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Climate Change

# Nesting of REDD+ Initiatives:

Manual for Policymakers

**FOREST  
CARBON  
PARTNERSHIP**

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# Contents

<b>Acknowledgements</b> .....	vi
<b>Acronyms</b> .....	vii
<b>Executive Summary</b> .....	1
<b>Introduction: How and Why to Use This Manual</b> .....	7
<b>PART I: NESTING DESIGN</b> .....	10
<b>1. Nesting and Its Objectives</b> .....	10
1.1 Determining the Objectives of Nesting.....	11
1.2 General Considerations in Designing a Nested System.....	13
<b>2. Nesting in the Context of REDD+ Implementation Models</b> .....	15
2.1 Jurisdictional ER Program (Only), With Benefit Sharing.....	16
2.2 Centralized Nested Approach.....	18
2.3 Decentralized Nested Approach.....	19
2.4 Project Crediting (Only), No Jurisdictional ER Program.....	20
2.5 Key Differences Between the Models.....	21
2.6 The Reality: Mixed Approaches.....	26
<b>3. Considerations for the Design of Nested Systems</b> .....	26
3.1 Capacity Constraints.....	26
3.2 Landscape of REDD+ Results-Based Finance.....	28
3.3 Role of the Private Sector in REDD+ Markets.....	30
3.4 The Paris Agreement: Nationally Determined Contributions and Article 6.....	31
<b>PART II NESTING ELEMENTS</b> .....	33
<b>4. Carbon Accounting and MRV</b> .....	33
4.1 Aligning Baselines and ER Claims.....	33
4.2 Deciding the Scope of Nesting.....	35
4.3 Aligning the Estimation of GHGs.....	37
4.4 Application of Nesting Approaches.....	40
<b>5. Legal Issues</b> .....	45
5.1 General Considerations.....	45
5.2 Establishing Carbon Rights.....	45
5.3 Application to Nesting Approaches.....	49

<b>6. Benefit Sharing</b>	52
6.1 General Considerations	52
6.2 Application to Nesting Approaches	53
<b>7. Safeguards</b>	54
7.1 General Considerations	54
7.2 Application to Nesting Approaches	59
<b>8. Risk Management</b>	60
8.1 General Considerations	60
8.2 Application to Nesting Approaches	62
<b>PART III NESTING IMPLEMENTATION</b>	69
9. Consultations on the Adoption of a Nested System	69
9.1 General Considerations	69
9.2 Application to Nesting Approaches	70
<b>10. Institutional Requirements for Nesting</b>	71
<b>11. Regulations and Approvals</b>	73
11.1 General Considerations	73
11.2 Application to Nesting Approaches	75
<b>12. Registries</b>	77
12.1 General Considerations	77
12.2 Jurisdictional ER Program (Only), with Benefit Sharing	80
<b>APPENDIX A: GLOSSARY</b>	82
<b>APPENDIX B: INSTRUCTIONS FOR THE DECISION SUPPORT TOOL</b>	85
Readme Tab	86
Questions Tab	86
Tabs for "Jurisdictional ER program," "Centralized Nested," "Decentralized Nested" and "Project Crediting Only."	87

## Boxes

Box 1 What Is REDD+?.....	7
Box 2 What Is Nesting? .....	10
Box 3 Why Do Countries Want to Develop Nested Systems? .....	12
Box 4 Emerging Types of Nested Systems.....	27
Box 5 Aligning Land Classifications.....	37
Box 6. Creation and Recognition of Carbon Credits .....	46
Box 7 Concepts and Definitions in Relation to Carbon Rights .....	47
Box 8 Examples of How Countries Define Safeguard Requirements for a Nested System.....	58
Box 9 Integrating Early-Action Projects in a REDD+ Program.....	61
Box 10: Summary of Approval Requirements.....	74
Box 11 What Types of Approval Procedures Are Countries Developing? .....	74
Box 12 Considerations When Deciding on a Registry System .....	77
Box 13: What Types of Registries are Countries Developing?.....	79

## Figures

Figure 1 Development of REDD+.....	1
Figure 2. The four general models of REDD+ implementation.....	4
Figure 3. Process Diagram: How to Use this Manual, and the Decision Support Tool.....	9
Figure 4 Summary of Four Simplified Models .....	15
Figure 5 Jurisdictional ER Program (Only), with Benefit Sharing .....	16
Figure 6 Centralized Nested Approach .....	18
Figure 7 Decentralized Nested Approach.....	19
Figure 8. Project Crediting (Only).....	20
Figure 9 The Key Difference between the Centralized and Decentralized Nested Models .....	21
Figure 10. Hybrid Scenario A.....	24
Figure 11. Hybrid Scenario B.....	24
Figure 12 Hybrid Scenario C .....	25
Figure 13 Verified Carbon Unit (VCU) Issuances from 2010 to 2019.....	30
Figure 14 Decision-Making Process for a Jurisdictional ER Program (only), with a Benefit-Sharing Approach .....	40
Figure 15 Centralized Nested Approach.....	41
Figure 16 Decision-Making Process for a Centralized Nested Approach.....	41

Figure 17 Representation of the Decentralized Nested Approach.....	42
Figure 18 Decision-Making Process for a Decentralized Nested Approach .....	43
Figure 19 Representation of Project Crediting (only) No Jurisdictional ER Program .....	43
Figure 20 Decision-Making Process for a Project Crediting (only), No Jurisdictional ER Program .....	44
Figure 21. Detail of the “Readme” Tab.....	86
Figure 22 Recommendation Box, “Questions” Tab.....	86
Figure 23. Answer Check Boxes under “Questions” Tab.....	86
Figure 24. Error Message, Recommendation Box, “Questions” Tab.....	87
Figure 25. Example of DST Screen When Step 1 Is Completed.....	87
Figure 26. Information Dashboard of Nesting Model Tabs .....	88
Figure 27. Components and Distribution of the Nesting Element .....	88
Figure 28. Location of Checkboxes and Subject Progress Bars in Nesting Model Tabs .....	88
Figure 29. Example of Timeline for a Nesting Subject .....	89

## Tables

Table 1. Key Policy Considerations When Designing a Nested System.....	14
Table 2. Benefits/Risks of Jurisdictional ER Program (Only), with Benefit Sharing.....	17
Table 3. Benefits/Risks of the Centralized Nested Approach.....	19
Table 4. Benefits/Risks of the Decentralized Nested Approach.....	20
Table 5. Benefits/Risks of the Project Crediting (Only), No Jurisdictional ER Program .....	21
Table 6. Key Differences Among REDD+ Implementation Models.....	23
Table 7 The Landscape of REDD+ Results-Based Finance .....	29
Table 8. Options for Promoting Alignment in Baseline Setting .....	35
Table 9 Scope of Coverage of Forest-Related Fluxes in GHG Inventories, NDCs, and FRELs .....	35
Table 10 Selecting the Carbon Accounting Scope for Nesting .....	36
Table 11 Options for Aligning Activity Data for Nesting.....	38
Table 12 Options for Aligning Emission Factors for Nesting.....	39
Table 13 Significance of Forest Land Tenure, Carbon Rights, and Claims to ERs Under Different Models .....	51
Table 14 Implications of Benefit Sharing for Each of the Four Models .....	55
Table 15 Risks Inherent in the Jurisdictional-Only Approach.....	63
Table 16 Risks Inherent in the Centralized Nested Approach.....	65
Table 17: Risks Inherent in the Decentralized Nested Approach .....	67
Table 18: Risks Inherent in the Project Crediting (Only) Approach.....	68

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# Acronyms

<b>AAUs</b>	Assigned Amount Units
<b>AD</b>	Avoided Deforestation
<b>AR</b>	Afforestation / Reforestation
<b>ART TREES</b>	Architecture for REDD Transactions – The REDD+ Environmental Excellence Standard
<b>BioCF-ISFL</b>	Bio Carbon Fund Initiative for Sustainable Forest Landscapes
<b>CA</b>	Corresponding Adjustment
<b>CCB</b>	Climate, Community and Biodiversity (standard)
<b>CDM</b>	Clean Development Mechanism
<b>CIFOR</b>	Center for International Forestry Research
<b>COP</b>	Conference of the Parties to the UNFCCC
<b>CORSIA</b>	Carbon Offsetting and Reduction Scheme for International Aviation
<b>DMS</b>	Data Management System
<b>DRC</b>	Democratic Republic of Congo
<b>DST</b>	Decision Support Tool
<b>EF</b>	Emission Factor
<b>EIT</b>	Economies in Transition
<b>ER</b>	Emission Reduction
<b>ERPA</b>	Emission Reduction Payment Agreement
<b>ESMF</b>	Environmental Social Management Frameworks
<b>ESP</b>	Environmental and Social Plan
<b>ETS</b>	Emissions Trading System
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>FCPF</b>	Forest Carbon Partnership Facility
<b>FGRM</b>	Feedback and Grievance Redress Mechanism
<b>FPIC</b>	Free Prior Informed Consent
<b>FREL</b>	Forest Reference Emissions Levels
<b>GCF</b>	Green Climate Fund
<b>GHG</b>	Greenhouse gas
<b>HFLD</b>	High forest cover, low deforestation
<b>ICAO</b>	International Civil Aviation Organization

<b>IFM</b>	Improved Forest Management
<b>ITMO</b>	Internationally transferred mitigation outcome
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>JCM</b>	Joint Crediting Mechanism
<b>JI</b>	Joint Implementation
<b>JNR</b>	Jurisdictional and Nested REDD+ of the Verified Carbon Standard
<b>LEAF</b>	Lowering Emissions by Accelerating Forest finance
<b>MRV</b>	Measurement, Reporting and Verification
<b>NDC</b>	Nationally Determined Contribution
<b>NFI</b>	National Forest Inventory
<b>NFMS</b>	National Forest Monitoring System
<b>NGO</b>	Non-Governmental Organization
<b>NZ ETS</b>	New Zealand Emission Trading Scheme
<b>ODA</b>	Official Development Assistance
<b>PA</b>	Paris Agreement
<b>PES</b>	Payments for Ecosystem Services
<b>RBF</b>	Results-based Finance
<b>RED</b>	Reducing Emissions from Deforestation
<b>REDD+</b>	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
<b>REM</b>	REDD Early Movers Program
<b>RENARE</b>	Registro Nacional de Reducción de Emisiones de GEI
<b>R-PP</b>	Readiness Preparation Plan
<b>SIS</b>	Safeguards Information System
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VCS</b>	Verified Carbon Standard
<b>VCU</b>	Verified Carbon Unit
<b>VER</b>	Verified Emission Reduction



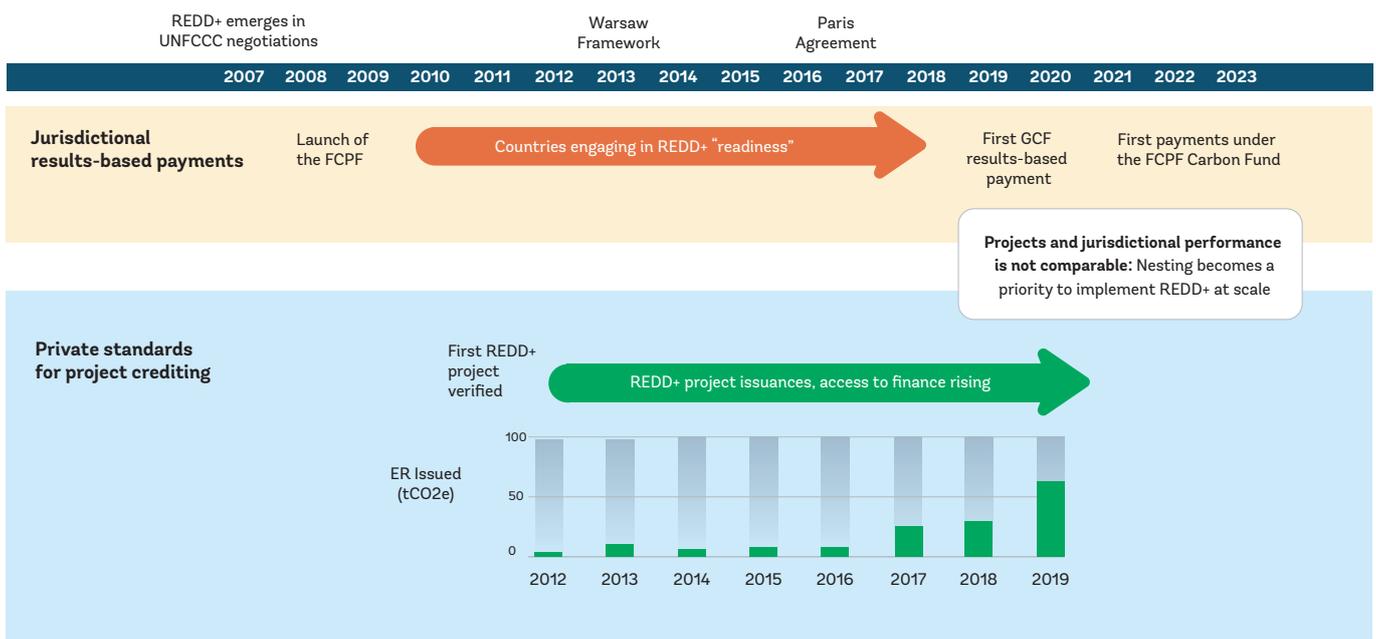
# EXECUTIVE SUMMARY

## Background and Objectives

Tropical forest countries that seek to reduce deforestation and participate in REDD+ are being challenged to develop policies that conserve forests in the long term; create incentives for local actors to protect forests; and align forest policies with agricultural and rural development and other land-use policies. Developing a REDD+ implementation strategy requires consideration of government budgetary resources as well as the various types of international finance that are available to support REDD+. In assessing this landscape of potential funding sources, policymakers can determine which types of finance to access; which financing conditions they can realistically achieve; and within what time frame it can be done, given national circumstances and institutional constraints.

Many countries are participating in, or hosting initiatives to reduce deforestation. Since 2007, when REDD+ was first considered in the negotiations of the United Nations Framework Convention for Climate Change (UNFCCC), several initiatives for implementing REDD+ have been developed. The REDD+ activities advanced under these initiatives have operated at various levels, ranging from the project level, (geographically demarcated areas within which an activity takes place), to subnational and/or country-wide programs (see Figure 1). Many countries already have received, or are seeking, payments for subnational and national REDD+ results. Many of these same countries already host, or intend to host, REDD+ projects, which are usually developed by private actors.

Figure 1 Development of REDD+



**The existence of REDD+ initiatives on multiple scales within countries, and with access to various sources of financing has recently been a source of challenges for countries.** Multiple accounting and reporting frameworks can represent a risk to environmental integrity,<sup>1</sup> and it has often been difficult for countries to align them. Moreover, it has been challenging for them to maximize and harmonize their access to various sources of financing in order to achieve their forest and climate change goals.

**Accounting and reporting emission reductions (ERs) of REDD+ initiatives on multiple scales, and access to multiple sources of financing on different scales requires a systematic approach: this is what nesting is.** Nesting refers to aligning REDD+ implementation across different scales as it is reflected in the accounting of greenhouse gas (GHG) emissions and removals; claims to emission reductions (ERs); and the related legal and institutional arrangements. Setting up a nested system facilitates the resolution of GHG accounting issues by making the necessary adjustments to projects and programs, and requiring engagement among various public, private, and community stakeholders.

**The lack of updated and systematic guidance for designing a nesting system has been identified as a challenge for countries that are piloting large-scale jurisdictional REDD+ ER programs, including through the World Bank's Forest Carbon Partnership Facility (FCPF) Carbon Fund.** Consultations with stakeholders who are implementing REDD+ initiatives through the Carbon Fund have expressed a strong need for guidance on the optimal approaches and procedures for aligning REDD+ initiatives at various geographic scales in order to enhance national ambition, ensure environmental integrity, and avoid double counting of mitigation outcomes.

**This manual has been created to provide guidance for the design and implementation of nested systems.** Along with the accompanying Decision Support Tool (DST) described in Appendix B,<sup>2</sup> it aims to guide decision makers through a process of planning, identifying, and implementing efficient nested REDD+ systems.

**A nested REDD+ system is at its core a national policy; therefore, it should be driven by national policy priorities.** Before designing a nested system, policymakers should decide *why* the country wants to develop such a system, and should have in mind clear objectives, and a clear idea of the planned

scope and applicability of the system. Clarity of the government's approach to integrating its forest and climate-change policy objectives should be an inherent part of designing a nested system.

Therefore, **the main target audience of this manual is policymakers in developing country governments;** but it may be also useful for public and private REDD+ implementing agencies, and other participants and stakeholders of REDD+ initiatives.

The most common issue that comes up with nesting is the integration of REDD+ projects into subnational or national REDD+ programs led by country governments. **Throughout this manual the words national/subnational may be used interchangeably, and they may be generically referred to as "jurisdictional."**

This manual is structured in three parts:

- **Part I: Nesting Design** provides guidance in defining the objectives of the nesting system, various approaches to REDD+ implementation, and other design considerations.
- **Part II: Nesting Elements** provides specific guidance on carbon accounting, measurement, reporting and verification (MRV), legal issues, benefit sharing, and safeguards.
- **Part III: Nesting Implementation** provides guidance on practical considerations for the implementation of a nesting system, such as institutional arrangements, regulations, and registries.

## Part I: Nesting Design

**A well-designed nested system reflects the policies, priorities, institutional arrangements, and regulatory framework that is supporting the REDD+ implementation of a country.** The main policy objectives to be considered in designing a nested system are the national forest or climate-change targets, and the means for achieving them, including access to finance. More specifically:

- It is important for the government to have clarity concerning its forest and climate-change policy objectives before designing a nested system.
- It is also important that governments explore various pathways for achieving their forest and climate change goals; for example, which specific policies and measures it envisages for reducing deforestation.

<sup>1</sup> A carbon market-based mechanism has environmental integrity if the transfer of credits through that mechanism leads to the same, or lower, aggregated global emissions. Integrity is ensured through accounting that avoids double-counting (in which the same unit is used twice to offset emissions), as well as through the quality of the ER estimates (for example in regard to the baseline or reference level, additionality, permanence, uncertainty, and leakage).

<sup>2</sup> The DST may be accessed here: <http://documents1.worldbank.org/curated/en/548791631769281867/Decision-Support-Tool.xlsx>

- Policymakers should review the landscape of available finance, including the government’s budgetary resources.
- Once a country has determined how climate and carbon finance can support their implementation of REDD+, and which types of financing it wishes to seek, it can consider how to optimize access to such financing.
- Countries should also consider how REDD+ implementation will affect their nationally determined contributions (NDCs). Countries that are hosting multiple categories of REDD+ initiatives should decide the extent to which the ERs from forestry activities will contribute to achieving their NDC targets.

After a government has determined its objectives for a nested system, there are then three fundamental design decisions to consider:

- **The degree of centralization (or decentralization) for REDD+.** A **centralized approach** focuses on receiving payments for ERs at the jurisdictional scale; carbon benefits are then distributed among the beneficiaries, whether projects or local actors. A **decentralized system** focuses on receiving payments at the project scale, which are then distributed among local actors. The characteristics of centralized vs. decentralized systems are summarized in Figure 2.
- **Defining the role that nonstate actors (private entities, communities, and nongovernmental entities (NGOs) should play in the implementation of REDD+.** Closely related to the first point, the government needs to decide how best to integrate nonstate entities into its REDD+ strategy, since involvement from a wide range of stakeholders will lead to more sustainable and more effective implementation. This decision will be influenced by the rights that nonstate actors are entitled to, and how the government wishes them to be incentivized—for example, through carbon finance that can be directly accessed by local actors.
- **Determining the most appropriate types and channels of climate and carbon finance to access.** A government may decide that it wishes to encourage voluntary carbon market crediting at the project level, but also make efforts to access nonmarket payments at the jurisdictional level, for example from the Green

Climate Fund (GCF). It may also decide to allow crediting at various levels—project, subnational, and/or national—or to limit crediting to only certain levels. Or it may decide that certain REDD+ activities, such as reforestation, are more appropriate for implementation at the project level, while reducing deforestation is tackled more effectively at a jurisdictional level. **The decisions about which type of crediting, and at what levels, are fundamental and crucial decisions to be made in designing a nested system.**

**Depending on the objectives defined, governments should design an appropriate REDD+ implementation, or nesting system.** Although nesting is sometimes defined in a narrow sense as a system that aligns the accounting and reporting of ERs at different levels, it may also reflect an integrated policy framework that implements REDD+ across various implementation and governance levels. Therefore, throughout this manual, it is important to understand that reference to a nesting system, or a nesting model, may not necessarily imply nesting in the narrow sense.

