRV under the UNFCCC.
- Ensure that over 95% of the carbon revenues return to rainforest countries.

To learn more, click here



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REDD+ Results Unit

The REDD+ sovereign carbon asset is represented by a REDD+ Result Unit (RRU). It must be included in the issuing country's national Greenhouse Gas inventory (GHGi) and their NDC. RRUs are the only sovereign carbon credit on the market that have completed the UNFCCC MRV process. They are issued under Article 5.2 or Article 6 of the Paris Agreement. And they are the only carbon asset that can deliver the financing required to stop and reverse deforestation with the speed and scale required by climate science. They offer buyers carbon reductions and removals at national scale. Each RRU represents one metric ton of CO2.

They are authorized, issued, and tracked throughout their lifecycle via the issuing country's national registry as part of the global carbon accounting system established by the Paris Agreement. This allows rainforest nations to oversee their greenhouse gas emissions and reductions which is critical to their NDCs.

Parties to the Paris Agreement may issue RRUs and sell them to private buyers under Articles 5.2 and 6.2. As mentioned earlier, the COP27 Sharm El-Sheikh Implementation Plan reaffirms that private finance is welcome to support 5.2 credits under the decisions 1/CP.27 art 79 & 80 and 1/ CMA.4 section XVI art 47.

A 2021 vintage or later can also qualify as an Internationally Transferrable Mitigation Outcome (ITMO). The credit is fully compliant with the Paris Agreement Article 5 and must also be compliant under Article 6.2 to become an Internationally Transferrable Mitigation Outcome (ITMO):

- · Real, verified, and additional
- Emissions Reduction and Removals
- Measured in tCO2e consistent with countries' NDC
- Authorized for use towards an NDC
- Vintage 2021 onwards
- · (Correspondingly) Adjusted
- Avoid Leakage
- Part of the Global Accounting system.

There are no legal or regulatory reasons why results-based payments under Article 5.2 of the Paris Agreement cannot be made via carbon offsets in the form of RRUs. For clarity, the Paris Agreement does not use the term "carbon offsets" in its text [nor did the Kyoto Protocol] but seeks to measure, report, and verify emission reductions and removals as other carbon standards claim to do. From a legal and regulatory perspective RRUs can be issued, held, and retired as carbon offsets.



Papua New

As formalized to Article 5 of the Paris Agreement, the REDD+ Mechanism is designed to "slow, halt and reverse forest cover and carbon loss" across an entire country. It has led and will continue to lead to sequential declines in emissions and protect entire rainforests. It thus meets and exceeds the accepted criteria to judge the quality of carbon credits: Real, Measurable, Permanent, Additional, Independently Verified, and Unique.

5.1 Scale and Rigor

The UNFCCC REDD+ framework, as mandated in Article 5 of the Paris Agreement, creates a financial value for the carbon absorbed by rainforests and offers performance-based payments for national conservation efforts that have worked. Despite limited public awareness, the REDD+ framework has delivered over 9 billion UNFCCC-compliant emissions reductions and has a multigigaton pipeline becoming available.

5.2 The Global Carbon Standard

The UNFCCC REDD+ Mechanism is a standard that meets the goals of the Paris Agreement. It was explicitly designed for the goals of a global climate agreement and with the purpose of ending deforestation and forest degradation. The national scale net accounting and mandated improvement each five-year cycle cannot be matched by other voluntary standards.

5.3. Role of Governments and National Action

Success in preserving and restoring rainforests requires clarity and enforcement of land-tenure and land-use regulations. Simply put, good government policies are critical to saving rainforests, with the authority and responsibility for forests vested locally. Paying for carbon credits from a national-scale program is crucial.

5.4. No Leakage

UNFCCC REDD+ emissions reductions can be generated only if there is a net reduction of emissions at a national scale. This eliminates the risk found in subnational, jurisdictional, and project programs that deforestation will leak or be displaced outside the boundaries of the program. Buyers should be aware that project-based carbon credits preserve only one part of a national forest - and do not stop destruction of forests "further down the river bend" or in another part of the country.

REDD+ Results Units

Under the Paris Agreement, countries are obliged to generate emission reductions on net emissions from the entire forests of that country. This prevents the problem commonly called leakage or displacement. The carbon credits must originate from proven and verified conservation activities that have resulted in sequential declines in emissions and deforestation in the country of origin.