**This report presents four general models for REDD+ implementation.** Although the objective of FCPF is to support jurisdictional REDD+ implementation through the nesting of REDD+ initiatives, this manual includes an overview of other implementation approaches that have been observed on the ground in order to enable countries to identify various paths that can be taken. For this reason, we present an overview of REDD+ implementation models and summarize them under four simplified approaches, as highlighted below and explained in Section 2 and summarized in Figure 2.

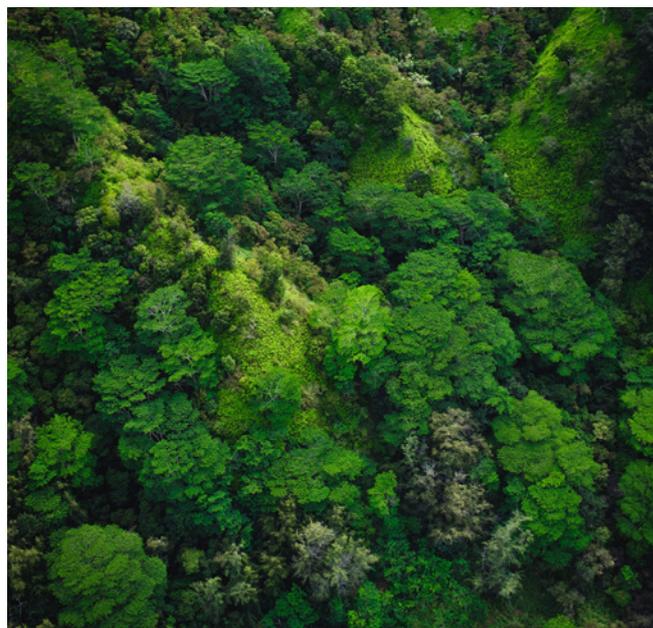


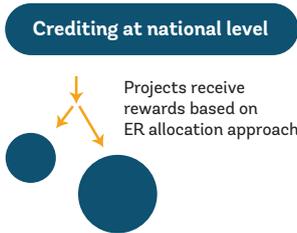
Figure 2. The four general models of REDD+ implementation



**Jurisdictional ER program (only) with benefit sharing**  
 Key features:

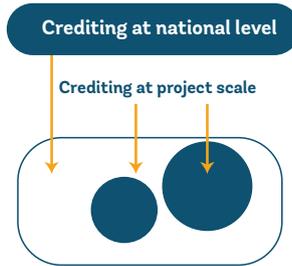
- ERs credited at national scale (only)
- No forest carbon project crediting
- Government operates ER program and distributes benefits

**Nested systems**



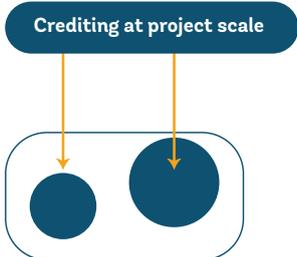
**Centralized-nested**  
 Key features:

- ERs credited up to national scale performance (only)
- Projects encouraged and receive rewards based on GHG performance (linked to national performance)
- Government control over ERs and distribution of carbon benefits via an agreed 'allocation method'



**Decentralized-nested**  
 Key features:

- ERs credited at national and project scale
- Projects authorized to generate and market ERs (delinked from national performance)
- Government generates ERs through public programs and on public lands



**Project crediting (only), no jurisdictional ER program**  
 Key features:

- ERs credited at project scale (only)
- Projects are incentivized, may be regulated
- No result-based finance (RBF) or sale of carbon credits by the government
- Government role is regulator, not ER program manager

**Governments should opt for a system that is the most appropriate for their own national circumstances; often this does not fall neatly into any particular nesting or REDD+ model.** They may also start with one approach and evolve over time to another model. Almost all countries choose to combine their national policies with the empowerment of local actors, but they can choose different ways of doing so. Their choices will depend on the drivers of deforestation, the accessibility of various regions within the country, and the target populations involved. Countries may therefore simultaneously operate several different models, or **create their own “mixed” approach** that best meets their national circumstances. This is discussed in Part I, Section 2.6.

**The human, institutional, and financial capacities of a country are essential considerations when planning the design of a nested system.** The centralized and decentralized nesting models require technical sophistication, and strong implementation capacity. This is discussed in Part II, Section 3.1 t). There are also a variety of results-based finance RBF opportunities for REDD+ programs—from nonmarket to market-based mechanisms, and from voluntary to compliance markets. In addition, there is growing interest in how to mobilize private-sector finance for REDD+, as well as increasing interest from companies to engage in nature-based climate solutions, including REDD+. As countries increasingly consider how to access REDD+ RBF, many are also

struggling to understand how these may impact their obligations under the Paris Agreement. These things are discussed in detail in Part I Section 3.4.

## Part II: Nesting Elements

**Nested REDD+ systems require institutional arrangements that enable the integration of implementation frameworks at multiple scales in order to maintain the system and to manage risks.**

Nesting is also closely linked to legal issues, benefit sharing, safeguards, and risk management. The elements of nesting are highlighted below discussed in detail in Part II of this manual.

- **Countries that engage in nested REDD+ need to develop GHG accounting and reporting systems in order to ensure consistency among the various levels.** This includes alignment of the MRV systems at various levels. In addition, data management systems to ensure transparency, consistency, and to avoid double counting, or double sales, of ERs, are essential.
- **Designing a nested REDD+ system requires understanding the rights of communities and individuals to benefit from ecosystem services and ERs.** Such rights, often referred to as “carbon rights,” define who has “*the right to benefit from carbon stored in a forest and/or reduced greenhouse gas emissions from forest loss or degradation.*” **Carbon rights should be distinguished from issued and tradable carbon credits:** the former describes an underlying entitlement to benefit from ERs or REDD+, whereas the latter represents one tonne of emissions reductions (ERs) that are traceable, tradable, and transferable, and are issued with an identifiable serial number in national or international carbon registries. Engaging communities in leading or co-leading REDD+ activities, and recognizing their rights to the land and its natural resources—including the associated carbon—is aligned with the devolution of rights to forest resources in countries. Such empowerment of communities can mean, depending on the legal context of the country, that communities have the right to initiate and participate in initiatives, or that they are duly considered in the benefit sharing arrangements.

- **Governments should consider whether—and if so, how—to link rewards and incentives (monetary, nonmonetary, and carbon benefits) to ER performance.** When elaborating a benefit-sharing framework,<sup>3</sup> governments should consider how to balance supporting national policies with creating incentives for private investors and communities at the local level. In situations where government programs and institutions can effectively distribute benefits, fully centralized systems could be efficient. Where government institutions are in the process of evolving, supporting programs and projects that can evolve into nested systems over time could be an option. However, there is a wide space in between these two extremes, in which part of the benefit sharing arrangements could be dependent on the government, and other parts externalized to nongovernment actors, including, but not limited to, projects.
- **National environmental and social safeguards are defined and implemented in line with national laws and policies, and the Cancun safeguards,<sup>4</sup> and are applicable to all REDD+ activities.** Consequently, in a nesting context in which implementation occurs at multiple scales, the safeguard policies included in a national legal framework should apply to jurisdictional programs as well as to nested REDD+ projects. How a government chooses to ensure that the safeguards are applied and enforced may differ depending on the nested system that is chosen. As part of the national legal framework, national REDD+ safeguards must be fulfilled by any REDD+ project or activity, and countries should clarify who is involved—project developer, landowner, etc.—and how the nested projects will implement safeguards and report on their compliance.
- **Governments should carefully consider the risks of the model they are considering, and define strategies for managing them.** For example, in a centralized nested system, where jurisdictional ER performance poses a material risk to projects, governments can guarantee certain payments to affected communities. Selecting a particular model or approach to REDD+ implementation can also cause political risks; they should be managed with participatory approaches that include stakeholder engagement and dialogue.

<sup>3</sup> Refers specifically to the arrangement by which a government institution allocates, administers, and channels benefits funded by payments for ERs to national actors.

<sup>4</sup> The UNFCCC has agreed on a specific set of safeguards known as the “Cancun safeguards.” More information may be found here <https://redd.unfccc.int/fact-sheets/safeguards.html>.

## Part III: Nesting Implementation

**Attention should be paid to the integration of existing projects into a nested system.** In some countries, REDD+ projects have been operating prior to the formulation jurisdictional REDD+ programs. In such cases, the government should articulate the steps to be followed, using a structured process and dialogue, and a suite of measures to be implemented over a specific period of time, with binding agreements between stakeholders of the projects and the national government on a transition pathway to a nested system. The details of effective implementation of nesting are highlighted below, and discussed in detail in Part III of the manual.

- **Consultations are essential in the process of adopting a nesting strategy and identifying its potential benefits and co-benefits, as well as the potential spillover effects of REDD+ implementation.** Consultations help to ensure the integration of local action into national and subnational REDD+ implementation via benefit-sharing or free-standing REDD+ projects. **Participatory approaches that result in agreements with local actors are key pillars of nested REDD+ systems.**
- **In order for nesting to be implemented effectively it is essential to assign clear responsibilities among ministries and public agencies for the operations related to the nesting process. Nested REDD+ policies should be supported by enduring institutional arrangements.** Successful implementation of REDD+ requires policy changes and governance reforms in forestry as well as in other sectors—for example, in order to disburse REDD+ payments. However, weak forest governance in most REDD+ countries constitutes one of the main challenges for REDD+ implementation, carbon effectiveness, cost efficiency, and equity.<sup>5</sup> What makes things even more complex is that REDD+ is inherently a multilevel endeavor; there is thus a need for policy coherence and coordination across the various levels of governance, as well as the relevant sectors, in order to make it REDD+ work. Nesting adds complexity to policymaking by requiring additional considerations.

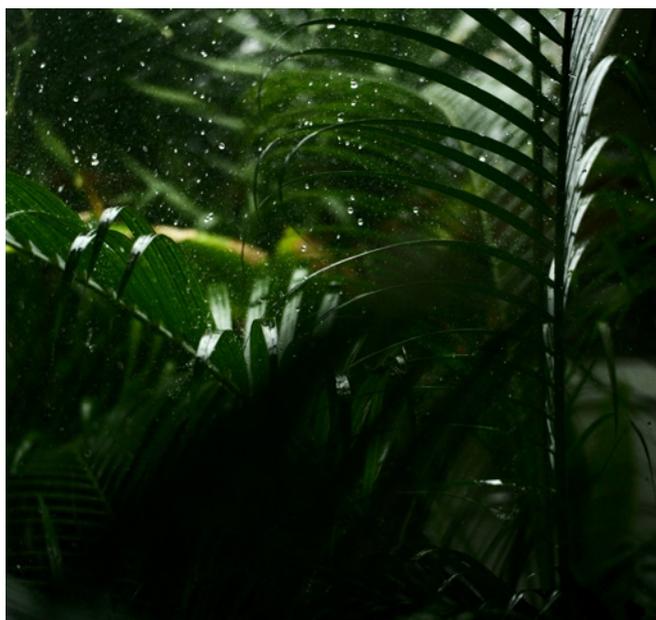
- **Regulations and approvals facilitate the implementation of any REDD+ system.** Clear rules offer REDD+ actors legal certainty. Within the context of the REDD+ regulatory framework, a country's nesting strategy and benefit sharing arrangements may need to be translated into a legal act. Nested models that officially approve projects must define the requirements that projects and project developers are required to meet in order to be formally recognized by the government. Nesting also requires adoption of the procedures by which projects will be nested in national systems. Procedures may also have to address the conditions under which a project can undertake “corresponding adjustments” if engaging in a transaction under Article 6 of the Paris Agreement.
- **Countries that engage in nested REDD+ may need to develop GHG accounting and tracking systems to ensure consistency between national, jurisdictional, and project-level processes and results.** These systems should consist, at a minimum, of data management systems that systematically record and monitor information to ensure transparency and consistency. Market-based transactions (including REDD+ or other carbon units) typically require use of a transaction registry to allow for the unique identification and tracking of carbon units. However, governments could rely on existing transaction registries, depending on the circumstances; and in some cases a transaction registry might not be necessary.

**Nested REDD+ systems are expected to play a major role in integrating REDD+ implementation at different levels of governance, and in engaging various sources of finance and stakeholders to sustainably manage forests, and to enhance their role in climate change mitigation.** Designing effective nested systems that are suitable to national circumstances, while ensuring the environmental integrity of mitigation outcomes from forests, is an important step in scaling up climate action. This manual provides detailed guidance in how to do just that.

<sup>5</sup> The UNFCCC has agreed on a specific set of safeguards known as the “Cancun safeguards.” More information may be found here <https://redd.unfccc.int/fact-sheets/safeguards.html>.

# INTRODUCTION: HOW AND WHY TO USE THIS MANUAL

The international policy framework that provides incentives for REDD+ has motivated many developing country governments to review their land-use policies. To reduce emissions from deforestation and forest degradation, and to support the role of conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries, policymakers at the national and subnational scales have developed strategies that seek to protect or expand forests while promoting economic development (Box 1). In some cases, governments have expressed interest in seeking results-based finance (RBF) for reduced emissions, while in other countries preexisting forest carbon projects, or projects that are under development are registered under voluntary carbon market standards to generate tradable carbon credits. Several countries are also looking for ways to integrate subnational programs and projects into their national REDD+ strategies. **Nesting is an approach that can be used to integrate the actions of smaller-scale REDD+ initiatives into larger-scale jurisdictional (national or subnational) approaches.**



## Box 1: What Is REDD+?

The concept of “REDD+” first emerged in 2007 during the negotiations under the UN Framework Convention on Climate Change (UNFCCC). Then, in 2013, in Warsaw, the Conference of the Parties (COP) to UNFCCC agreed on a set of decisions known as the Warsaw Framework for REDD+,<sup>6</sup> which encourages developing countries to pursue mitigation actions in the forest sector, and all countries to support such efforts, including through finance. The Warsaw Framework includes guidance for countries on how to develop a forest reference emission level (FREL) as a benchmark of REDD+ performance. It also demonstrates how entities that are financing REDD+, including the Green Climate Fund (GCF), can apply methodological guidance that is consistent with COP decisions. REDD+ was conceived as a national approach for encouraging the adoption of policies to reduce deforestation, and accounting for ERs at the national level. However, in view of the challenges of implementing a fully national approach, COP has recognized that subnational approaches can be used as a step toward national approaches.<sup>7</sup> In addition, many countries now host and/or encourage project-scale activities as part of their national REDD+ strategies. The term REDD+ is also used more broadly, sometimes simply to mean reducing emissions (or increasing removals) in the forest sector of developing countries.

**Experience has shown that countries with REDD+ projects that were implemented in order to generate carbon credits in jurisdictional ER programs have faced multiple challenges.** These have been particularly severe in situations where there are mismatches in the GHG accounting of projects and jurisdictional programs; this often requires continued negotiations among the governments and implementation entities, and can be challenging for both countries and projects. Nested systems enable

<sup>6</sup> UNFCCC Decision 15-9/CP.19. <https://unfccc.int/topics/land-use/resources/warsaw-framework-for-redd-plus>

<sup>7</sup> UNFCCC Decision 2/CP.13 Annex, 7

the alignment of GHG accounting at various scales, to promote the environmental integrity of carbon credits issued at multiple scales. The advantages of designing a nested system or framework has been emphasized during the past few years; however, there has been a lack of comprehensive guidance for designing them. This manual seeks to address that gap.

**The need for this manual emerged from the FCPF Carbon Fund experience of piloting REDD+ implementation initiatives.** Consultations with stakeholders implementing such initiatives in subnational and national ER program jurisdictions supported through the World Bank’s Forest Carbon Partnership Facility (FCPF)<sup>8</sup> Carbon Fund have revealed a need for guidance in aligning REDD+ initiatives at various geographic scales in order to enhance national ambition, ensure environmental integrity, and avoid the double counting of REDD+ mitigation outcomes. The experience of the FCPF Carbon Fund has also highlighted the need to bridge significant knowledge gaps among various stakeholders—that is, governments, public and private implementing entities, and participants and stakeholders of REDD+ initiatives at various levels.

**The purpose of this manual is to provide countries with practical advice and guidance for developing a “nested” system for REDD+ implementation.** Nested REDD+ systems present pathways for integrating subnational programs or projects into national REDD+ strategies; and the nesting of REDD+ initiatives can promote the environmental integrity of carbon credits issued. Nested REDD+ initiatives can also enable countries to confront deforestation and forest degradation of various types and scales, from broad public policies to site-specific activities, allowing the intervention of public and private actors to complement their actions.

A “nested” approach was first proposed in 2007,<sup>9</sup> and since then several publications<sup>10</sup> have elaborated it. **Basically, nested systems allow a country to access multiple sources of finance—from public-sector climate finance to private-sector carbon finance—to support REDD+ activities.** The Paris Agreement has created new obligations for countries to meet their

climate targets in the form of nationally determined contributions (NDCs), which are relevant for the carbon accounting of projects and programs: this too can be addressed by the nesting of REDD+ initiatives.

The need to integrate project-level activities into national REDD+ strategies; interest in accessing multiple sources of finance; and the demands of carbon accounting under the Paris Agreement have led to a demand from policymakers for guidance on how to develop nested REDD+ systems that respond to a variety of national circumstances.

Although the objective of FCPF is to support jurisdictional REDD+ implementation through the nesting of programs and projects, this manual includes an overview of other models of REDD+ implementation that have been observed on the ground as well, in order to clarify the differences between nested models and other models of REDD+ implementation.

This manual provides guidance for countries on how to align the accounting for projects with subnational and national accounting procedures, as well as how to identify steps for integrating the mechanisms used to access the financing needed to implement national REDD+ strategies. Together with the accompanying Decision Support Tool (DST), decision makers are guided through a step-by-step process of selecting, planning, and implementing a nested REDD+ system.

The manual is divided into three parts.

**Part 1. Designing a Nested System** guides users through key issues and questions to consider when designing an overall nested approach. The policy objectives likely to be considered include national forest or climate-change targets and the means for achieving them, including access to finance. Other contexts critical to the design of a nested system include land (forest) tenure, and who has the right to carbon from activities that reduce the emissions from deforestation and forest degradation. We present four basic models, which offer several options for accessing various forms of REDD+ results-based finance RBF, including two “nested” archetypes.

<sup>8</sup> The Forest Carbon Partnership Facility (FCPF) is one of the earliest multilateral initiatives to support REDD+ implementation in developing countries through two complementary funds. The Readiness Fund provides support for enhancing the technical and institutional capacity to design and implement national REDD+ strategies; promoting stakeholder engagement; implementing environmental and social safeguards; and enhancing the capacity for monitoring and reporting on REDD+ activities. The FCPF Carbon Fund extends results-based payments to developing countries for emission reductions achieved through the implementation of REDD+ ER programs.

<sup>9</sup> Pedroni, L., Streck, C., Estrada, M. and Dutschke, M. 2007. *The Nested Approach: A Flexible Mechanism to Reduce Emissions from Deforestation*. CATIE, Turrialba, Costa Rica.

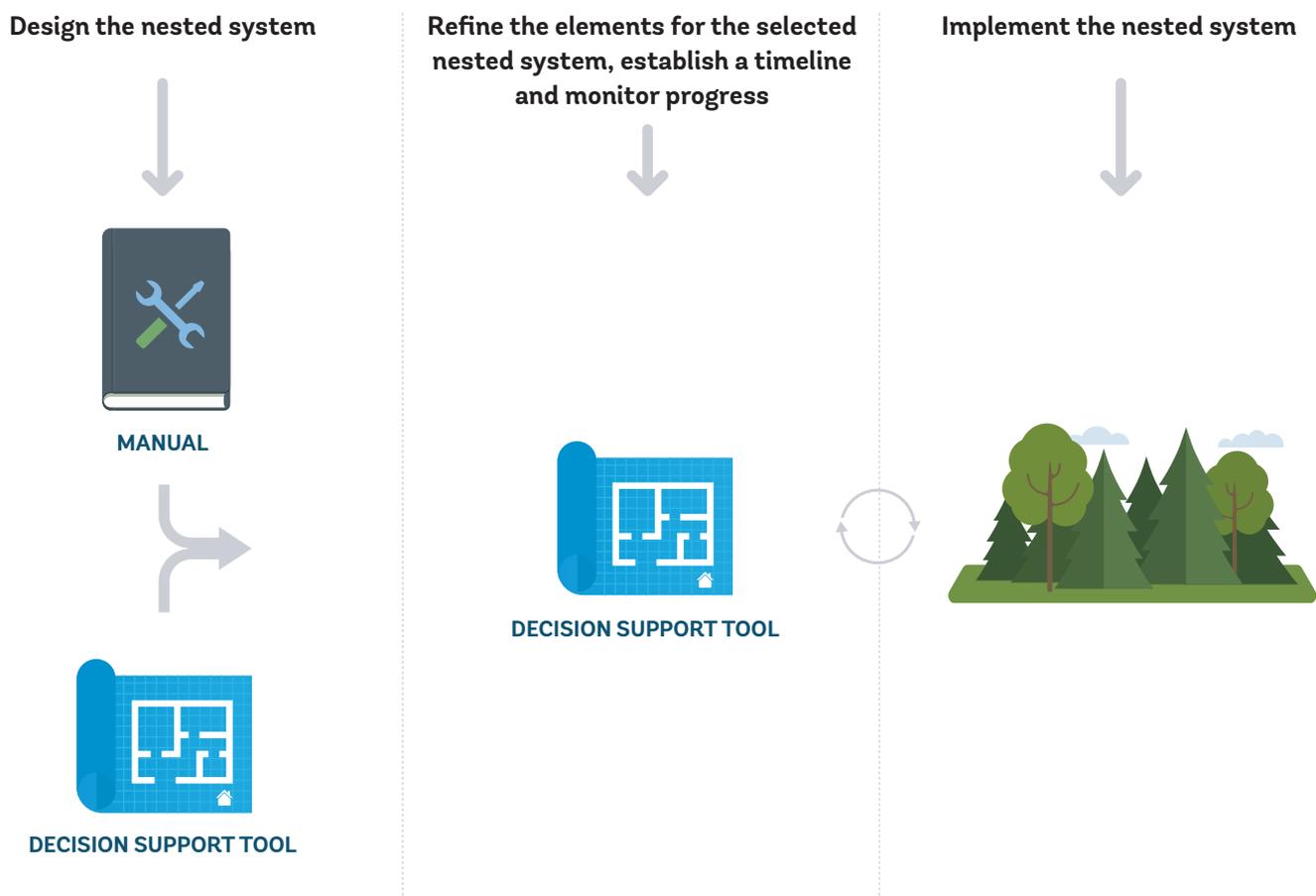
<sup>10</sup> Angelsen et al. 2008. “What Is the Right Scale for REDD? National, Subnational and Nested Approaches.” CIFOR Working Paper. Pedroni, L. et al. 2009. “Creating Incentives for Avoiding Further Deforestation: The Nested Approach.” *Climate Policy* 9: 207–220; Cortez, R. et al. 2010. *A Nested Approach to REDD+: Structuring Effective and Transparent Incentive Mechanisms for REDD+ Implementation at Multiple Scales*. The Nature Conservancy; Chagas T. et al. 2011. *Nested Approaches to REDD+: An Overview of Issues and Options*. Forest Trends; Kashwan, P. and Holahan, R. 2014. “Nested Governance for Effective REDD+: Institutional and Political Arguments.” *International Journal of the Commons*. 2014. 8 (2): 554–575; Gibbon, A. et al. 2014. *Planning Guide: Integrating REDD+ Accounting Within a Nested Approach: Lowering Emissions in Asia’s Forests*; (LEAF), USAID; Pearson, T. et al. 2016. *Guidance Document: Options for Nesting REDD+ Projects*. Pub City: Winrock International; Lee, D. et al. 2018. *Approaches to REDD+ Nesting Lessons Learned from Country Experiences*, Washington, DC: World Bank.

**Part 2. Elements of a Nested System** elaborates the specific elements needed, including MRV and accounting systems, legal issues, benefit sharing, and safeguards. It analyzes them, and clarifies the actions and priorities that need to be considered in each of them. These elements should be considered as illustrative, to be adapted to each country's unique circumstances, taking into consideration the requirements of various REDD+ initiatives or carbon standards.

**Part 3. Implementation of a Nested System** describes the steps in designing and implementing a nested system, including consultations, the adoption of a regulatory framework, and the establishment of a registry.

**Additionally, Appendix B provides instructions on the use of the Decision Support Tool (DST),** and explains how it can complement the use of the manual. The DST helps users identify the nesting model that best reflects their national circumstances, as well as the relevant elements for the model they have selected.

Figure 3. Process Diagram: How to Use this Manual, and the Decision Support Tool

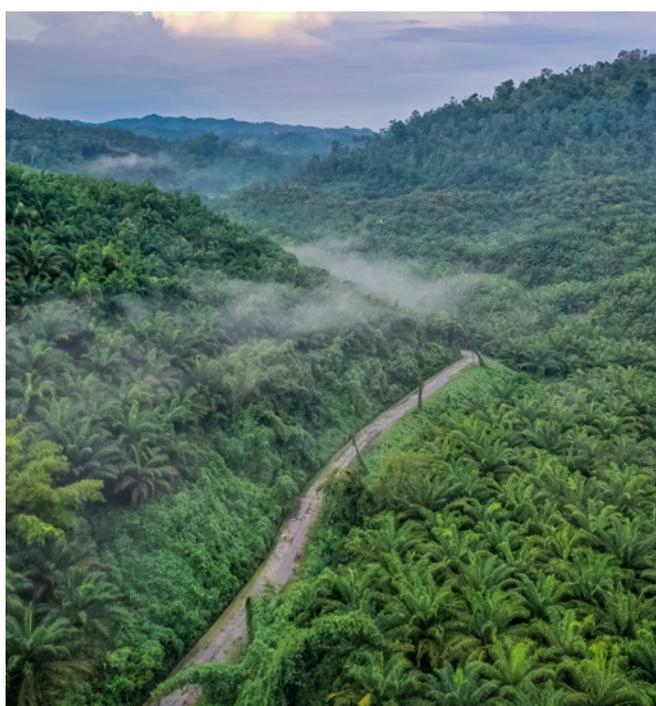


# PART I: NESTING DESIGN

This part presents the main considerations that inform a government’s decision making regarding nested REDD+.

## 1. NESTING AND ITS OBJECTIVES

For the purpose of this manual, “nesting” refers to the alignment of the accounting of greenhouse gas (GHG) emission reductions and removals (ERs) from REDD+ activities across multiple scales. For example, a government may be seeking to receive results-based payments, or to generate and issue carbon credits at the jurisdictional scale, while projects (or smaller jurisdictions within the larger jurisdictional program) are simultaneously accounting for ERs, and are generating carbon credits. Although “nesting” is referred to in this narrow sense, REDD+ nesting also reflects an integrated policy framework that implements REDD+ across various implementation and governance levels (Box 2). For this reason, the manual refers generically to four models of REDD implementation, but only calls two of the models “nested systems.”



### Box 2: What is Nesting?

There is no internationally agreed-upon definition for nesting. In fact, people often mean quite different things when using this term. Some consider nesting in the narrow context of aligning GHG “measurement, monitoring and reporting” of smaller-scale systems; for example, projects with larger-scale (subnational or national) systems such as those that align ER claims by carbon projects with the GHG inventories that form the basis for nationally determined contributions (NDCs). Others take a broader view that nesting is about harmonizing the implementation of REDD+ activities at multiple governance levels and geographical scales. In the latter case, nesting can encompass, for example, national-scale ER programs that employ a benefit-sharing approach for distributing finance received from monetizing ERs; frameworks that enable site-scale activities; or small-scale projects that can directly generate and issue ERs.

**A well-designed nested system reflects the policies, priorities, rights, and regulatory framework for implementing REDD+ within a country.** It promotes environmental integrity and sets a foundation for avoiding the double counting of ERs by facilitating the alignment of measurement, reporting, and verification (MRV) systems. It establishes institutional arrangements for operating and maintaining the system in order to manage the risks inherent in nesting. Nesting is also closely linked to forest policies, benefit sharing, and safeguards. All of these elements are discussed in subsequent sections of this manual.

**In many cases, countries are pursuing jurisdictional ER programs, while projects are simultaneously generating verified carbon credits.** This has created a challenging situation for many countries, particularly where there are significant mismatches between the various GHG accounting systems. Setting up a nested system therefore often requires an adjustment of the

processes for existing programs and projects; this can be challenging, but the sooner such a system is developed, the smoother the transition will be.

## 1.1 Determining the Objectives of Nesting

**A nested REDD+ system is at its core a national policy; therefore, it should be driven by national policy priorities.** Before designing a nested system, a country should decide *why* it wants to develop such a system, and should have in mind clear objectives, and a clear idea of the planned scope, and applicability. Some of the possible objectives for the development of a nested system are presented below, in Box 3.

**It is helpful for a government to have clarity concerning its forest and climate-change policy objectives before designing a nested system** (Box 3). These may be clearly spelled out in a national REDD+ strategy; through forest sector goals that are communicated through another policy or legal instrument; or in the national climate-change policy and/or the country's NDC under the Paris Agreement. While achieving forest or climate-related policy objectives is the main goal of national REDD+ strategies, other objectives that influence policy decisions include poverty reduction, rural development, and food security. In addition, governments may be seeking to support vulnerable communities and empower local actors. The bundle of national aspirations regarding REDD+ will likely determine the way nesting is designed.

**Next the government should explore pathways for achieving its forest and climate change goals; for example, which policies and measures it envisages for reducing deforestation.** REDD+ strategies often include policies and measures the government may target as drivers—for example, minimizing agricultural expansion, or illegal logging—or underlying causes of deforestation, such as conflicted land titles, or weak law enforcement. Some actions may require the adoption of government policies, or increased government enforcement of existing laws and policies. Other actions may require targeted interventions that attempt to change the behavior of those responsible for forest loss, or provide direct assistance to and partnership with local actors.

**Policymakers need to review the landscape of available finance, including budgetary resources, and decide how such financing can help achieve their**

**forest and climate goals.**<sup>11</sup> There are many types of international finance available to governments, including official development assistance (ODA); loans from multilateral financial institutions; and/or other types of grant financing from public, private, or philanthropic sources. Climate finance, both investment finance and results-based finance (RBF) for REDD+, and carbon market finance are other potential sources (see Section 3.2). In assessing the landscape of potential funding sources, policymakers can determine which types of finance are available to them; which financing conditions they can realistically achieve; and within what time frame it can be done, given their national circumstances and institutional constraints. For example, many countries are already receiving ODA, or have projects that are participating in voluntary carbon markets. On the other hand, access to market-based finance at the jurisdictional level requires technical capacities, coordinated action from multiple government ministries, and actions from stakeholders at several levels; thus it may take significant time to accomplish.

**Once a country has determined how climate and carbon finance can support implementation of REDD+, and which types of financing it wishes to seek, it can consider how to optimize access to such finance.** For example, if a government wishes to take advantage of both project-scale voluntary markets and RBF from the Green Climate Fund (GCF), it may need to promote alignment in accounting at the project and national (or subnational) levels.<sup>12</sup> Countries that are parties to the Paris Agreement also need to periodically report on their climate mitigation performance, and ensure the environmental integrity of such achievement. Hence, it is crucial to manage issues such as leakage, permanence, additionality, and the carbon accounting of REDD+ activities that are being implemented at different levels.

**Engagement in market-based transactions under Article 6 of the Paris Agreement requires additional considerations.** To participate in an Article 6 transaction, a government would need to transfer ERs and make a “corresponding adjustment” (CA) to its national GHG accounting (see Sections 3.4 and 11.1). If they wish to engage in transactions under Article 6 at the project or subnational level, there could be a strong motivation for nesting, in order to align the MRV of projects and programs with national-scale GHG monitoring and reporting.

<sup>11</sup> One useful resource for evaluating and designing a REDD+ financing system is Charlotte Streck and Brian Murry's *Financing Land Use Mitigation: A Practical Guide for Policy Makers*. 2015. (Winrock).

<sup>12</sup> Countries may choose to implement REDD+ at a subnational scale as an interim step toward national implementation. Throughout the text we often refer to “national” scale with the understanding that it may also apply to subnational scales.

### Box 3: Why Do Countries Want to Develop Nested Systems?

Our research for this report revealed that at least 17 countries have an interest in developing nested REDD+ systems. While each country is unique, and circumstances differ from country to country, there are several common reasons why many countries are now interested in developing nested systems.

One of the most common reasons cited by forested countries is to be able to gain access to **multiple sources of financing in order to achieve their forest and climate change goals**. Countries see nesting as a way to organize various streams of carbon finance—including voluntary markets, funds such as the FCPF Carbon Fund or BioCF-ISFL, as well as nonmarket payments through donor-funded schemes such as GCF’s results-based payments program, or the REDD Early Movers Program. In many cases, nested systems are largely motivated by the government’s desire to access REDD+ results-based payments, while also allowing projects to continue accessing private-sector finance.

Countries also often see nesting as a way to **supplement the government’s capacity to implement its national REDD+ strategy** through support for site-based activities. In such cases, the government recognizes that national policies are crucial for reducing deforestation, but also that projects can help to support the management of forests and protected areas, particularly when it is insufficiently funded by government programs.

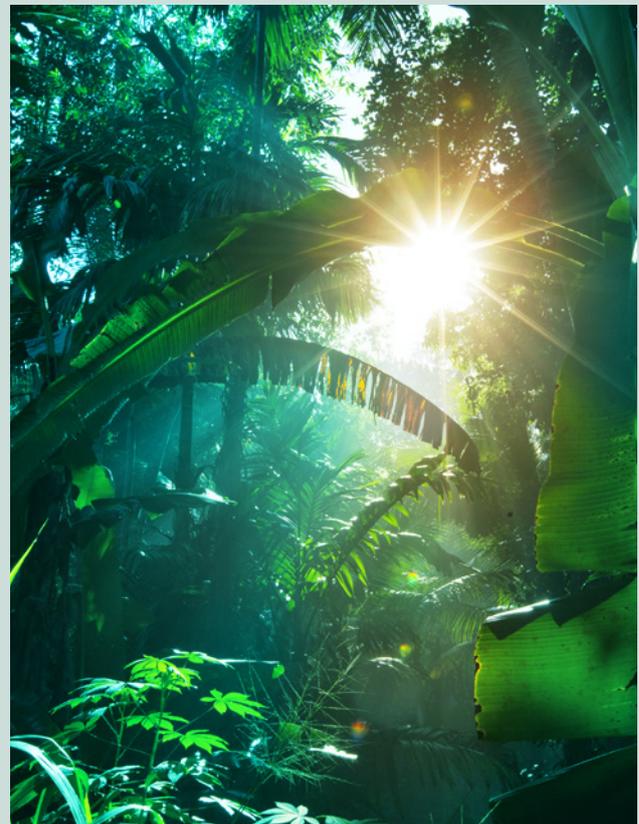
Some countries also see nesting as a way to **avoid double counting of ERs**. Most countries have not yet considered how to achieve their Paris Agreement target, and the role that Article 6 transactions may play in this. However, several governments do see nesting, in particular the alignment of GHG measurement across scales, as fundamental to future considerations on double counting.

Nesting is also seen as an opportunity to **increase domestic support for REDD+**. By including a wide range of actors, nesting can increase broad ownership, and build REDD+ constituencies. In some cases, a country may have had positive experiences with early REDD+ projects that have generated financial flows to support the conservation or sustainable management of forests, and therefore want these flows to continue. Such projects may

also have the strong support of local communities, or may be officially recognized as “early-action projects.” As such, they are critical to building national support for REDD+.

Another common motivation for building a nested system is the mismatch between national GHG accounting and project-based crediting. Where there are multiple projects within a country or jurisdiction, this mismatch becomes more pronounced, and can put into question the environmental integrity of the projects’ ER claims. In such cases, countries look for ways to promote alignment among projects—leveling the playing field, and promoting “equal reward for equal effort”—and also to **align project-level GHG monitoring with national GHG measurement and reporting approaches**. In some instances, countries have privately voiced concern that projects are generating voluntary carbon credits that are not backed by real ERs, and they hope that nesting can help improve the credibility of project crediting.

Hence, following a nesting approach allows countries not only to promote the alignment of accounting issues among projects and programs, but also to establish among all REDD+ activities a streamlined concept of key issues like permanence and additionality, while minimizing the risks of leakage.



## 1.2 General Considerations in Designing a Nested System

After a government has determined its objectives for a nested system, it should design the system in such a way as to achieve those objectives to the greatest extent possible. There are three fundamental design decisions:

- **Deciding the degree of centralization (or decentralization) for REDD+.** A centralized approach focuses on receiving payments for ERs at the jurisdictional scale, with a benefit-sharing system to distribute carbon benefits (monetary and nonmonetary) to subnational jurisdictions (states, municipalities), or nonstate actors (private actors, landowners, legal entities, communities, private sector companies, or others). In a decentralized structure the government authorizes the implementation of projects and programs, which are then carried out at lower scales, often with the participation of private actors to directly market and monetize ERs. Decentralized systems enable direct incentives for local actors to achieve GHG results without depending fully on government processes to attract carbon finance investors. **The characteristics of centralized vs. decentralized systems are described in Part I Section 2.**
- **Defining the role that nonstate actors (private entities, communities, and nongovernmental entities) should play in the implementation of REDD+.** Closely related to the first point, the government needs to decide how best to integrate nonstate entities into its REDD+ strategy, since ownership from a wide range of stakeholders will lead to more sustainable and more effective implementation. This decision is influenced by the standing and local rights that such nonstate actors possess, but also the extent to which the government wishes to rely on public policy alone to achieve REDD+

mitigation either directly (by addressing the drivers of deforestation) or indirectly (by providing incentives to local actors, including private investors, to address these drivers); or whether it wants to enable the local actors or REDD+ projects to receive incentives related to performance. If the latter is the case, the next consideration is whether local actors should be entitled to access carbon directly, or whether incentives should be provided through government-implemented programs.

- **Determining the types and channels of climate and carbon finance to access.** A government may decide that it wishes to encourage voluntary carbon market crediting at the project level, but also make efforts to access nonmarket payments at the jurisdictional level, for example from GCF. It may also decide to allow crediting at various levels—project, subnational, and national—or it may limit crediting to only certain levels. Or it may decide that certain REDD+ activities, such as reforestation, are more appropriate for implementation at the project level, while reducing deforestation is tackled more effectively at a jurisdictional level. *The decisions about which type of crediting, and at what levels, are fundamental decisions to be made in designing a nested system.*

**Before conceptualizing the design of the system, the government should contemplate a series of policy considerations.** Several suggested questions are provided in Table 1 below. In many cases, the answers will depend on national circumstances. In the **Decision Support Tool (DST)**, users are asked to provide the responses that best, or most closely, characterize the situation in their country, recognizing that most contexts are complex, and multiple responses may often apply; or that quite nuanced answers may be appropriate. (See Appendix B for a detailed description of the Decision Support Tool.)



Table 1. Key Policy Considerations When Designing a Nested System

Key Question	Explanation
<i>As a government, which actor/s do you want to incentivize through results-based climate, or carbon finance?</i>	REDD+ results-based payments and/or carbon crediting can provide incentives for various entities to change their behavior. Thus it is useful to consider whose behavior needs to be changed. For example, in order to reduce deforestation, is it primarily government policy that is needed? Or is it perhaps private action and investment in implementing existing policies? What type of finance will be most effectively deployed, or will provide the appropriate incentives to the right actors? For example, there may be a critical need to halt forest loss through land tenure reform, which requires government policies supported by ODA, or nonmarket results-based finance. Alternatively, the priority may be to provide incentives to local communities or landowners to shift away from activities that cause deforestation—and carbon finance may be seen as an opportunity to provide such incentives. In some cases, both activities may be needed; this would be one reason to consider a nested system.
<i>What climate or carbon finance opportunities are most relevant for your country?</i>	Countries may consider the types of carbon finance they wish to access—from nonmarket REDD+ results-based finance, to market-based finance, or financing from domestic, international, or voluntary markets. (See Section 3.2 for a discussion of various sources.) Furthermore, a country may consider the scales that are the “best fit” for accessing different types of finance. For example, a country may intend to access GCF REDD+ results-based finance at the national scale, while enabling local actors to engage in voluntary markets. In considering the various sources of financing, which are often unpredictable, countries should gauge the risks of depending on external sources, and understand the requirements for accessing each of them.
<i>What is the best role for the government to play with regard to REDD+? As an ER program manager, or as a regulator?</i>	Government engagement in markets at the national scale entails the management of a country-wide ER program as well as responsibility for implementing activities, and ultimately for performance as well. In such a case, a country would have full control over ERs, including the monetization and disbursement of funds. At the other end of the spectrum, a country may simply allow projects to proliferate, unattended by the government. A middle road may be for a government to regulate projects – for example, attempt to drive projects to priority areas, align MRV systems, or ensure that safeguards are applied – but empower the projects to generate the credits and access carbon finance directly.
<i>What characterizes your country’s rules regarding land and forest ownership?</i>	A country’s system of land tenure and ownership and forest governance will influence the type of crediting that may occur within the country. For example, a country that has private ownership of land and strong property rights might have some added difficulties with subnational/national models compared to countries where the forests are nearly all state-owned and managed.
<i>What is your view of voluntary carbon projects?</i>	In many cases, nesting is the result of existing and/or emerging voluntary forest carbon projects. In some instances, countries may wish to encourage projects, while in others they may not be allowed. And some countries may wish to encourage projects, but also want to regulate them—for example, to ensure that safeguard measures are applied, or to align them with jurisdictional programs.