5.5 Fully Integrated into NDCs

UNFCCC REDD+ emissions reductions are part of a country's overall greenhouse gas inventory under the Paris Agreement. Carbon credit retirements can be seamlessly integrated into national climate targets, called Nationally Determined Contributions (NDCs). This provides the accounting transparency of emissions reductions and makes corporate purchases of carbon credits directly relevant to a country's efforts to tackle the climate emergency. Credits are properly accounted for in a rainforest nation's national greenhouse gas inventory and the country of the commercial entity buying the offsets. They are also reflected in their NDC of both buyer and seller countries toward the Paris Agreement.

To help determine whether these emissions declines have taken place, UNFCCC verifies a country's rainforest conservation performance over a period. To assist this process and measure performance, a country must first propose a baseline, which is then verified by UNFCCC. The baselines of the REDD+ framework are called Forest Reference Levels (FRL) and are based on actual previous historical emissions at the national level.

5.6 Ongoing Belt-Tightening

A country may initially project an upward trend in emissions based on history, but it is expected to move to a flat and then declining FRL to support more aggressive NDCs. This process is known as "belt-tightening," and a country must follow the Paris Agreement. This creates a global regime and pathway to ending deforestation under the Paris Agreement. The historical emissions, the FRL, and the reported emissions reductions are posted on the UNFCCC REDD+ Info Hub.

5.7 Climate Justice and Equity

UNFCCC REDD+ forestry carbon credits provide a cost-effective way for retiring entities to purchase emissions reductions directly from developing countries and confidently know that 90% of the payment is going to the countries where the emissions reductions were created.

UNFCCC REDD+ carbon reduction activities should do no environmental harm and protect human rights. This is enshrined under the UNFCCC REDD+ Mechanism by the Cancun Safeguards, which the COP approved in 2010. As noted in Section 4.7, a Safeguard Information System is one of the four core elements of a UNFCCC REDD+ program. Three of the seven safeguards make provisions for environmental protection and human rights, requiring REDD+ programs to provide respect for the knowledge and rights of indigenous peoples and members of local communities, by considering 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.

Finally, under the Paris Agreement, rainforest countries' contributions should be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, considering different national circumstances. This ensures that lesser developed nations with more limited resources can participate in the UNFCCC REDD+ mechanism and generate carbon reductions from their rainforests.

The beautiful thing about the Paris Agreement is that it puts the money where the problem occurs. These are sovereign assets, so as much of the revenues as possible should go to the country to reduce emissions

Now, in the middle of all that are normal transactional fees, a registry has transactional fees. The brokers that are putting the deal together have transactional fees.

But the key is to keep that around 5% or less for transaction fees, ensuring that as close to 100% of the climate finance goes to the country and the people that have reduced those emissions.

The UNFCCC REDD+ framework ensures that purchases of UNFCCC REDD+ carbon credits create a real impact in addressing the climate emergency.

5.8 Carbon Credits That Count

Unlike subnational REDD+ projects, the Measuring, Reporting and Verification (MRV) of the UNFCCC REDD+ emission reductions that create the carbon credits are encompassed into a country's overall obligations under the Paris Agreement. This means the carbon credits that you buy count toward the global carbon budget. By meeting these requirements, the UNFCCC REDD+ Mechanism ensures that purchases of nationally issued REDD+ carbon credits create a real impact in addressing the climate emergency.

Moreover, the global carbon budget must balance. Two entities cannot claim the emission reductions from the same carbon credit, whether an offset comes from a project or national program or if the buyer/seller is a country, business, multilateral organization, or individual.

All cross-border transfers of offsets must be appropriately accounted for in the country NDCs of both the buyer and seller.

5.9 Price Transparency

Buyers expect to receive full-price transparency on where their monies go after a purchase. They also want to understand the programs' overhead costs, such as project design, marketing, validation, verification, listing, issuance, and retirement. Nationally issued REDD+ carbon credits are offered on the REDD.plus platform and transfers 90% of the price a buyer pays back to the country. This reflects the price per ton plus all fees paid.