A country’s response to the above questions can help them choose the REDD+ implementation model that is most suitable for its needs. The next section discusses nesting in the context of REDD+ implementation models.

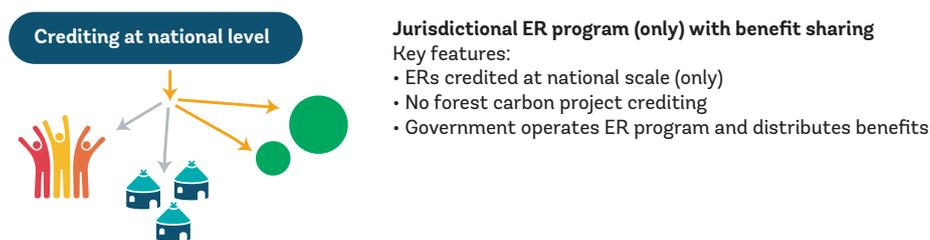
**It’s important to note that decisions about nesting are often limited by local circumstances and existing frameworks.** For instance, limitations on the existing jurisdictional MRV system might limit the available options for nesting.

## 2. NESTING IN THE CONTEXT OF REDD+ IMPLEMENTATION MODELS

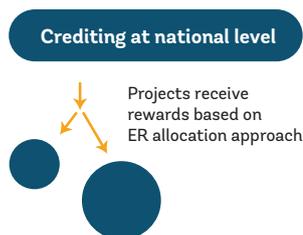
There are four simplified approaches, or models, that a government may adopt for REDD+ implementation. Based on our working definition of nesting, **only the two middle models – centralized and decentralized – (shown in the blue box of Figure 4) are considered nested systems.** Countries can choose just one of the four models, or they can use a mixture of them (see Section 2.6). Or they may start with one model and evolve over time to a different model.

The word “jurisdiction” can refer to either subnational or national jurisdictions throughout this manual (and vice-versa). “Nesting” can refer to integrating a subnational jurisdiction into a national framework as well as integrating a project into a subnational or national framework. A summary of the simplified models of REDD+ implementation with nested systems is highlighted in Figure 4, followed by more detailed descriptions in the subsections that follow.

Figure 4 Summary of Four Simplified Models



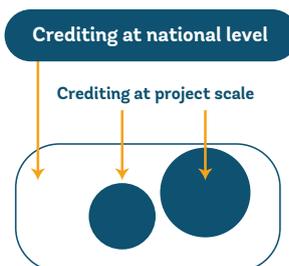
### Nested systems



#### Centralized-nested

##### Key features:

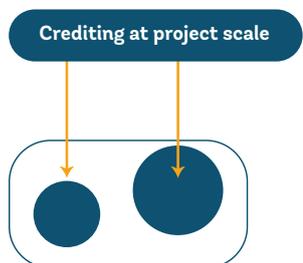
- ERs credited up to national scale performance (only)
- Projects encouraged and receive rewards based on GHG performance (linked to national performance)
- Government control over ERs and distribution of carbon benefits via an agreed 'allocation method'



#### Decentralized-nested

##### Key features:

- ERs credited at national and project scale
- Projects authorized to generate and market ERs (delinked from national performance)
- Government generates ERs through public programs and on public lands



#### Project crediting (only), no jurisdictional ER program

##### Key features:

- ERs credited at project scale (only)
- Projects are incentivized, may be regulated
- No RBF or sale of carbon credits by the government
- Government role is regulator, not ER program manager

## 2.1 Jurisdictional ER Program (Only), With Benefit Sharing

### How does this model operate?

In this model, there is accounting for ERs only at the national scale. This model relies on the government's ability to achieve ERs through government programs, and to monetize the ERs generated at the jurisdictional level. Local actors receive payments from the government as part of the government's defined benefit-sharing arrangements (Figure 5). The government has full control over the accounting and initial allocation of funds generated by the program, but the benefits may be channeled through nongovernmental means below a certain level.

**Example:** At the time of this report, in Ecuador, all ecosystems services belong to the state; therefore projects are not authorized to generate carbon credits.<sup>13</sup> However, the country may receive payments for REDD+ performance, as it has done from the GCF, and it can transfer payments to beneficiaries through national forest schemes such as the SocioBosque program. This model is similar to Brazil's Amazon Fund, through which the government receives payments for ERs in the Amazon region, and manages a program to disburse the funds they receive to local actors.



### What countries might be interested in this model?

**Incentives:** The government is responsible for implementing policies and measures to slow, halt, and reverse deforestation, and to create the necessary incentives and enabling environment to mobilize private sector finance. Local actors obtain incentives through defined benefit-sharing arrangements. Therefore, the government is the sole direct recipient of any climate or carbon finance.

**Rights:** This model is the easiest to implement in cases where the public sector holds full control over forest lands, resources, and management. It is also suitable when the government relies on the enforcement of existing laws to achieve REDD+ mitigation.

**Finance:** The government wishes to support jurisdictional programs through REDD+ results-based finance (RBF); for example, finance provided by GCF or other bilateral arrangements, or market-based crediting at the jurisdictional scale. Carbon markets are not a direct source of financing for REDD+ projects, since carbon finance is received through the benefit-sharing arrangements of the jurisdictional program.

### What is the key challenge of this model?

The key challenge is the development of benefit-sharing arrangements that are acceptable to constituents, and the implementation of policies that will reduce deforestation. Where Indigenous and local communities or private entities manage significant parts of the forest estate, they may hold rights, including customary or use rights, that allow them to directly claim carbon rights.

Figure 5 Jurisdictional ER Program (Only), with Benefit Sharing



<sup>13</sup> Ecuador's GCF Funding Proposal provides relevant information in Section F "Legal Arrangements". Available at: <https://www.greenclimate.fund/document/ecuador-redd-plus-rbp-results-period2014->

Table 2. Benefits/Risks of Jurisdictional ER Program (Only), with Benefit Sharing

Benefits	Risks
Gives the government full control over REDD+ credit (or payment) transactions...	...but also places the full burden of achieving ERs, or creating the necessary policies to mobilize non-carbon private finance (for example, environmental fiscal instruments) on the government.
A government does not need to worry about "mismatches" in ER generation with projects...	...but the system does not provide strong performance incentives to local actors unless sufficient incentives are included in the benefit-sharing arrangements and guaranteed by the government.
The government has the flexibility to channel REDD+ payments based on national priorities...	...but in doing so it may not optimize GHG performance and contributions toward its NDC.
Requires potentially few REDD+ rules...	...but requires robust national capacity to implement REDD+ activities and distribute benefits.
May simplify national GHG accounting...	...but may risk litigation if the system does not provide proper benefits to rights holders.



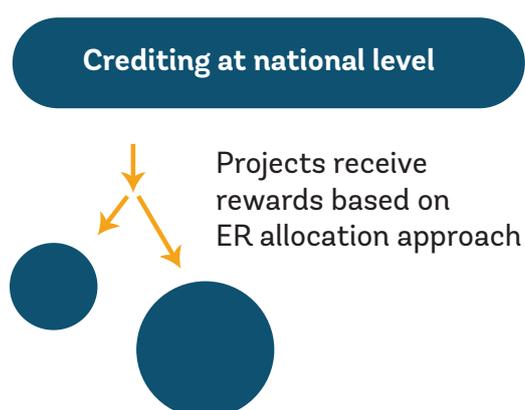
## 2.2 Centralized Nested Approach

### How does this model operate?

In this model, ERs are accounted for at the national scale. However, because the government wishes to encourage projects through incentives that are linked to performance, it develops a system for sharing the benefits it receives from monetizing ERs at the national scale with projects. Approved projects may receive either payments or ERs from the government in accordance with its benefit-sharing arrangements and ER allocation system (Figure 6). The key difference with the jurisdictional ER model above is that projects can measure their own ER performance, and can receive a share of the ERs. This model implies that rewards for private action are dependent on national performance, unless the government is willing to make up any shortfalls by compensating projects.

Example: The Democratic Republic of Congo (DRC)'s benefit-sharing arrangements for the FCPF Carbon Fund provides payments for GHG performance to carbon projects, as well as the possibility for projects to receive a share of the ERs that are generated by the ER program, but are not purchased by the Carbon Fund. A national government can also allocate ERs or payments to subnational jurisdictions. For example, in 2017 Brazil created a system whereby states within the Amazon were provided with a share of the regionally achieved ERs to monetize.<sup>14</sup>

Figure 6 Centralized Nested Approach



### What countries might be interested in this model?

**Incentives:** REDD+ requires a combination of government and local action; however, the government may wish to control international ER transactions and link them to national performance. The main goal of nesting is to incentivize projects to contribute to the national performance.

**Rights:** This model works best for state-owned lands, including where a government has licensed out management of parts of the forest estate. The land managers that own the carbon rights receive benefits in the form of funds or ERs, as a reward for measured GHG ERs.

**Finance:** The government is interested in accessing REDD+ RBF provided by GCF, the FCPF Carbon Fund, or other bilateral arrangements, or market-based crediting at the national scale; and wishes to create incentives for subnational programs or projects closely linked to measured GHG ERs.

### What are the key challenges of this model?

Generating a transparent and fair allocation of incentives to projects, and devising an accepted means of allocating payments or ERs are the main challenges of this model. Projects may not receive benefits for their share in mitigation actions if the overall jurisdiction falls short in achieving sufficient ERs, or the government does not distribute benefits fairly. This may undermine the incentives to change behavior at the local level for activities that are dependent on carbon finance.

<sup>14</sup> More detailed explanations of the DRC example can be found at: <https://openknowledge.worldbank.org/handle/29720/10986>

Table 3. Benefits/Risks of the Centralized Nested Approach

Benefits	Risks
Government can benefit from ERs generated at the project level...	...but remains liable for generating and allocating REDD+ benefits.
Local action may be incentivized through the ER allocation system...	...but if projects do not receive rewards unless there is national performance, it is likely to stifle carbon-related investment.
Protects government from “overselling” ERs beyond national performance...	...but may be placing national underperformance risks on private projects.
The government claims control over carbon rights...	...but may risk litigation if the system does not provide proper benefits to rights holders (project developers, project beneficiaries).

## 2.3 Decentralized Nested Approach

### How does this model operate?

In this model, the crediting and monetizing of ERs occurs at both the national and the project scale. Projects can directly generate and issue tradable ERs that do not depend on national performance (Figure 7). Depending on the context, the government may be required to subtract project credits when calculating their national ER claims. The government regulates project MRV and safeguards to promote alignment with national approaches.

Example: Colombia allows the development of REDD+ projects and programs that can directly generate ERs. In 2018, the government adopted a regulation that defined MRV rules for projects.<sup>15</sup> The country engages in RBF through the REDD Early Movers program and GCF, but it also promotes private actions to protect forests by recognizing ERs from REDD+ projects under the national carbon tax, and future emissions trading system.

### What countries might be interested in this model?

**Incentives:** REDD+ requires a combination of government and local actions; in this model, projects can access carbon credits in compliance with government rules, but without governmental intermediation. This system is designed to drive carbon finance directly to projects.

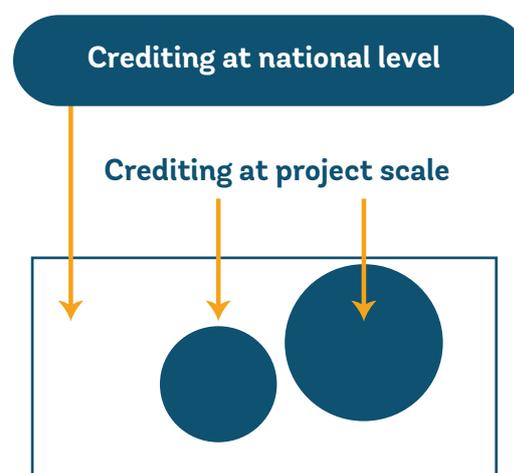
**Rights:** This model recognizes the rights of community and private landowners to monetize carbon rights and benefit from the ERs that result from reducing deforestation on their land.

**Finance:** The government wishes to engage private sector finance, including direct investments into REDD+, and also REDD+ results-based finance at the national scale. .

### What is the key challenge of this model?

The development of an MRV system for projects that align with the national MRV, particularly where a country foresees significant crediting at the project scale (compared to national mitigation), is challenging. This may require a sophisticated national forest monitoring system, and institutional arrangements that can regulate projects and manage their reporting in a national registry or database.

Figure 7 Decentralized Nested Approach



<sup>15</sup> Resolution No. 1447, August 2018, 1. Ministry of the Environment and Sustainable Development, Colombia

Table 4. Benefits/Risks of the Decentralized Nested Approach

Benefits	Risks
Engages private finance, including the potential to generate upfront finance to protect forests...	...but requires significant technical capacity to develop MRV and carbon accounting rules; the political will to adopt them; and strong institutional capacities for processing project requests, including assessing the data and the information submitted by projects.
Mobilizes local action to contribute to forest and climate change goals...	...but the government may face a “national underperformance” risk if project GHG performance exceeds national GHG performance.
Allows for the recognition of REDD+ and the natural resource rights of forest communities and Indigenous peoples...	...but risks unscrupulous project developers taking advantage of communities unless the government adopts minimum requirements on benefit sharing, and enforces safeguards. (Note: This is the case in any scenario that involves projects).
Aligns the GHG accounting of REDD+ projects with the national system	...but requires technical capacity to manage MRV alignment at different scales, and a national registry or database to regulate and track project accounting.

## 2.4 Project Crediting (Only), No Jurisdictional ER Program

### How does this model operate?

In this model, crediting only occurs at the project scale (Figure 8), and the government does not intend to monetize ERs at the national scale. This approach applies to countries that do not depend on national carbon payments to finance government programs. For example, the government may still be implementing REDD+ and may want to regulate projects in order to promote equity in how carbon benefits are enjoyed; to increase the environmental integrity of projects; or to ensure that safeguards are being applied. This model would allow them to regulate projects in order to achieve such goals and/or to align the MRV of projects with national GHG accounting, which may be a factor if future Article 6 transactions are envisioned.

**Example:** This model may be relevant for countries that consider REDD+ projects to be a good mechanism for addressing the drivers of deforestation, since they are in line with government policies and frameworks. In this case, the government may wish to align ER claims with their national forest monitoring, but not intend to access results-based payments, or issue jurisdictional forest carbon credits.

### What countries might be interested in this model?

**Incentives:** Climate and carbon finance are focused on encouraging local and private action. In this model, the government is not dependent on accessing RBF or carbon finance to support their policies.

**Rights:** This model is most appropriate for countries with private and community forest landholdings with strong property rights.

**Finance:** The country implements national forest and REDD+ policies without receiving RBF payments. It is primarily interested in advancing private sector carbon finance; it does not seek to monetize GHG performance at the national scale.

### What are the key challenges for this model?

In this model, the government needs to either self-finance, or find other sources of financing for implementing its forest policies outside of the project areas. If the country is only engaging voluntary market projects, and not expecting to monetize national performance, the urgency to align the MRV systems of all projects is diminished; the government may consider applying requirements to ensure the environmental integrity of ERs generated within its national jurisdiction.

Figure 8. Project Crediting (Only)

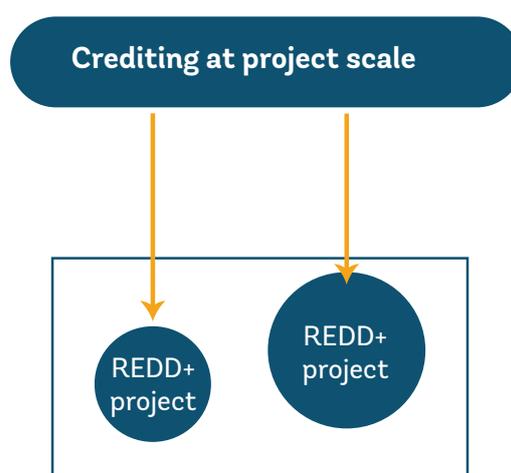


Table 5. Benefits/Risks of the Project Crediting (Only), No Jurisdictional ER Program

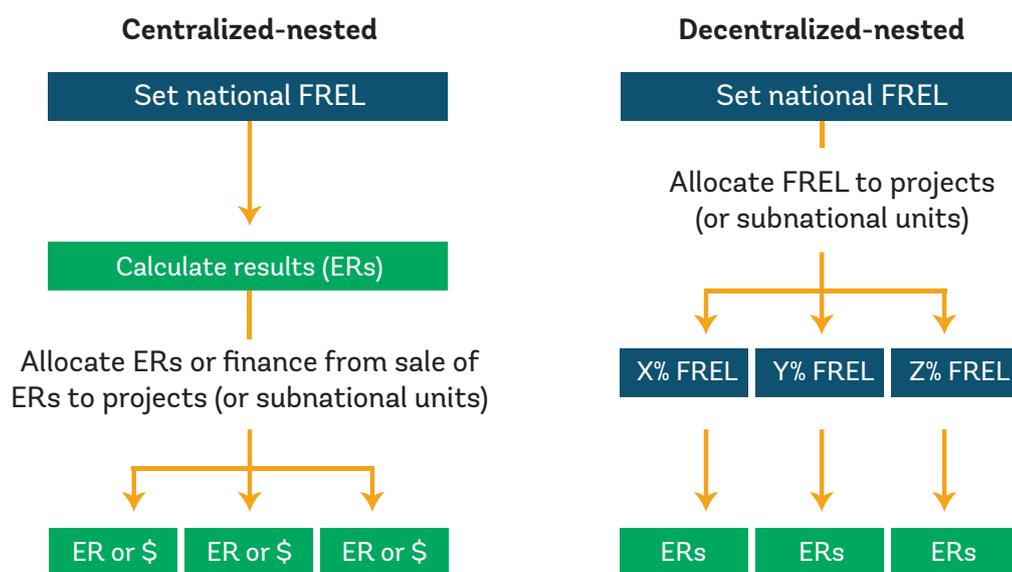
Benefits	Risks
Engages private finance in protecting forests, and offers the potential to generate upfront interest in private sector finance in carbon offsets as a return on their investment...	...but may require financial, technical, and institutional capacity, depending on the level of the desired regulation of projects.
Is simple, with very low risk for litigation or conflicts with respect to carbon rights...	...but may result in GHG performance being limited to project areas, if the government fails to implement national forest and REDD+ policies.
May lead to a higher volume of ERs achieved per unit of area...	...but may result in impacts on environmental integrity due to overestimation of ERs, unless rules are established in support of robust MRV.
Allows for private sector partnerships with forest communities and Indigenous peoples...	...but risks project developers taking advantage of communities unless the government adopts minimum requirements on benefit sharing, and enforces safeguards.

## 2.5 Key Differences Between the Models

This section highlights several of the key differences between the models presented above. One key difference between the two nested models is whether a country wishes to develop a system that limits

and allocates ERs based on national performance (the centralized model), or whether it wishes to give projects more autonomy in generating ERs (the decentralized model). Figure 9 illustrates this difference.

Figure 9 The Key Difference between the Centralized and Decentralized Nested Models



While this difference may appear to be a simple one, it has significant implications. For example:

- Responsibility for generating ERs.** Both approaches require actions by both state and nonstate stakeholders in order to address deforestation and generate ERs. Both require the implementation of policies and measures to address the drivers and legal frameworks that support catalyzation of on-the-ground activities. However, in the decentralized **nested model there**

**is a clearer link between successful implementation of on-the-ground activities and the achievement of results.** This creates a clearer risk-reward incentive for projects, since they are driven by the potential for future carbon revenues.

- Access to finance.** In the centralized system, the government controls and allocates all RBF or carbon finance. This enables it to ensure that sufficient funds are available for the support of governance reform and government policies, for

example by claiming a share of the emission reductions (ERs) that are generated by projects. Under this model, projects (or subnational jurisdictions) receive a portion of the share of the ERs or revenues generated at the national scale. In a decentralized model, the government can preassign a baseline to projects, but after that the projects are free to generate, issue, and sell their project ERs, and the government does not participate in these transactions. However, the credits issued by projects need to be reported to the national database or government registry, and regulations defined by the country apply. Because under this model projects are more autonomous, it is more attractive to private sector carbon-related investment, since risks are contained at the project scale. (See Section 3.3 for more information on private sector carbon finance.)

- **Risk profiles.** In the centralized model, the government has greater control over ER transactions, RBF, and carbon finance. Therefore, if a government is concerned about projects

“overselling” credits—for example, beyond the level of national performance—the centralized model helps to avoid this eventuality. The projects bear the greater risk, since they may put in the effort to achieve ERs, but not receive the full reward for their effort if there is underperformance across the country. The risk to the government is that this may reduce the incentive for private carbon-related investment. In the decentralized model, the risk for the government is that the projects may sell more ERs than the national performance.

Regarding the project crediting (only) model, it is worth noting that the same rules may be applied to projects as in the decentralized-nested model—with the only difference being that the government is not seeking payment or crediting at the jurisdictional scale. In this model, a government may still decide to adopt requirements for projects in order to reduce the risk of environmental integrity or to promote consistency of reported ERs with national reporting.



Table 6. Key Differences Among REDD+ Implementation Models

	Jurisdictional ER program (only) with benefit sharing	Centralized Nested Model	Decentralized Nested Model	Project Crediting (only), No Jurisdictional ER Program
REDD+ strategy	Yes	Yes	Yes	Yes
Measurement, Recording, Verification (MRV)				
Jurisdictional FREL	Yes	Yes	Yes	No
Project level baseline and MRV	No	Yes	Yes	Yes
Allocation of ERs to activities and projects	No	Yes	No	No
Allocation of the FREL to activities and projects	No	Yes	Yes	Optional
Incentives to projects via...	Benefit-sharing arrangements	Sharing of jurisdictional ERs (or \$ from them)	Ability to independently generate ERs	Ability to independently generate ERs
Legal				
Right to transfer ER with nonstate actors	Only government transfers (jurisdictional) ERs	Government transfers jurisdictional ERs, projects may transfer ERs (if received rather than share of \$)	Government transfers jurisdictional ERs, projects transfer project ERs	Only projects transfer ERs
Recognition of carbon rights of via...	Benefit-sharing arrangements	Sharing of ERs or \$	Right to engage in projects that generate ERs	Right to engage in projects that generate ERs
Benefit Sharing				
Benefit-sharing approach with projects	By government, focused on sharing of \$ (based on non-ER metrics)	By government, focused on sharing of ERs or \$ (based on GHG performance)	Projects generate and monetize ERs through FREL allocation (based on GHG performance), and share locally	Local actors generate and monetize ERs (based on GHG performance), and share locally
Access to benefits by local communities and indigenous people via...	Benefit sharing arrangements of jurisdictional program	Benefit sharing arrangements of jurisdictional program or projects	Benefit sharing arrangements of jurisdictional program, direct participation or as beneficiaries of benefit sharing-arrangements of projects	Direct participation as project proponents or benefit sharing arrangements of projects
Right to transfer ER with nonstate actors	Only government transfers (jurisdictional) ERs	Government transfers jurisdictional ERs, projects may transfer ERs (if received rather than share of \$)	Government transfers jurisdictional ERs, projects transfer project ERs	Only projects transfer ERs
Sale of ERs support national government for, for example, institutional strengthening	Yes	Yes, if there are ERs outside the project areas	Yes, if there are ERs outside the project areas	No
Risk Management				
Government bears the performance risks of projects	Not applicable	No	Yes	No
projects bear the performance risk of the government	Not applicable	Yes	No	No

## 2.6 The Reality: Mixed Approaches

Governments should opt for a system that responds to their unique national circumstances; it may not necessarily fall neatly into any particular nesting or REDD+ model. They may also start with one approach and evolve over time to another model. Almost all countries will choose to combine national policies with the empowerment of local actors, but they can choose different ways of doing so. Their choices will depend on the drivers of deforestation, the accessibility of various regions within the country, and the target populations involved. Countries may therefore simultaneously operate several models, or **create their own “hybrid” approach** that best meets their national circumstances, as illustrated in the examples below (See Figure 10, Figure 11, Figure 12).

**Example A:** The government chooses to develop a national ER program, and in its benefit-sharing system provides some constituents with non-performance-based funding, while others may receive rewards in the form of either financing or ERs, based on GHG performance.

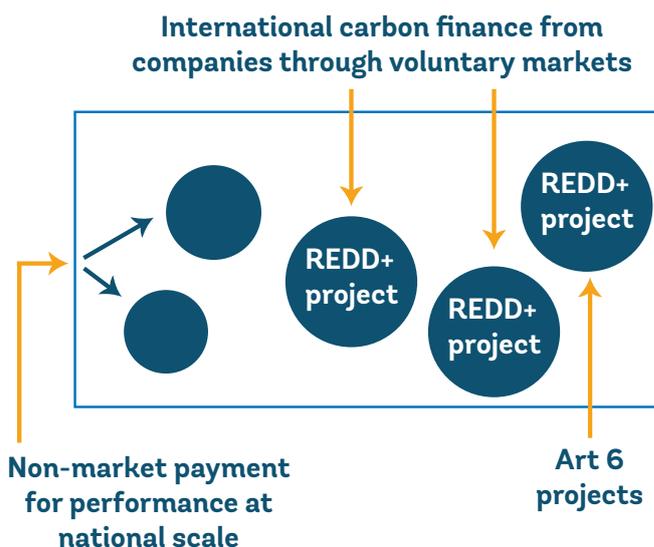
In this example, the country is combining the jurisdictional only and centralized nested models. Some actors within the country may respond better to the provision of nonmarket finance—for example, local communities or Indigenous people. Others, such as private sector actors, may prefer to be rewarded based on their GHG performance.

**Example B:** The government wishes to access nonmarket REDD+ results-based payments, participate in Article 6 transactions, and allow projects to participate in voluntary markets, as illustrated in Figure 11. (See Section 3.4 for more on Article 6.)

Figure 10. Hybrid Scenario A



Figure 11. Hybrid Scenario B

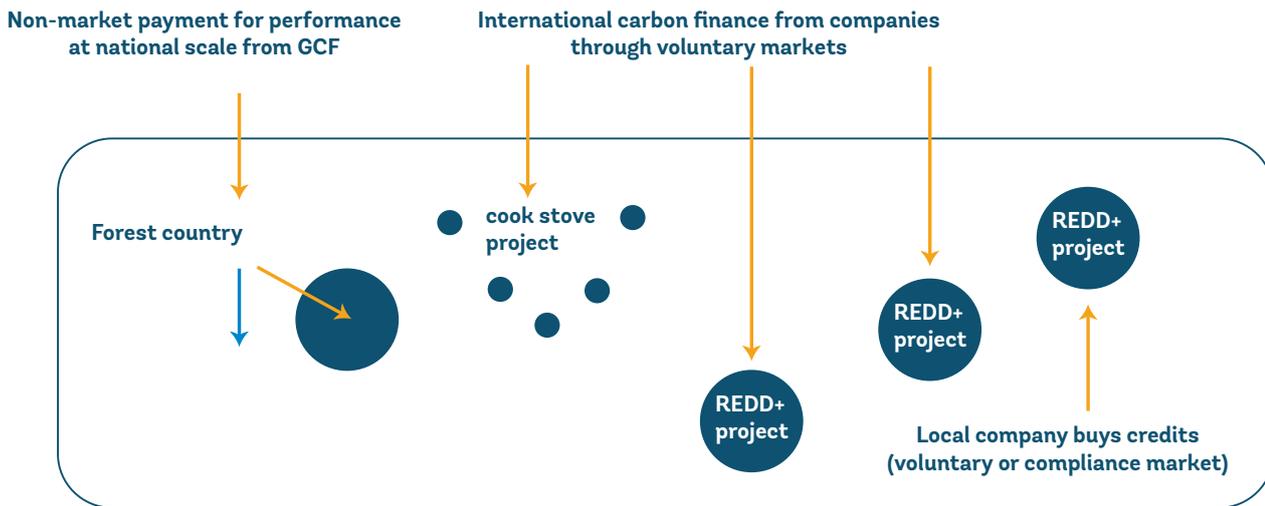


In this example, the country may combine the decentralized and centralized nested models.

- **Under voluntary crediting, the country may choose to allocate the reference level (see Section 4), and assign baselines to projects in order to promote equity among projects, drive projects to high-risk areas, and align MRV with the national GHG accounting systems; but it may also allow projects to engage in voluntary markets based on their performance against the assigned baselines.**
- **For projects that are under Article 6 of the Paris Agreement, the country may apply the centralized nested approach, in which the government allows projects to sell a given volume, allocated from the national performance, of credits with CAs.**

**Example C:** The country wishes to access nonmarket REDD+ results-based payments, and allow projects to participate in voluntary markets. It participates in a donor-funded program (for example, the FCPF Carbon Fund, BioCF-ISFL, or REDD Early Movers), and has also developed a domestic carbon market where REDD+ credits are eligible.

Figure 12 Hybrid Scenario C



In this example, a country may again combine several models:

- For nonmarket results-based payments, it may distribute the payments to some local actors, such as vulnerable groups that require additional financing to support sustainable development, and to others based on their GHG performance.
- For voluntary crediting, it may allocate the forest reference emission levels (FRELs), but allow projects to engage directly in voluntary markets.
- For domestic crediting, there is a local standard that is more flexible. Local companies are encouraged to invest in the country's ecosystem protection or restoration; there is no effort to align MRV with the national system, although projects are regulated to the extent that they must apply minimum safeguards.

As illustrated in these examples, it is important to understand the available sources of finance and to develop a strategy to access and optimize such finance. For example, while GCF offers nonmarket REDD+ payments to any developing country, most of them will need to find an accredited entity that is willing to put forward a funding proposal on their behalf, which is a cumbersome process. Other sources of financing (for example, the FCPF Carbon Fund, BioCF, and bilateral deals) are only available to a limited number of countries. Similarly, international compliance markets (for example, Article 6.2 transactions) require a country-to-country agreement. Voluntary market buyers may also have requirements or preferences that tend to favor some countries

over others. And in some countries there may be local companies that are interested in buying credits.

Another critical consideration when determining the scale and levels of crediting is ownership of the land and resources, and consequent claims to participate in REDD+ within a country. Countries often define forest carbon rights based on the land tenure framework of the country: this is discussed in Section 4.4. Countries where governments control all of the forest land and resources may favor the centralized management of carbon rights, while those with diverse forest ownership and land management regimes may tend to respect the right of landowners to engage in carbon projects. Benefit-sharing arrangements should consider both legal and customary rights.

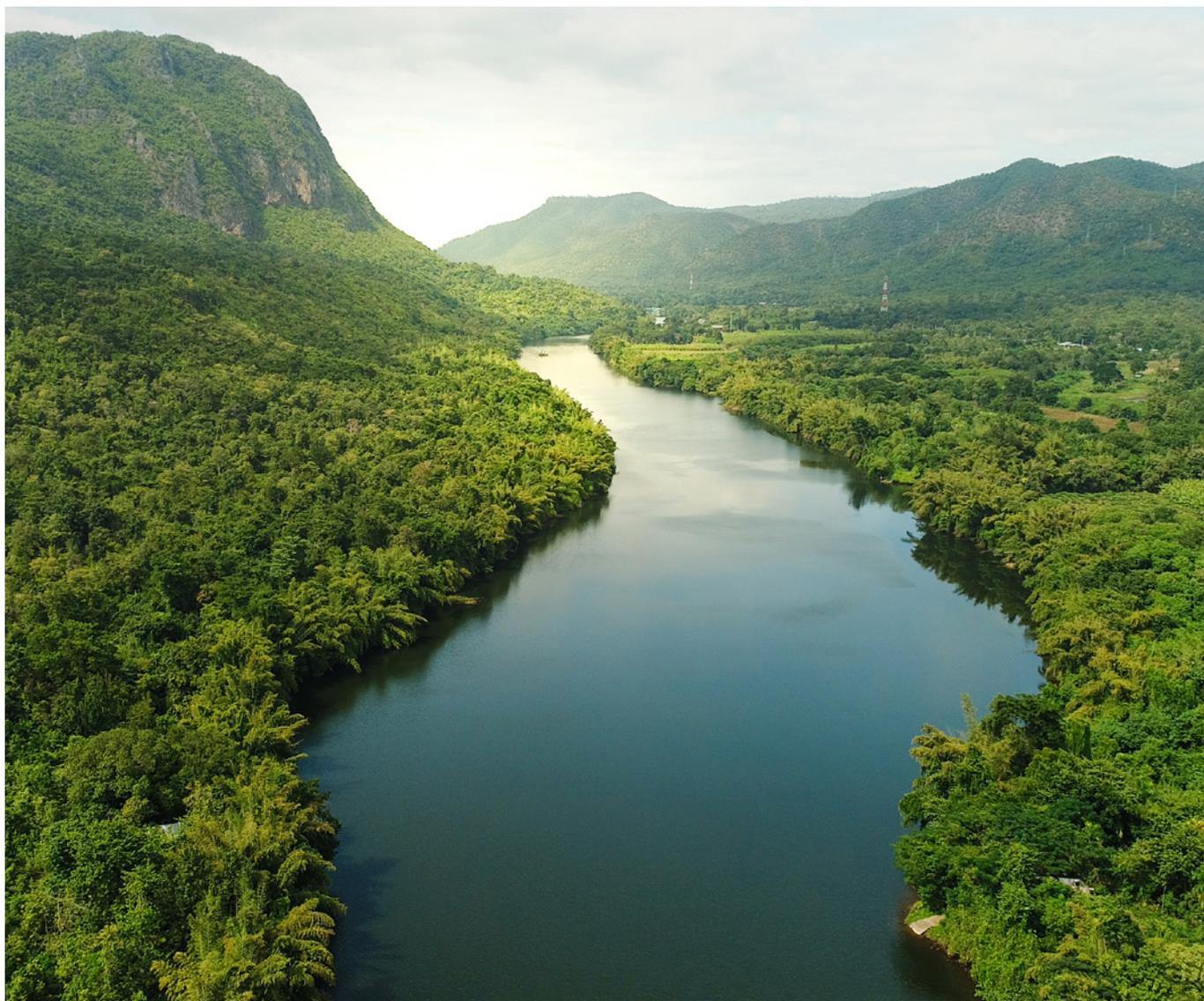
Finally, it is useful for a country to have a position on whether, and if so how, carbon finance will play a role in the country's achievement of its NDC. As of the time of this report, there remain questions about the role of the voluntary market and its relationship to a country's accounting of its NDC (including corresponding adjustments). By contrast, the carbon offsetting and reduction scheme for international aviation (CORSIA) has approved provisions that require a corresponding adjustment. Furthermore, a country's target—and its conditional vs. unconditional pledge—may be a factor in the overall design of the nested system that is chosen by the government.

### 3. CONSIDERATIONS FOR THE DESIGN OF NESTED SYSTEMS

The human, institutional, and financial capacities of a country are essential considerations when planning the design of a nested system. While nesting might be technically challenging, a governmental ER program requires stronger implementation capacity (see Part III, on implementation). There are also a variety of REDD+ results-based finance (RBF) opportunities—from nonmarket to market-based mechanisms, and from voluntary to compliance markets. In addition, there is growing interest in how to mobilize private sector finance for REDD+, as well as increasing interest from companies that are engaged in nature-based solutions. As countries increasingly consider how to access REDD+ RBF, many are also struggling to understand how these may impact their obligations under the Paris Agreement. These aspects are focused on in the sections below.

#### 3.1 Capacity Constraints

While policy objectives and the national legal and policy context should be the primary factors guiding the design of the nested systems, other issues may limit the options countries have, particularly in the near term. For example, **one consideration is the ability to measure and monitor GHGs from forests or land use.** Many carbon standards require a level of accuracy in the estimation of emissions (or removals), or take a deduction for uncertainty. Institutional and technical capacity varies significantly within and among countries; some countries may not be able to accurately measure and report the GHG emissions and removals from their forest resources. Building technical capacity is a prerequisite for the development of a nested system—as well as the ability to operationalize it; therefore it requires a level of commitment from countries (Box 4).



## Box 4 Emerging Types of Nested Systems

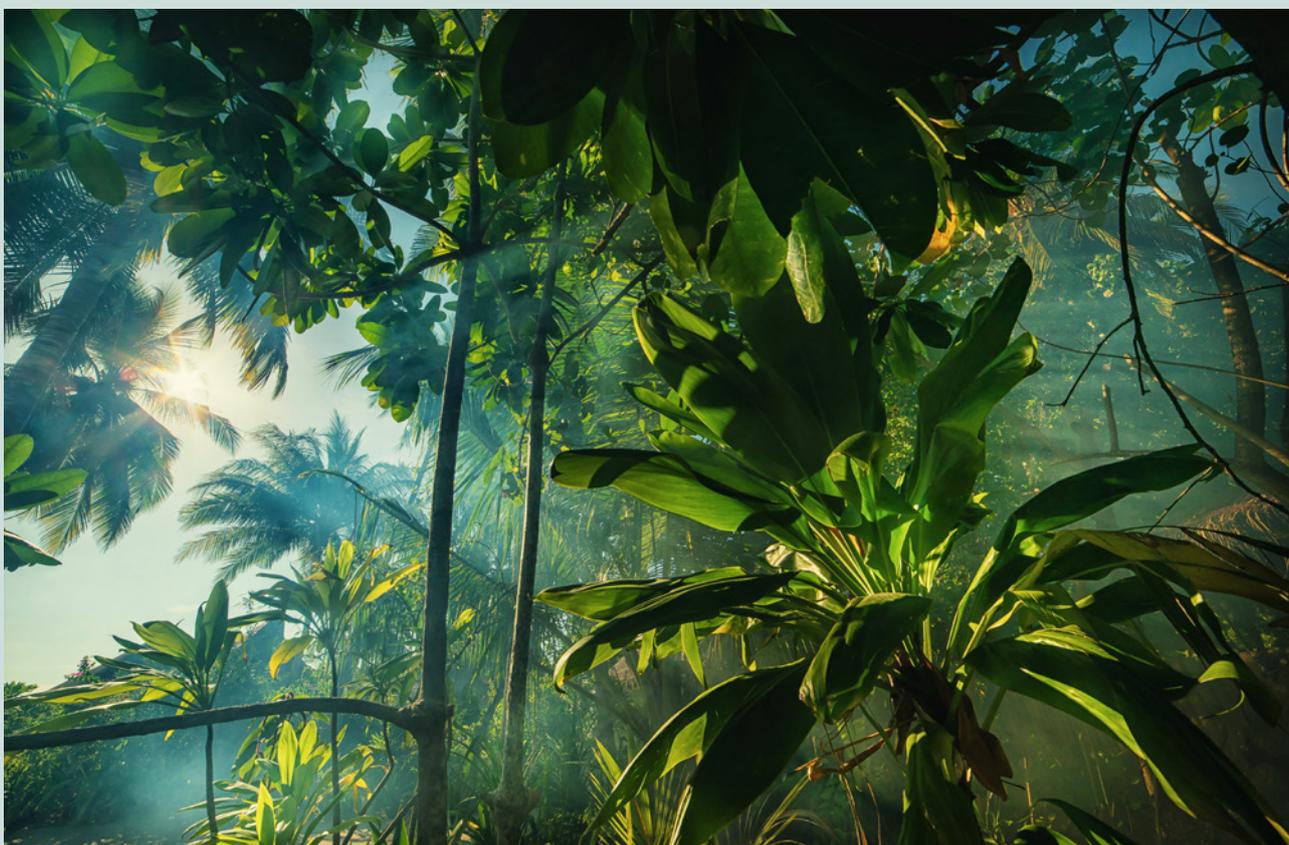
Countries have a variety of different systems, based on a range of factors. When governments follow a Jurisdictional ER Program (only) with Benefit Sharing, the projects within such countries may be promised a portion of the jurisdictional performance-based payment, but will not be allowed to issue and sell carbon credits on their own. In Ecuador, for example, only the government has the power to monetize carbon rights, and environmental services, including carbon, are not available for appropriation by any entity. Thus, carbon cannot be sold or traded in markets, although the government can receive payment for GHG performance. In this case, environmental benefits are considered a public good, and the government is the only entity that can ensure that the benefits are enjoyed collectively, or shared among citizens.