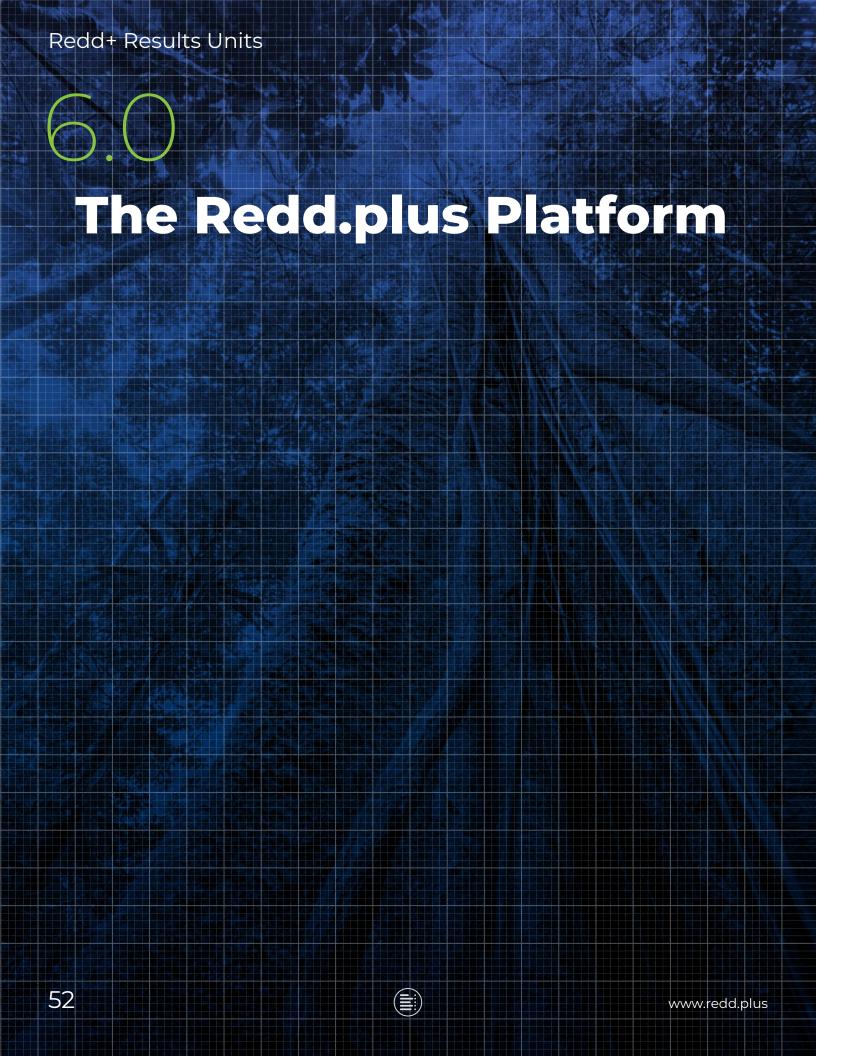
Further, countries:

- Receive free technical support from UN Agencies and nongovernmental organizations, such as the CfRN, to help them measure and report their emissions reductions under the Paris Agreement
- · Pay no fee to the UNFCCC for the assessment of the FRLs and analysis of submitted
- Pay no charges to REDD.plus for listing credits

This all ensures that a buyer's money has the maximum impact.





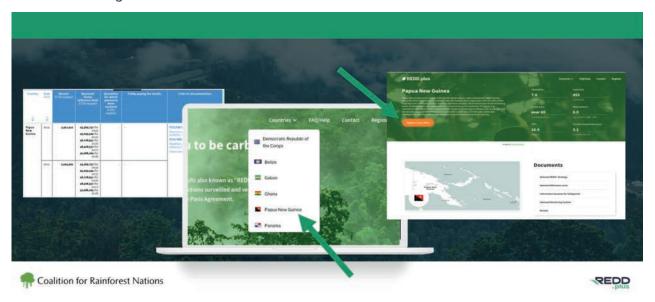


The purpose of the *REDD.plus Platform* is to offer the commercial infrastructure required for rainforest nations to sell sovereign REDD+ carbon credits globally. Similarly, it provides businesses and individuals access to emission reductions that rainforest nations have created under UNFCCC REDD+. The REDD.plus Platform exclusively uses the Paris Agreement decisions as the standard and the UNFCCC REDD+ MRV process.