A number of approaches are also being developed in which governments (for example, Cambodia and Colombia) develop frameworks to regulate particular aspects of project-based crediting to facilitate project activities for accessing carbon finance. The core of such frameworks often relates to the

setting of baselines and/or the alignment of project monitoring with national MRV systems. One of the motivations for using this approach is the possibility of attracting private finance to protect and enhance forest resources.

Hybrid approaches are also emerging. For example, a couple of countries (Guatemala, Peru) are receiving RBF at the national scale while also respecting the carbon rights of landowners. In such cases, the country allows the owners with carbon rights to “opt in” to the national carbon finance system, by signing agreements that give the government the authority to commercialize and sell ERs on their behalf.

Given the complexities that arise in developing nested systems, some countries are taking a step-by-step approach. They may start with a simpler approach, with the intent of phasing in a more sophisticated design over time. For example, an early approach may not achieve full MRV consistency, but may simply improve alignment in GHG estimation at various scales. Alternatively, a country may start by building a decentralized system, largely in order to enable voluntary crediting that is aligned with national GHG measurement systems, but has the ultimate goal of engaging in national results-based payments, and/or Article 6 transactions.



### 3.2 Landscape of REDD+ Results-Based Finance

For many countries, the desire to develop a nested system is motivated by a desire to access multiple streams of REDD+ RBF, subject to specific rules and procedures for accessing funds. These include:

- **Nonmarket finance: Finance is linked to ERs.** However, there is no requirement to transfer the rights to ERs, no issuance of a tradable carbon credit, and no need for a GHG transaction registry. Some nonmarket instruments have specific requirements; for example, the Green Climate Fund (GCF) tries to avoid “double payment” of ERs, and requires countries to register REDD+ results in the Lima REDD+ Information Hub.<sup>16</sup>
- **Voluntary markets: Carbon credits are generated and issued under the rules of voluntary carbon standards, and tradable units are tracked in registries. The market is largely driven by companies with self-imposed targets.**

- **Domestic compliance markets: Markets are created by governments and linked to regulatory systems such as emissions trading schemes or carbon taxes. ERs are generated or recognized under the rules defined by national legislation. Tradable units are tracked in registries.**
- **Internationally regulated markets: Markets are created by governments through multilateral fora, such as UNFCCC, or the International Civil Aviation Organization (ICAO). ERs are tracked in linked carbon registries. Under the Paris Agreement, ER transactions require a country to make a “corresponding adjustment” in reporting their achievement of nationally determined contributions (NDCs).**

Table 7 provides examples of different types of RBF; the scales at which they reward GHG performance; who pays for such performance; and the rules that are applied to measuring it.



<sup>16</sup> <https://www.greenclimate.fund/document/terms-reference-pilot-programme-redd-results-basedpayments>

Table 7 The Landscape of REDD+ Results-Based Finance<sup>17</sup>

Type of REDD+ RBF	Scale	Who pays for performance	Who sets the rules, and examples
Nonmarket	National or subnational	Donor governments	Donor governments set the rules, often in agreement with developing countries: <ul style="list-style-type: none"> <li>GCF: Use of a “scorecard,” approved by GCF Board</li> <li>REDD Early Movers (REM) /bilateral: Defined by donor government(s) in partnership with the country</li> <li>Amazon Fund: Defined by the Brazilian government</li> </ul>
Voluntary market	Project	Companies (voluntary targets)	Rules may be developed by governments or nongovernmental organizations (NGOs). There are two types of voluntary markets: <ul style="list-style-type: none"> <li>Domestic: Standards specific to the host country (for example, the Thai VER standard)</li> <li>International: Standards apply across countries and regions (Verified Carbon Standard (VCS), FCPF C</li> </ul>
Domestic compliance market	Project	Companies (obligations under law)	Rules are set by government regulators, for example: <ul style="list-style-type: none"> <li>Chinese certified emissions reductions</li> <li>Offsets linked to Colombia’s carbon tax</li> <li>Offsets linked to South Africa’s carbon tax</li> </ul>
International regulated markets	Project or larger-scale programs	Governments or companies	Requirements are set by an international body such as <ul style="list-style-type: none"> <li>CORSIA. Eligible programs include: <ul style="list-style-type: none"> <li>Architecture for REDD+ Transactions (ART)</li> <li>Verra’s Jurisdictional and Nested REDD+ (JNR)</li> <li>FCPF Carbon Fund (conditionally eligible; needs to meet additional requirements to be fully eligible)</li> </ul> </li> </ul> Paris Agreement “internationally transferred mitigation outcomes” (ITMOs), <ul style="list-style-type: none"> <li>Article 6.2 transactions, defined bilaterally between countries</li> <li>Article 6.4 transactions, admi</li> </ul>

**It is important to note that for programs that are eligible to access both nonmarket and market mechanisms, financing from different sources can overlap.** Nationally and internationally regulated markets can be linked; for example, the EU Emission Trading System and the markets created under the Kyoto Protocol are linked. In addition, there may be overlapping of bilateral or multilateral RBF programs, or different voluntary carbon standards.

**The multitude of available programs can create challenges for countries that wish to access or enable funding at various scales.** For example, countries participating in nonmarket, national-level REDD+ RBF through GCF or REM Early Movers are likely to use different methodologies to measure GHG performance (and receive payments) than voluntary projects are. The issues related to GHG measurement mismatches are covered in Part II Section 4.

<sup>17</sup> The FCPF Carbon Fund requires the issuance of tradeable FCPF units, which may or may not be used for offsetting purposes. For instance, Carbon Fund Tranche B buyers retransfer the ERs to the country to be used for NDC purposes (example of a nonmarket mechanism), while Tranche A buyers may use the ERs for other purposes, and countries may sell remaining FCPF units on the market.

### 3.3 Role of the Private Sector in REDD+ Markets

The Warsaw Framework for REDD+ states that financing for REDD+ should come from both public and private sources. To date, most REDD+ RBF has been offered by donor governments through multilateral funds (the FCPF Carbon Fund, BioCF-ISFL, GCF), and bilateral approaches such as REDD Early Movers (REM), or government-to-government agreements. All such funds provide payment for performance at the national (or subnational) scale.

Governments may consider multiple approaches to mobilizing private sector finance for REDD+ implementation, ranging from fiscal incentives to carbon finance. This applies to all REDD+ implementation models.

More recently, the private sector is increasing its engagement in nature-based certified ERs.

Previously, project developers in the private sector played a small role but had an earlier start, implementing forest carbon projects at the local level. They have sometimes been funded by private investors or companies, through the purchase of credits generated by such projects; however, the funding was minimal compared to the amounts provided by donor governments. Many companies have recently shown interest in using nature-based offsets to achieve their climate mitigation targets. In 2019, the issuances of voluntary forest carbon credits more than tripled compared to the annual volumes from 2010-15, as shown in Figure 13). Recent research<sup>18</sup> suggests that the voluntary market will continue to grow, potentially exceeding donor-based finance for REDD+.

Figure 13 Verified Carbon Unit (VCU) Issuances from 2010 to 2019



Source: VCS Project Database, accessed October 2020

<sup>18</sup> Taskforce on Scaling Voluntary Carbon Markets, January 2021. Found at: <https://www.iif.com/tsvcm>

**It is useful to understand the various types of private sector actors that are involved in REDD+ carbon markets.** Project developers could be companies engaged in supporting mitigation activities to generate a return. By contrast, companies with a carbon footprint and climate targets might be either (i) offtakers or buyers of carbon credits; or (ii) investors in mitigation activities who have plans to receive credits, or revenue from their investment. Generally, private entities are more comfortable investing in projects than in jurisdictional programs. For them, the risks are easier to manage than the risks encountered in jurisdictional programs.

**The increasing participation of the private sector in REDD+ markets will also drive the availability of upfront investment finance needed for the implementation of mitigation activities.** This could be leveraged by countries to gain access to additional sources of upfront investment finance. Investors need to see a clear link between the activity they are investing in and the ERs they would receive; this is one reason why there might be more interest in investing in project-level interventions, where attribution of ERs is easier. Recent transactions have shown that prospective buyers of REDD+ credits are also interested in investing in mitigation activities that generate other revenue besides carbon.

**REDD+ countries are increasingly interested in combining donor government funding with private sector investment at the project level.** In a few instances, countries may have carbon credits at the jurisdictional level, and may still be able to find private and public sector buyers, depending on the risks they present. But for many countries, meeting the requirements of carbon market standards at the national scale may be challenging—for example, regarding issues related to carbon rights, as well as the MRV stringency required by markets. Thus, due to capacity constraints, access to private sector finance is unlikely at the jurisdictional scale—at least in the near term—for some countries.

### 3.4 The Paris Agreement: Nationally Determined Contributions and Article 6

**The Paris Agreement opens the possibility of linking REDD+ finance to the transfer of ERs.** Such transfers can either be limited to government-to-government transactions, or linked to carbon markets.

At the same time, the Agreement also brings new challenges, especially because developing countries are now expected to reduce, measure, and report ERs—an obligation that was previously held only by developed countries. This adds a layer of complexity in implementing REDD+, not only because ERs are now an asset of considerable value for both developing and developed countries, but also because countries have an obligation to ensure that the reductions are not counted toward multiple nationally determined contributions NDCs.<sup>19</sup>

**For REDD+, carbon market finance can supplement the financing options envisioned in the Warsaw Framework.** Article 6 of the Paris Agreement states that countries may transfer “internationally transferred mitigation outcomes (ITMOs) to allow for ambition in their mitigation and adaptation actions” (Art. 6.1, Paris Agreement). ITMOs must be authorized by participating countries (that is, parties to the Paris Agreement), and should avoid “double counting,” meaning that an ER can only be used by one party to demonstrate achievement of its NDC. When in the context of REDD+ ERs are transacted under Article 6.2 or 6.4, a corresponding adjustment is required. Guidance on cooperative approaches, including guidance regarding accounting and reporting processes, is being negotiated under Article 6, and guidance on the tracking of ERs is being negotiated under Article 13.<sup>20</sup>

**If a government wishes to engage in Article 6 transactions by selling forest carbon credits, it must consider how such transactions will affect the achievement of its NDC,** since any credits transferred to another country must be deducted from its own national accounts through the so-called “corresponding adjustments.” These provisions are expected to align with other international market mechanisms, such as ICAO’s CORSIA.

**Currently there are few Article 6 pilots in the forest sector.** Those that exist are under Article 6.2 of the Paris Agreement, which states that parties may define the conditions under which ITMOs are authorized. Currently all such pilots in the forest sector are at the project scale. Japan’s joint crediting mechanism (JCM) approved its first REDD+ methodology<sup>21</sup> early in 2020, in an agreement between Japan and Cambodia. Mitsui is funding a pilot REDD+ project that uses the JCM REDD+ methodology.<sup>22</sup> Korea is also funding several REDD+ projects.<sup>23</sup>

<sup>19</sup> For more detail see: Streck, Howard, Rajoni. 2017. Options for Enhancing REDD+ under Art. 6 of the Paris Agreement.

<sup>20</sup> Decision 1/CP.21, para. 36. This is specified in the context of Article 6.2. However, Article 6.5 sets a similar requirement for the Article 6.4 mechanism. Countries’ views differ on whether transfers originating under Articles 6.2 and 6.4 should be subject to the same set of accounting rules.

<sup>21</sup> <https://www.jcm.go.jp/kh-jp/methodologies/97>

<sup>22</sup> [https://www.mitsui.com/jp/en/topics/11241\\_1225795/2018.html](https://www.mitsui.com/jp/en/topics/11241_1225795/2018.html)

<sup>23</sup> <http://www.tumringredd.org/>

**The decision of a country to participate--or not to participate--in Article 6 transactions is closely linked to its NDC accounting and reporting.** The Paris Agreement requires that all of its parties submit NDCs and periodically report on progress made toward their achievement. Countries with significant forest-related emissions generally include such emissions within their NDCs. For countries that rely on REDD+ to meet their NDCs, the potential transfer of ERs under Article 6 must be carefully considered. These countries may only want to transfer ITMOs and make the corresponding adjustments if they feel comfortable that the partnership with another government (or international entity) will generate more ERs than the country is being asked to transfer, or if the country expects to meet its NDC without relying on forest sector ERs.

**There is currently no agreement on the requirement for corresponding adjustments for transactions performed outside of Article 6.** International offset compliance initiatives such as CORSIA require a corresponding adjustment for carbon units used by airlines in order to meet their compliance obligations under the scheme. By contrast, some voluntary carbon standards foresee<sup>24</sup> the issuance of ERs under their standards with or without corresponding adjustments,

depending on the final use of the ERs. The Paris Agreement currently does not specify requirements for contexts in which nonstate actors engage in markets voluntarily.

**Countries that host REDD+ projects may decide whether, and if so how, they will allow transactions that come with corresponding adjustments, as well as whether and how they should claim ERs from REDD+ for their NDCs.** In the case where a country decides to allow transactions that come with corresponding adjustments for either projects or programs, capacities are needed in order to include such transactions in a national transaction registry (see Part III Section 12).

**Countries should keep in mind the evolving landscape around Article 6, corresponding adjustments, and the consideration of these aspects by voluntary carbon market players.** Decisions on whether to move forward with any of the models could create constraints and limitations in the future. However, there is also a benefit in immediately accessing available sources of finance. Countries may therefore wish to consider creating flexible frameworks that will be able to consider new realities and will allow easy transition from model to model.



<sup>24</sup> <https://verra.org/wp-content/uploads/08/2020/Proposal-for-Scaling-Voluntary-Carbon-Markets-and-Avoiding-Double-Counting.pdf> and [https://www.goldstandard.org/sites/default/files/documents/gs\\_guidance\\_correspondingadjustments\\_feb2021.pdf](https://www.goldstandard.org/sites/default/files/documents/gs_guidance_correspondingadjustments_feb2021.pdf)

# PART II NESTING ELEMENTS

This part provides information on the issues that should be considered in the development of the nesting models presented in Part I.

## 4. CARBON ACCOUNTING AND MRV

In this section, we describe the most relevant elements of measurement, reporting, and verification (MRV) that are likely to be addressed by countries that are implementing REDD+ activities at multiple scales. The setup and requirements of an MRV system depend to a great extent on the model or approach the country will adopt, as well as the various standards that projects or jurisdictions intend to use in order to access carbon finance. Some of the relevant aspects include:

- Aligning ER claims from the project to the national scale through baseline setting;
- Deciding on the scope for nesting: that is, which REDD+ activities, pools, and gases should be included;
- Aligning definitions, data, and methods for estimating emissions.

### 4.1 Aligning Baselines and ER Claims

Many countries face a significant mismatch between their project-level and national-scale claims of REDD+ related GHG performance (ER claims). The mismatch in ER claims of jurisdictions and carbon projects is more pronounced for reducing emissions by deforestation (REDD) or avoided deforestation (AD) projects. In many instances, this mismatch is the main reason for countries to consider nested systems. The reasons for such mismatching are explained by differences in scope as well as definitions and methodological approaches.

The most significant reason for mismatches is the

setting of baselines and forest reference emissions levels (FRELs). Baselines form the basis for estimating ERs, and in the case of REDD+, the methodologies for setting baselines can differ significantly among projects and national jurisdictional programs. This means that a “ton” of emission reduction measured by a project may not be the same as a ton estimated in a national/subnational jurisdictional program. In several cases project baselines have been overestimated due to the selection of reference areas<sup>25</sup> that could lead to a significant over-reporting of ERs.<sup>26</sup> On the other hand, national reference levels often have significant uncertainties;<sup>27</sup> but using conservative approaches for establishing the reference levels reduces the risk of overestimation of ERs.<sup>28</sup>

Countries often establish national FRELs to meet the requirements of results-based finance (RBF) programs, which may also be harmonized with nationally determined contribution (NDC) baselines.

For example, the methodological framework of the Forest Carbon Partnership Facility (FCPF), and the Green Climate Fund (GCF)’s REDD+ Results-Based Payments Pilot Programme require the FREL to be based on average emissions during a historical reference period. Exceptions apply when a country has a high percentage of land with high forest and low but rising deforestation (HFLD). The use of average emissions is considered a proxy for “business as usual” emissions since, at larger scales, near-term historical emissions can be a good predictor of near-term future emissions.

Projects set their performance benchmarks (that is, their baselines) by applying methodologies that are approved by the carbon standard that is used to generate carbon credits. There are two basic forest carbon project types: those for planned, and those for unplanned deforestation.<sup>29</sup> In both cases, the

25 Chagas et al. 2020. A Close Look at the Quality of REDD+ Carbon Credits. <https://www.climatefocus.com/publications/close-look-quality-redd-carbon-credits>

26 Thales, A. P. West, Jan Börner, Erin O. Sills, Andreas Kontoleon. 2020. Overstated Carbon Emission Reductions from Voluntary REDD+ Projects in the Brazilian Amazon. Proceedings of the National Academy of Sciences, Sep 2020. 117 (39) 24188-94; DOI: 10.1073/pnas.2004334117

27 R. D. Yanai et al. 2020. “Improving Uncertainty in Forest Carbon Accounting for REDD+ Mitigation Efforts.” *Environ. Res. Lett.* 15 124002 (<https://iopscience.iop.org/article/10.1088/1748-9326/abb96f>); Sandker et al (2021), *The importance of high-quality data for REDD+ monitoring and reporting*. *Forests* 2021, 12(1). 99. (<https://www.mdpi.com/1999-4907/12/1/99/html>)

28 Espejo, Andres B.; Becerra-Leal, Maria C.; Aguilar-Amuchastegui, Naikoa. 2020. “Comparing the Environmental Integrity of Emission Reductions from REDD Programs with Renewable Energy Projects” *Forests* 11 (12): 1360. <https://doi.org/10.3390/f11121360>

29 Some standards distinguish between different types of deforestation, for example, planned and unplanned, as described in this section. More information is available at: <https://www.unredd.net/knowledge/glossary.html>

project accounting area consists of areas of forest that exist at the start of the project. To set baselines for **unplanned deforestation**, an area that is subject to similar risks of deforestation is identified as a reference area, and the trends observed there are used as a proxy of what would be likely to happen in the project area in the absence of project activities. For **planned deforestation**, the project baselines that are set are the emissions that are expected relative to the development of a specific human activity, such as the construction of a road, the clearing of a land concession, or some other documented, planned land-use change.

The adoption of a specific nesting model will define how countries address baseline alignment:

- In a model where **only the government is seeking payment for ERs** at the jurisdictional scale, the alignment of ER claims is irrelevant.
- In a **centralized nested** model, project claims to ERs are based on GHG performance but are capped, since they are allocated a portion of the national ERs; in this instance, the government may wish to align the project baselines for reasons of fairness (for example, to inform allocations), or to ensure that projects contribute to the national GHG performance accounting.
- Alignment is most critical in a **decentralized nested** model, where multiple levels of crediting may be occurring simultaneously.
- In the case where **only projects are seeking payment for ERs**, the government may have an interest in aligning project accounting in order to ensure that projects are contributing to the national GHG performance by providing guidance on GHG measurement methodologies.

### **There are several ways to promote alignment in the setting of baselines**

One approach is to require conformity in how the baselines are set. Projects may have a variety of methods available; by limiting the number of methodologies that can be used (noting that more than one method may be required given different drivers, for example in planned and unplanned deforestation), and/or constraining how they are applied (through model inputs and data sources), the government can attempt to minimize the amount of variation in how project baselines are set.

**Another approach that can be used for RED (avoided deforestation) projects is to allocate the higher-scale**

**FREL to smaller-scale areas** such as subnational units, or projects. This method ensures that the “sum of the parts” (that is, the project or subnational baselines) never exceeds the whole (the national FREL). Ideally, project baselines should represent business-as-usual emissions; in other words, allocations to specific sites should be based on the current level of threat and emissions factors (EFs) to ensure that carbon credits represent actual additional ERs. High-risk areas (for example, forests at a high threat of loss) should receive a larger allocation, and areas of low risk a smaller allocation per unit area. Forests that are not being threatened (for example, forests that are inaccessible, or are not suitable for agriculture or other conversion activities) would not receive any allocation of the FREL.

**Finally, a government may simply assign a maximum crediting level to each project.** This approach may be relevant where data used at the national level is not “fit for purpose” for project-scale crediting. Setting such caps on projects limits the volume of credits each project can generate. This approach may be simpler than allocating a FREL, but may also result in project-scale ERs that are not comparable to the national GHG accounting.



Table 8. Options for Promoting Alignment in Baseline Setting

Approach	Benefits	Risks	Examples
<b>Promote conformity on baseline and monitoring methodologies</b>	Simple, and requires setting rules for baseline setting. The project baselines are defined locally and may be more accurate as a result.	May reduce, but likely not eliminate, mismatches in claimed GHG performance	Australia's Emission Reduction Fund
<b>Set project baselines by allocating the FREL</b>	Ensures that project baselines do not exceed the jurisdictional baseline; provides the strongest alignment between scales.	Technically challenging. Project baselines are determined by national methodology.	VCS JNR Peru Guatemala
<b>Set maximum crediting level for projects</b>	Does not require granular data at the national level; promotes alignment by setting an envelope for performance (and by capping projects).	Project baselines are not aligned, and may result in the issuance of credits that are not comparable.	Colombia's Resolution 1447

## 4.2 Deciding the Scope of Nesting

One fundamental decision that a country will need to make is which activities, pools, and gases to include in a nested system. This may lead to fewer activities being included in a nested system than in a system that is measured and monitored by the national forest monitoring system (NFMS), since nesting relates to aligning project (or subnational) MRV systems with the national accounting system and the NFMS.

There are several things to consider in making such a decision. One is practical: the lack of quality data will make some activities, pools, and gases too challenging to nest. The other is related to the need for nesting: Are there already forest carbon projects in the country? Do they have large mismatches in the way GHGs, or ERs are estimated?

Under UNFCCC, countries are encouraged to report on as many categories as possible in their national GHG inventories, particularly in places where emissions are significant. The Paris Agreement also encourages comprehensive target setting within NDCs. In the case of REDD+, many countries submit FRELs in order to access results-based payments. For this reason, countries sometimes narrow the scope of the FREL either by selecting a subnational area, or by reducing the number of activities to be included. The choice of scope (or coverage) in a FREL is often related to the requirements of the funding instrument from which a country is seeking results-based payments. Various contexts for the reporting and accounting of GHGs under UNFCCC are summarized in Table 9.

Table 9 Scope of Coverage of Forest-Related Fluxes in GHG Inventories, NDCs, and FRELs<sup>30</sup>

	Scope of Forest Fluxes	Practical Limitations
<b>GHG inventory</b>	Anthropogenic emissions and removals	National capacities, or lack of scientific methods, may limit full reporting of forest fluxes.
<b>NDC</b>	Anthropogenic emissions/removals (based on GHG inventories)	In addition to the above limitations, some NDCs are narrower than the scope of coverage in the national GHG inventory, or are currently unclear.
<b>REDD+ reference level (FREL)</b>	Significant* anthropogenic forest-related emissions/removals	Countries often choose only the most significant emissions (for example, deforestation); many exclude degradation and regrowth, and some FRELs are subnational in scale.

\*COP decision 13/CP.19 states that countries should not omit significant fluxes, but it does not define "significant."

30 From Lee, D. and Sang, M.J. 2017. "UNFCCC Accounting for Forests: What's In and What's Out of NDCs and REDD+." <https://www.climateandlandusealliance.org/reports/forests-ndcs-redd/>

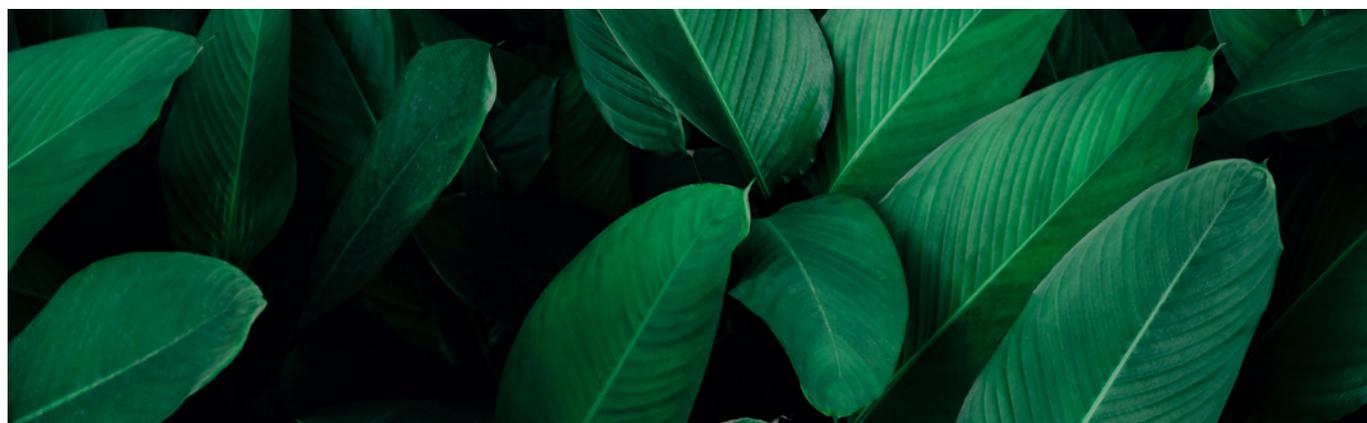
As Figure 13 (in Section 3.3) shows, the vast majority of forest carbon credits issued in the marketplace are from either from AD, or RED. In general, projects that generate carbon credits based on GHG removals from afforestation/reforestation (AR), or improved forest management (IFM) activities pose fewer accounting challenges than RED. Therefore, a country may want to start by building a nested system that is focused on RED. Table 10 provides additional elements a country may want to consider when designing a nested system.

Table 10 Selecting the Carbon Accounting Scope for Nesting

Scope	Consideration
<b>Activities</b>	In most cases, <b>deforestation</b> will be a priority for nesting, particularly if there are significant emissions from forest loss at the national scale and this is the focus of carbon projects. <b>Forest degradation</b> should be included where sufficiently robust data exists. Forest management, conservation, and enhanced removals (the “plus” in REDD+) have less significance in a nested system, since few developing countries are able to measure removals at the national scale; <sup>31</sup> the volume of ERs (or removals) generated by projects tends to be small; and mismatches between existing projects and national accounting tend to be less significant. <sup>32</sup>
<b>Pools</b>	<b>Aboveground biomass</b> will always be a significant pool and therefore should be included in a nested system. The <b>belowground biomass</b> pool is also often included since it can be calculated and reported using Inter-governmental Panel on Climate Change (IPCC) default values. <sup>33</sup> The inclusion of other carbon pools—such as soil carbon, litter, dead wood, or harvested wood products—is likely limited by the robustness of national data.
<b>Gases</b>	Similar to the inclusion of specific pools, as the predominant greenhouse gas for all forest activities, CO <sub>2</sub> will always be included in the nested system, but countries may find it challenging to include additional gases (such as N <sub>2</sub> O or CH <sub>4</sub> ), due to the inability to robustly measure these gases at the national scale.

Once a country decides on the scope for nesting, it may also want to consider how to manage projects that generate ERs that fall outside that scope. For example, a country’s nested system may focus on RED, while permitting standalone projects that are focused on reforestation; or it may focus on aboveground and belowground biomass pools, while permitting project-level accounting focused on other carbon pools, such as soil carbon. This is because projects, which operate at smaller scales, can often monitor a range of activities, pools, and gases that are much harder to measure at the national scale.

Countries can either allow projects that are outside the scope of nesting to generate credits (uninhibited), or they may wish to establish general guidance on whether (and if so how) such projects may seek credits. For example, the government could limit the standards and/or methodologies that projects can use. Alternatively, it may require projects to report the data and information they collect to the national government in order to strengthen the NFMS. The government may also develop guidelines on how projects are to measure and monitor emissions and removals, following national protocols.



<sup>31</sup> Lee, D., Skutsch, M. and Sandker, M. 2018. “Challenges with Measurement and Accounting of the Plus in REDD+.” <https://www.climateandlandusealliance.org/reports/plus-in-redd/>

<sup>32</sup> Chagas et al, 2020. “A Close Look at the Quality of REDD+ Carbon Credits.” <https://www.climatefocus.com/publications/close-look-quality-redd-carbon-credits>

<sup>33</sup> IPCC. 2006. Guidelines for National Greenhouse Gas Inventories. Volume 4, Chapter 4, Table 4.4. Document available at the following link: [https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_04\\_Ch4\\_Forest\\_Land.pdf](https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_04_Ch4_Forest_Land.pdf)

### 4.3 Aligning the Estimation of GHGs

**When GHG estimations are being made at multiple scales, it can be useful to reduce mismatches to the extent possible.** This can promote alignment in ER claims and ensure that the efforts being made (and rewarded) at smaller scales are contributing to the national GHG accounts. This alignment is critical for countries engaging in Article 6 transactions, or internationally transferred mitigation outcomes (ITMOs), as discussed in Section 3.4.

**One simple way to align GHG measurement is to encourage actors at all scales to use the same definitions for forest and REDD+ activities.** The use of a common definition for forests can help a government better manage, understand, and compare the impact of the various REDD+ activities occurring within the country: obviously, if one project considers a forest to be an area with a greater than 30 percent canopy, and another is defining it by using a 10 percent canopy, the results will not be comparable.

**Similarly, it is helpful if all REDD+ activities that are monitoring GHG performance use the same system for land representation.** If projects all use the same land classifications—for example, the same forest types (evergreen, semievergreen, deciduous) and/or classifications (primary, secondary, etc.)—then measurements across projects, and in comparison to the national reporting (and data generated by the NFMS), will be comparable.

**Requiring consistency can promote the environmental integrity of ER claims within a nested system** since it ensures that the “sum of the parts,” particularly baselines, are equal to the whole (as discussed in Section 4.1). In some countries, however, pioneering projects were established before the national FREL was developed; such projects may have used different definitions for forests or land representation systems. In such cases, negotiations among stakeholders to bring such projects into a nested system over a specific period of time should be a priority.

**Projects are able to collect more granular data due to their more limited geographic extent.** For example, they may have more strata (more forest types or classifications) than the national data, which allows for more accurate estimation of emissions. In such cases, it is recommended that once the higher-level strata are chosen, activities at the smaller scales measure and monitor GHG using, at a minimum, the strata from the national monitoring system. They may choose to further stratify lands, but within the

same higher-level strata (Box 5). This would promote consistency, while not constraining projects from keeping more detailed data.

#### Box 5 Aligning Land Classifications

Countries can establish and document protocols for defining the hierarchical relationships that allow the aggregation and disaggregation of land-use categories and the stratification of land, in particular forest types. This would enhance the alignment and consistency of GHG monitoring at different scales. For example:

**Level 1:**  
Forest / Non-Forest

**Level 2:**  
A: Forest by Forest Type (evergreen forest, deciduous forest)  
B: Non-Forest by IPCC land-use categories (croplands, grasslands, settlements, wetlands, other lands)

**Level 3:**  
A: Forest by Forest Type and Biome: mountain evergreen forest, coastal evergreen forest, etc.  
B: Non-Forest by IPCC land-use categories and subcategories: i.e., shrublands, pastures, rice cultivation, annual crops, woody crops, etc.

**Other important aspects for promoting consistency of GHG measurement are: (i) aligning the methods of generating activity data; and (ii) the consistent application of emission factors (EFs).** Projects often use methodologies for estimating GHGs that are different from those used at the national scale. This may be due to different requirements—for example, national GHG inventories are “fit for purpose” for reporting to UNFCCC. This is different from project-scale methodologies, which are approved by standards developed to provide assurances about the credibility of mitigation actions. Differences in the methodologies applied can also be a function of scale, cost, and available resources.

**Countries should consider the approaches being used to collect the activity data from projects, programs, and the national FREL, and decide on the best way to achieve consistency.** The most widely used methods and considerations for achieving consistency are described in Table 11. Aligning methods can promote consistency, but it also enables projects to support the improvement of NFMS and national GHG inventories.

Table 11 Options for Aligning Activity Data for Nesting<sup>34</sup>

If the higher scale uses...	...then the nested MRV system may consider:
<b>Pixel-based methods</b> , i.e., based on wall-to-wall land use/cover change data	If the wall-to-wall maps are sufficiently robust, <sup>35</sup> the project may “cookie cut” <sup>36</sup> their accounting areas and use the national maps as a basis for activity data (AD). If not, the NFMS may consider how to integrate the more accurate project-scale maps.
<b>Stratified area estimates</b> , using a combination of reference data from stratified samples and wall-to-wall maps, as described by Olofsson. <sup>37</sup>	A stratified estimate will need to be derived for the project area and for the remaining jurisdictional area so that there are two estimates using the same methodology. The sampling design should be adequate in terms of the achieved level of precision in order to deliver accurate estimations.
<b>Systematic sampling</b> for areas of land cover and change.	The systematic grid must be sufficiently intensive to adequately represent land-use change within the project area. Alternatively, the systematic grid could be more intensive in some specific locations, such as in project areas. Results can be aggregated from projects to the national scale.



<sup>34</sup> The options for aligning activity data for nesting have been based on the Methods and Guidance from the Global Forest Observations Initiative, which is available in the following link: [https://www.reddcompass.org/documents/184/0/GFOI-MGD-3.1\\_en.pdf/a3412aa7-878a-4b93-a1b7-3813c902bf27#page=150](https://www.reddcompass.org/documents/184/0/GFOI-MGD-3.1_en.pdf/a3412aa7-878a-4b93-a1b7-3813c902bf27#page=150)

<sup>35</sup> There is no common agreement on the criteria used to consider a FREL “sufficiently robust” to be used in a decentralized nested approach. However, some of the considerations are related to a low level of uncertainty, and lack of significant bias, especially at the local scale; and adequate spatial resolution to be able to be used at different scales.

<sup>36</sup> This term refers to an approach that consists of extracting the baseline of lower-level activities directly from the jurisdiction’s spatially explicit baseline.

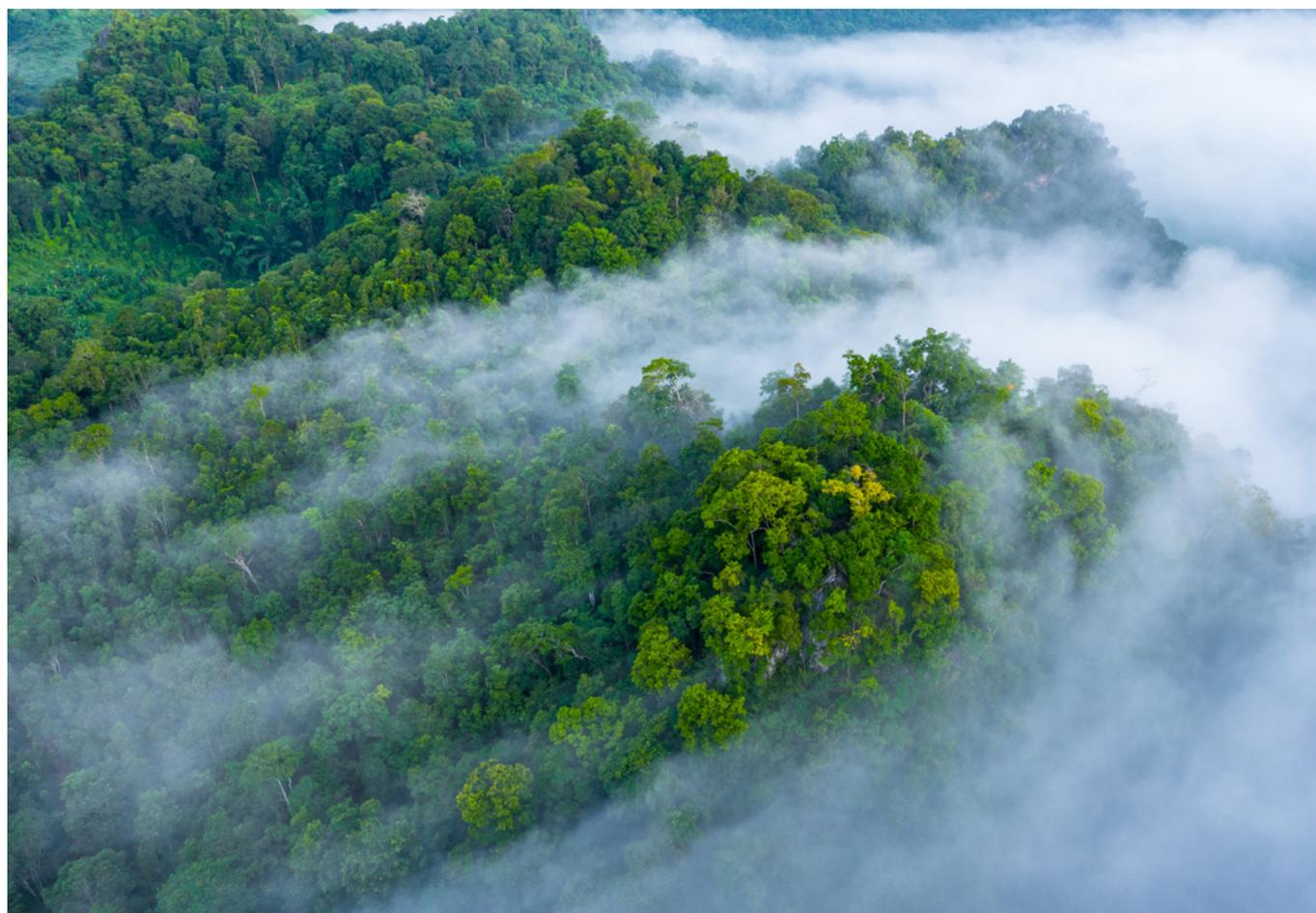
<sup>37</sup> Olofsson, P., Foody, G. M., Stehman, S. V., & Woodcock, C. E. 2012. “Making Better Use of Accuracy Data in Land Change Studies: Estimating Accuracy and Area, and Quantifying Uncertainty Using Stratified Estimation.” <https://doi.org/10.1016/j.jrse.2012.10.031>

**Aligning EFs is challenging, and should be analyzed on a case-by-case basis.** The heterogeneity of forests means that there are large variations in carbon stock across different locations. A National Forest Inventory (NFI) provides representative data on carbon content for different forest classes at the national scale, but these data may not be representative of the same forest strata at the project scale. Therefore, most REDD+ projects collect carbon stock data in the field to estimate their own EFs. Such data must meet the accuracy requirements set by the standards.

**Furthermore, few countries have completed more than one NFI cycle, and several have not yet implemented one complete NFI that includes measurement across a national system of inventory plots.** In such situations, countries use data collected from various sources and studies, which may not be fully representative of the actual carbon stocks of their forests. Where NFI data cannot provide sufficiently robust estimations of EFs at the project scale,<sup>38</sup> a country may wish to consider methods for integrating carbon stock information at various scales in order to optimize coherence, representativeness, and precision in a way that allows for improvement of the national estimates (Table 12).

Table 12 Options for Aligning Emission Factors for Nesting

If the higher scale...	...then the nested MRV system may consider...
...has sufficient C stock measurements for use by projects	...encouraging projects to use the national data, but at the same time allowing them to use local inventory data under well-established protocols, to ensure that EFs are reliable and are consistent with NFI data.
...does not have representative C stock measurements for use by projects	...requiring projects to collect their own data, but to follow consistent methodological protocols (set by the government); and national entities to check the reliability of results.



<sup>38</sup> For example, when the forest within a project's accounting area has a higher level of carbon stock compared to the national average, C stock is used in the FREL for the project's forest type.

## 4.4 Application of Nesting Approaches

One of the main reasons countries develop nested systems is to align their GHG accounting at various scales. Doing so strengthens the credibility of the ERs generated by both governments and projects. This section explores the MRV systems that are needed for each model.

### Jurisdictional ER Program (only), with Benefit Sharing

**In a jurisdictional ER program with benefit sharing but without ER crediting at the project level, the purpose of the MRV system is to ensure the accurate measurement and accounting of ERs at the national level.** In this instance, the integration of activities into the ER program does not require activity-level MRV or carbon accounting. (See Section 6, on benefit

sharing, for more detail). A schematic representation of a jurisdictional ER program structure is provided in Figure 1. This approach involves three main elements:

1. A FREL is used as the performance benchmark at the jurisdictional level.
2. A monitoring report, through which ERs are estimated by comparing emissions reported in the FREL to emissions during the monitoring period, is created.
3. ERs are claimed by the government, which may monetize them through either market or nonmarket approaches, and then distribute monetary or nonmonetary benefits, using defined benefit-sharing arrangements.