For developing countries, the REDD.plus Platform provides a Paris Agreement-compliant national registry administered by S&P Global, and a state-of-the-art sales platform to provide access to corporate and individual buyers administered by EEX. Custodial and settlement services are being added.

The platform provides businesses and individuals access to emission reductions, known as REDD+ Results that rainforest nations have created under the UNFCCC REDD+ framework. The private sector can now reward the national actions of rainforest coalition countries that have preserved and protected rainforests to hit their net-zero targets. With the country's approval, REDD.plus serializes each ton of REDD+ Results posted on the UNFCCC REDD+ Info Hub onto a registry where its life cycle can be tracked from issuance to retirement.

Figure 5: UNFCCC REDD+ Results are converted into Paris Agreement verified REDD+ Sovereign Carbon Credits



Converting UNFCCC REDD+ Results into REDD+ sovereign carbon credits

The following process outlines how UNFCCC REDD+ Results are achieved and then converted into REDD+ sovereign carbon credits

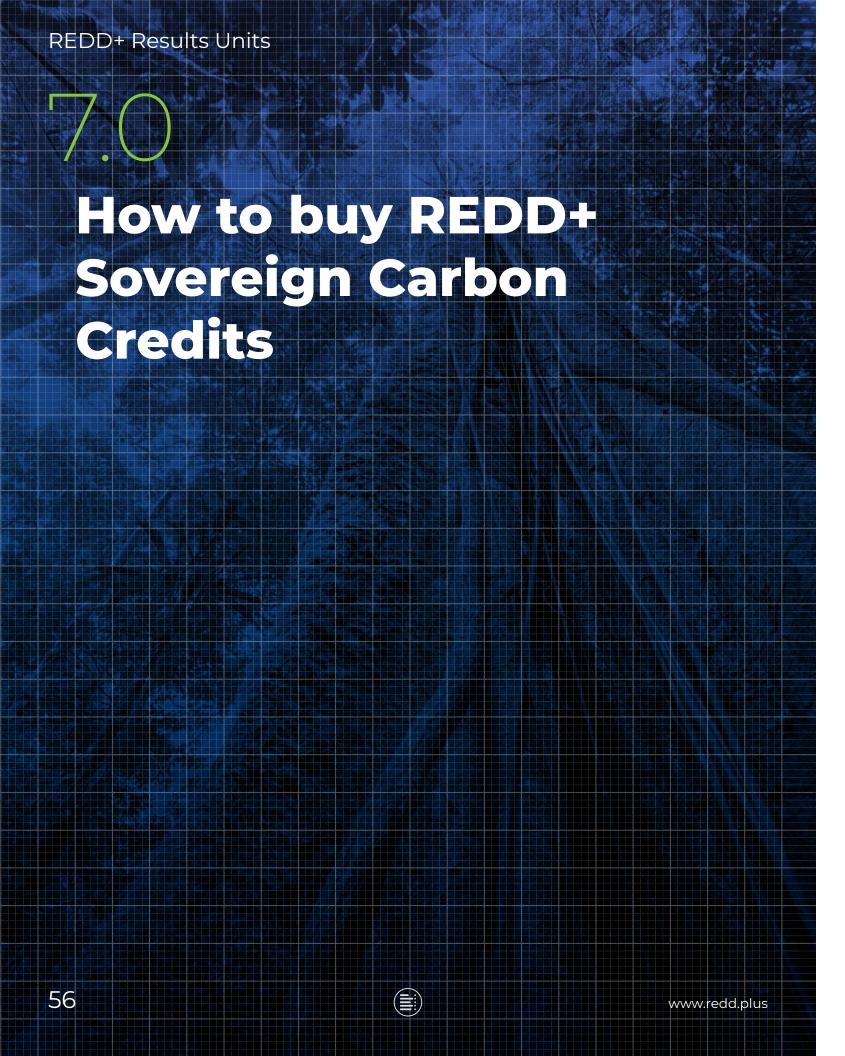
- National governments generate REDD+ carbon reductions or REDD+ Results
- The MRV methodologies for generating REDD+ Results were approved in 21 decisions at COP meetings and formalized into the Paris Agreement.
- This emission reduction crediting mechanism is administered by the UNFCCC Secretariat.
- After independent verification, the emission reductions are posted to the UNFCCC REDD+ Info Hub as REDD+ Results.
- REDD+ Results are converted into REDD+ Results Units (RRUs).
- The national government signs an agreement with REDD.plus.
- The REDD.plus registry, administered by S&P Global/IHS Markit, serializes each ton of REDD+ results, thus creating RRUs that can now be bought and retired by businesses and individuals.
- Each RRU represents 1 metric ton of CO².
- · RRUs are purchased and retired.
- Purchasing and retiring of RRUs can be done through the REDD.plus platform or soon on the REDD.plus exchange operated by European Environmental Exchange (EEX).

Who performs the key tasks in creating, retiring, and reporting on REDD+ Results Units?

- Issuers are national governments of rainforest nations who measure and report emission reductions from REDD+ activities to UNFCCC.
- Standards for MRV were decided under UNFCCC processes, approved by COP decisions, and enshrined into the Paris Agreement.
- Administration is provided by the UNFCCC Secretariat
- Independent verification is conducted by individuals from the UN Roster of Experts.
- REDD.plus Registry is administered by S&P Global/IHS Markit.
- REDD.plus Exchange is powered by European Environmental Exchange (EEX).
- Reporting of retirements to the UNFCCC is done by REDD.plus to ensure proper accounting into NDCs and the global carbon budget.











REDD.plus

REDD.plus Papua New Guinea

There are a variety options for buyers to purchase and retire their REDD+ sovereign carbon credits:

7.1 REDD.plus Sales Website

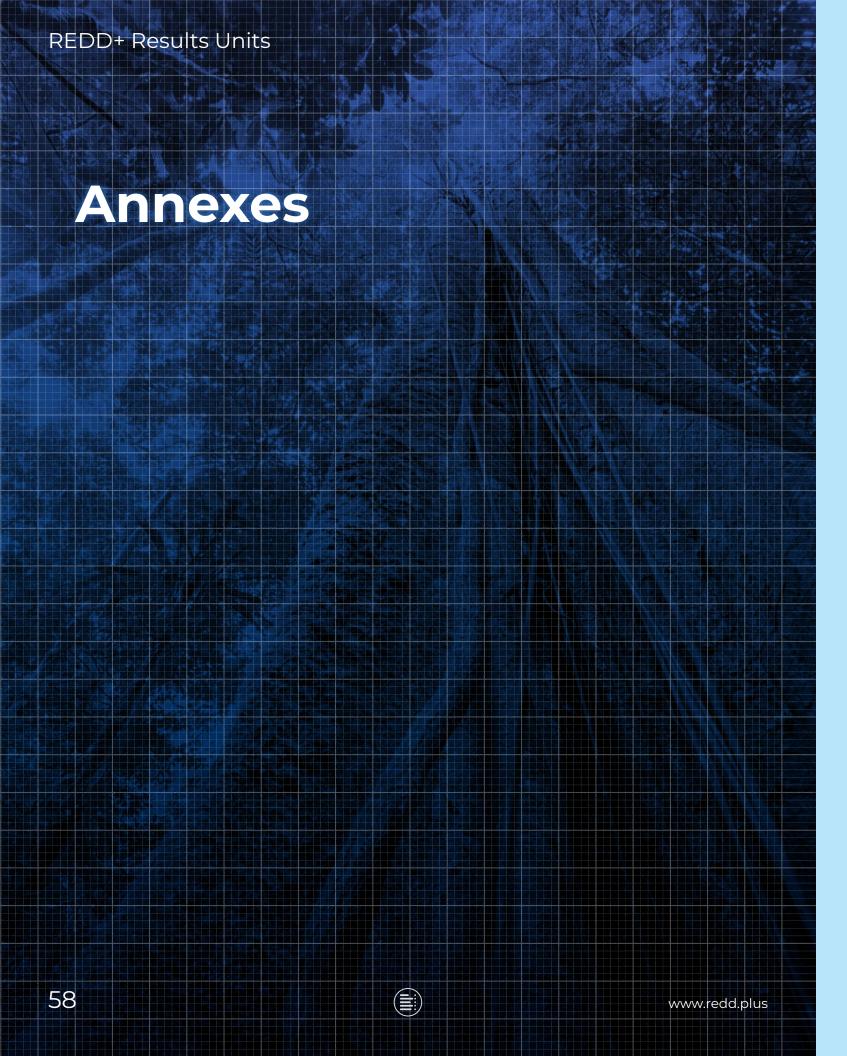
Please use the *REDD.plus website*, which accepts both credit cards and electronic bank-to-bank payments. This is the fastest way to purchase and is the recommended method for individuals and small businesses.

7.2 REDD.plus Exchange

Corporate and institutional buyers can purchase credits through the European Environmental Exchange (EEX). To learn more, *click here*.

7.3 For Large Purchases

Please work directly through REDD.plus and the CfRN. To do this, please open an account on the *REDD.plus Registry* operated by IHS Markit. Once your application has been approved, you will receive an email from S&P Global/IHS Markit and REDD.plus. This will open the opportunity to negotiate your purchase directly with the countries through the CfRN. They will also lead you through the payment and retirement processes.



Annex 1: About Coalition for Rainforest Nations

The CfRN is a group of rainforest countries coming together under the initial leadership of Prime Minister Sir Michael Somare of Papua New Guinea and President Óscar Arias of Costa Rica in 2005. For the first time, rainforest countries took the lead: They have not caused climate change, but are willing to be part of the solution. CfRN introduced the REDD+ concept into the UN climate negotiations in 2005 at the COP meeting in Montreal. CfRN is a Secretariat-registered, US-domiciled nonprofit. Over the next ten years, CfRN was instrumental in the negotiations on the details of REDD+ Mechanism before it was finally formalized into the Paris Agreement.

Annex 2: Introduction to the UN's Climate Negotiating Framework and Procedures

How Does It Work?

The UNFCCC is more than just an annual meeting of the COP. Analysis, research, and negotiations take place year-round in various SBs, standing committees, and at the IPCC. The COP directs these activities, seeking guidance on issues and solutions before making final decisions. While the process is arduous, it is also thorough and assures that outcomes are equitable and have support from the broad global community.

What Are the Reporting Requirements for Rainforest Nations Under the Paris Agreement? Article 4 of the Paris Agreement lays out requirements for country reporting, defining what, when, and how to report. For rainforest nations, the two major reports are the National Communications and BURs. A strength of the REDD+ framework is how it is integrated into the overall efforts a country is making to address climate change and fulfill its obligations under the Paris Agreement.

- Rainforest nations should update their National Communication every four years. At the
 minimum, they should contain "six thematic components, including national circumstances and
 institutional arrangements; national GHG inventory; programs containing measures to facilitate
 adequate adaptation to climate change; programs containing measures to mitigate climate
 change; other information; constraints and gaps, and related financial, technical and capacitybuilding needs."4
- BURs should be submitted every two years and contain "updates of national GHG inventories, including a national inventory report and information on mitigation actions, needs and support received. Such reports provide updates on actions undertaken by a Party to implement the Convention, including the status of its GHG emissions and removals by sinks, as well as on the actions to reduce emissions or enhance sinks."5

www.rainforestcoalition.org (a)

What Is the "Global Stocktake"?

The global stocktake assures that efforts to address climate change improve through time. The Paris Agreement, and therefore the national REDD+ programs, are not "set it and forget it"; they require ongoing analysis to ensure that the best efforts are being made to achieve a 1.5°C world.

Article 14 states that the COP "shall periodically take stock of the implementation of this Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals (referred to as the 'global stocktake'). It shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support, and in the light of equity and the best available science. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall undertake its first global stocktake in 2023 and every five years thereafter unless otherwise decided by the Conference of the Parties serving as the meeting of the Parties to this Agreement. The outcome of the global stocktake shall inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the relevant provisions of this Agreement, as well as in enhancing international cooperation for climate action." ⁶

What Are the SBSTA and SBI?

The Convention established two permanent Subsidiary Bodies (SB): the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI). These bodies advise to the COP, and each has a specific mandate. As its name suggests, the SBSTA's task is to provide the COP with advice on scientific, technological, and methodological matters. The SBI gives advice to the COP on all matters concerning the implementation of the Convention.