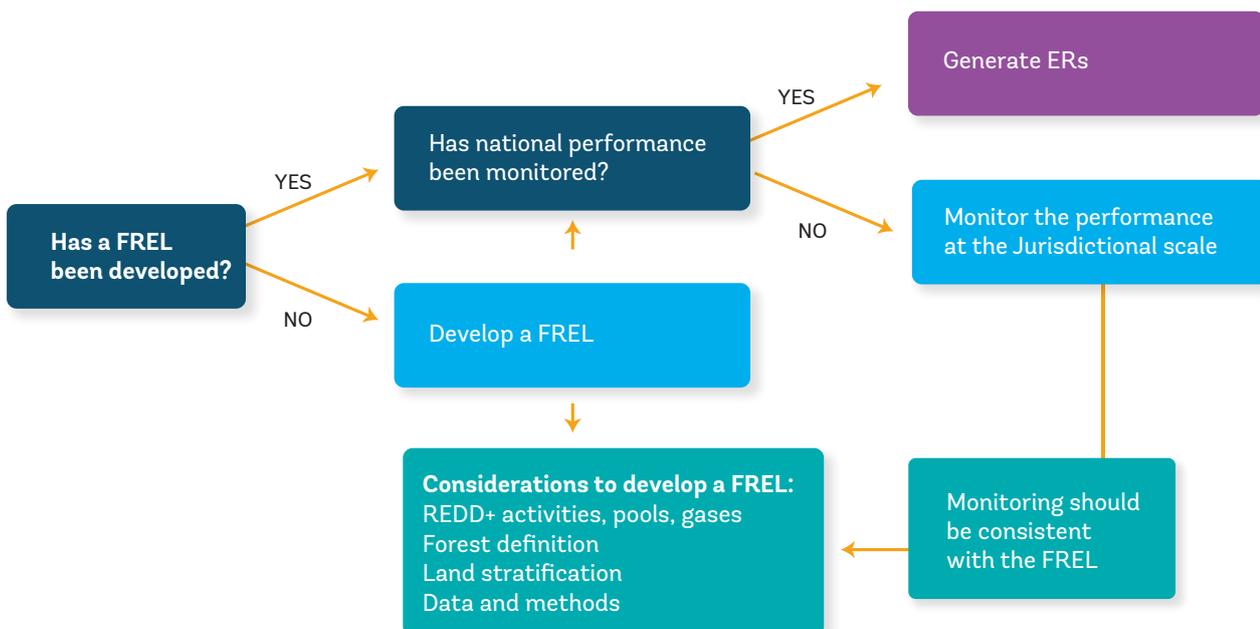
Figure 14. Jurisdictional ER Program (only), with Benefit Sharing



In this model, in order to access finance, countries must meet either the requirements of the funding instrument from which they are seeking payment (GCF, FCPF Carbon Fund, BioCF-ISFL, or a bilateral

agreement), or of the standard<sup>39</sup> from which they are seeking to issue ERs. This decision-making process is illustrated in Figure 14.

Figure 14 Decision-Making Process for a Jurisdictional ER Program (only), with a Benefit-Sharing Approach



<sup>39</sup> The FCPF Carbon Fund Methodological Framework, Verified Carbon Standard's Jurisdictional and Nested REDD+, or VCS JNR, the Architecture for REDD+ Transactions' The REDD+ Environmental Excellency Standard, or ART-TREES.

### Centralized Nested Approach

In the centralized nested approach, a sophisticated MRV is needed in order to reflect the GHG performance of the projects and programs that are embedded in the national system. ERs are measured at the national level; however, the government allows, or encourages, MRV of ERs at the project level as well. Projects that achieve ERs then participate in the benefit-sharing plan, as discussed in Section 6. Either monetary or nonmonetary benefits can be shared by applying an ER allocation method that is based on the GHG performance of projects.

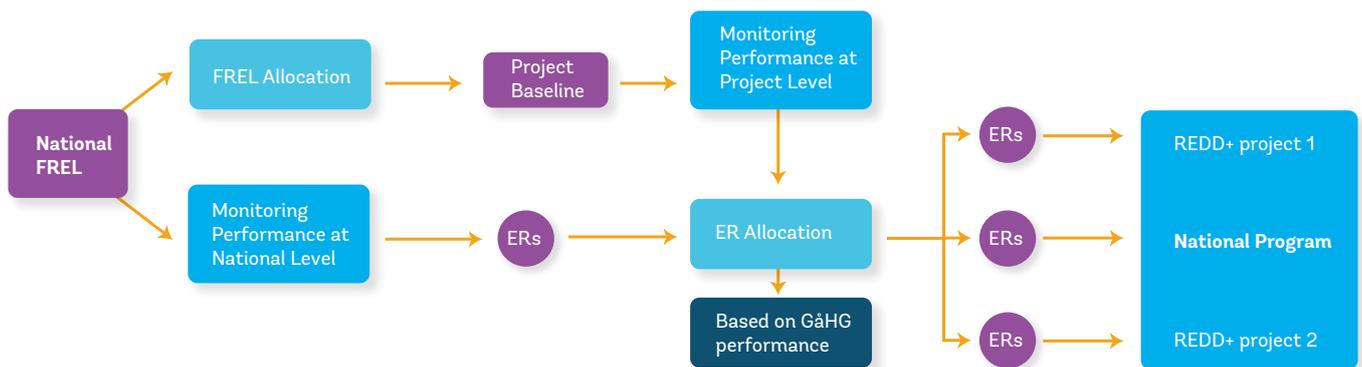
This approach involves five main elements:

1. Development of a FREL as the performance benchmark at the jurisdictional level;
2. Monitoring of performance (ERs) against the FREL (at the jurisdictional scale);

3. A rule-based allocation system for sharing jurisdictional ERs, based on the GHG performance of projects (and/or programs);
4. Monitoring performance at the project scale could include assigning baselines to projects (as discussed in Section 4.1);
5. The distribution of benefits to projects in the form of finance, or allocated ERs.

The main distinctive feature of this approach is the development of an ER allocation. National GHG performance, or ERs, are shared among the government and projects (and/or the subnational jurisdictions), and are distributed following rules of allocation that ideally result in a “fair share” of ERs distributed among all actors. Figure 15 summarizes this approach.

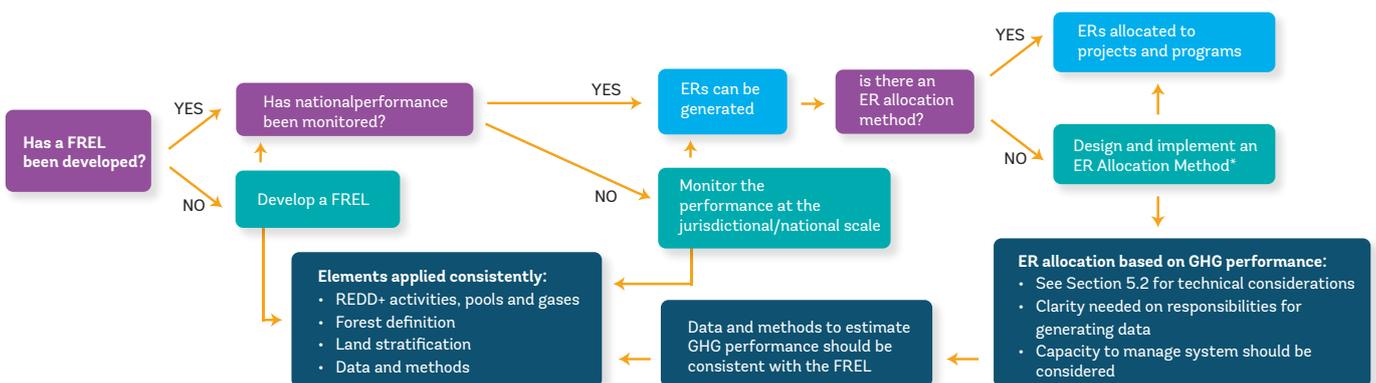
Figure 15 Centralized Nested Approach



The MRV requirements under this model include components at both the national and project scales. Since the ER allocation to projects is based on GHG performance, it is desirable to achieve consistency between the FREL and the national ER estimation, as well as among the MRV systems of projects (as discussed in Section 4.1). To promote harmonized

claims to ERs, the government may align land-use definitions and classifications, and/or data sources and methods in estimating emissions (Section 4.3). In most cases, the reference and crediting periods for projects and programs will need to be aligned with those used in the FREL, and for the monitoring of national performance, as illustrated in Figure 16.

Figure 16 Decision-Making Process for a Centralized Nested Approach



## Decentralized Nested Approach

A decentralized nested approach is designed to encourage crediting at multiple scales. In this model, projects are provided with a share of the national FREL; they can then generate, issue, and monetize credits without being tied to national ER performance. The main difference from the centralized nested approach is that only a FREL allocation is required, not an ER allocation.

A FREL allocation system distributes portions of the FREL to REDD+ projects, establishing their baselines. Ideally, the allocation represents business-as-usual emissions. Various allocation methods are being used or tested in several countries. For example:

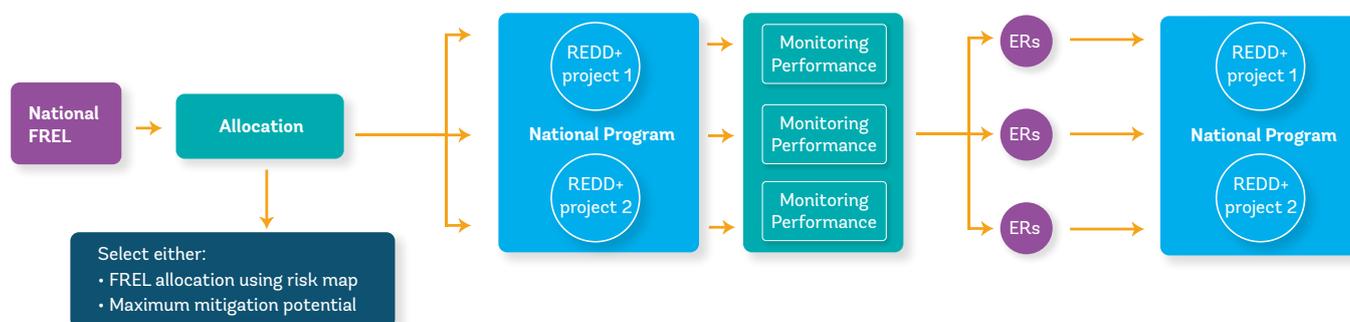
1. **One emerging method is to allocate the FREL to projects, using a “risk-based” method.** This method is currently proposed under VCS JNR.<sup>40</sup> In order to create such an allocation, the government develops a risk map, identifying areas of high versus low threat, based on variables related to deforestation and forest degradation, if it is included in the baseline. These variables might include distance to areas of past deforestation, distance to the forest edge, or accessibility (roads, population density, slope, etc.). (Section 4.1 has covered this approach in further detail.)

2. **Another option is to assign a “maximum mitigation potential” to projects.** This approach is included in one resolution that guides project crediting in Colombia.<sup>41</sup> In this instance, projects set their baseline using a certification or standard approved by the government, but they cannot exceed an assigned maximum value, which is provided by the government.

This approach involves four main elements:

1. **Development of a FREL** as a performance benchmark at the jurisdictional level;
2. **A FREL allocation system;**
3. **Monitoring at multiple scales;**
  - a. REDD+ projects/programs: results are estimated against the project/program baseline.
  - b. Jurisdictional level: results are estimated against the FREL.
4. **Issuance of ERs:** Both projects and jurisdictional programs are able to issue ERs. To avoid double counting of ERs, a system is needed to avoid selling more ERs than actually exist. (For example, some funding instruments require the government to subtract project-level crediting from jurisdictional results.)

Figure 17 Representation of the Decentralized Nested Approach

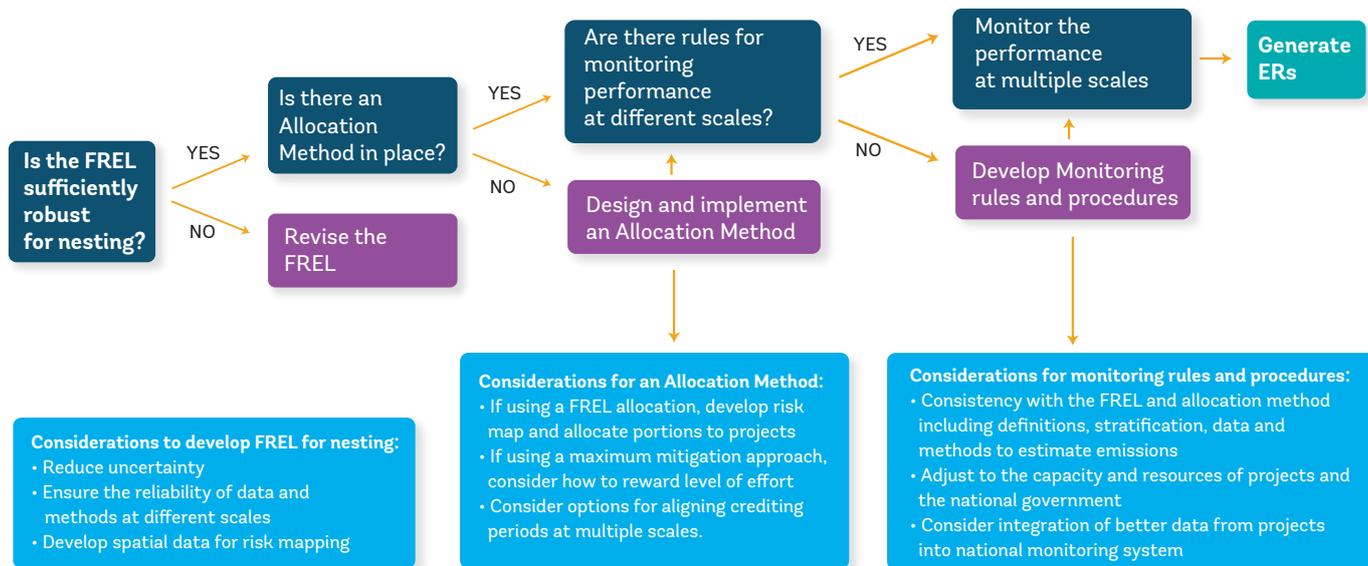


<sup>40</sup> Currently there is only one standard that accommodates this type of nesting, i.e., Verra’s Jurisdictional and Nested REDD+ (JNR).  
<sup>41</sup> Art. 45, Resolution No. 1447, August 1, 2018. Ministry of the Environment and Sustainable Development, Colombia

In order to build an appropriate MRV system for this model, first the government will need to establish a FREL that is sufficiently robust for nesting; and if the government wishes to issue carbon credits at the jurisdictional scale, it will need to follow the requirements of the standard that will issue, or certify, such credits. Some standards, such as VCS JNR, also have requirements for the jurisdictional reference level that is allocated to projects.

Next, a FREL allocation methodology is required (see Section 4.1 for further details). Following this, the government may need to provide guidance for project monitoring, to promote alignment in the methods used to estimate GHGs. The decision-making process for this approach is illustrated in Figure 18.

Figure 18 Decision-Making Process for a Decentralized Nested Approach

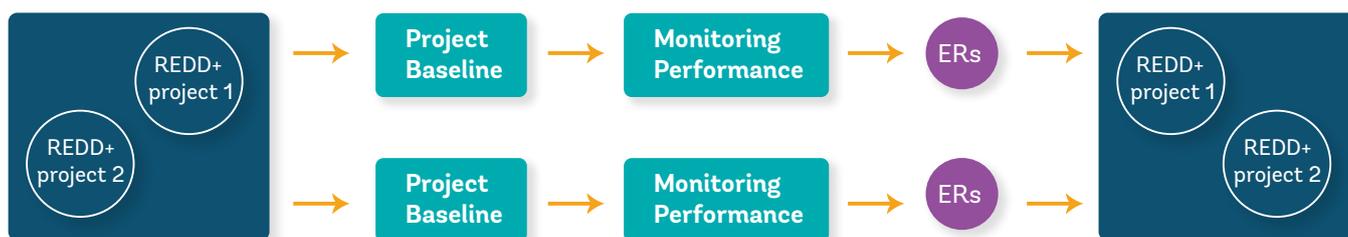


**Project Crediting (only), No Jurisdictional ER Program**

Under this model, the government may not intend to engage in jurisdictional crediting, or to seek results-

based payments at the national level as part of its REDD+ strategy. Only project crediting is anticipated in the near term. As such, projects monitor their own performance and generate ERs (Figure 19).

Figure 19 Representation of Project Crediting (only) No Jurisdictional ER Program

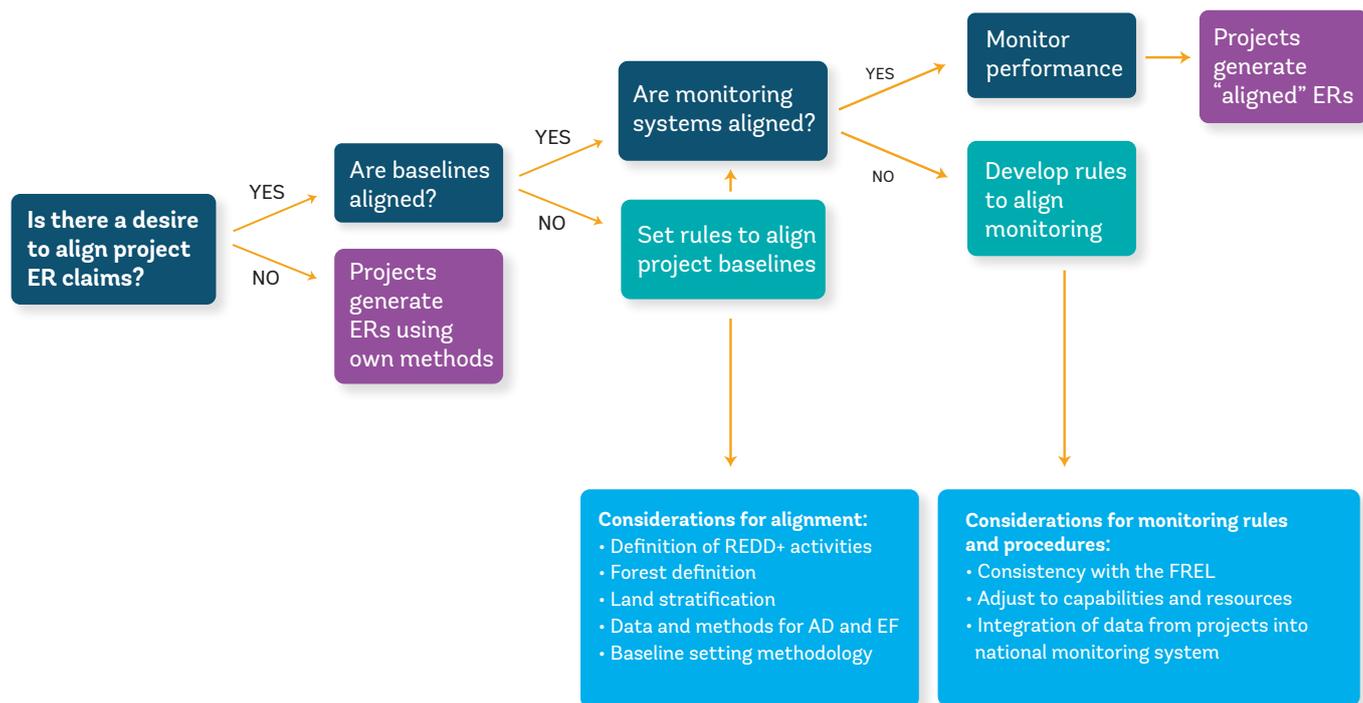


Some governments may wish to design a system that aligns the ER claims of REDD+ projects with national GHG reporting. Such alignment can improve the environmental integrity of ERs generated at the project scale by ensuring that project baselines do not exceed the national FREL; facilitating comparability; and promoting their contribution to the reported national GHG performance.

Where a government wishes to promote such alignment, it could establish rules for projects (or

small- scale programs) for issuing credits. Such rules and procedures will depend on the level of alignment the government wishes to achieve. This may include the use of specific standards and methodologies; requirements to use national definitions of forest and/ or REDD+ activities and land use classifications; or certain GHG estimation methodologies (see Section 4.3). The government can also set rules for baseline setting (Section 4.1), and/or additional requirements, such as data sharing, in order to improve the national forest monitoring system and capacities.

Figure 20 Decision-Making Process for a Project Crediting (only), No Jurisdictional ER Program



## 5. LEGAL ISSUES

### 5.1 General Considerations

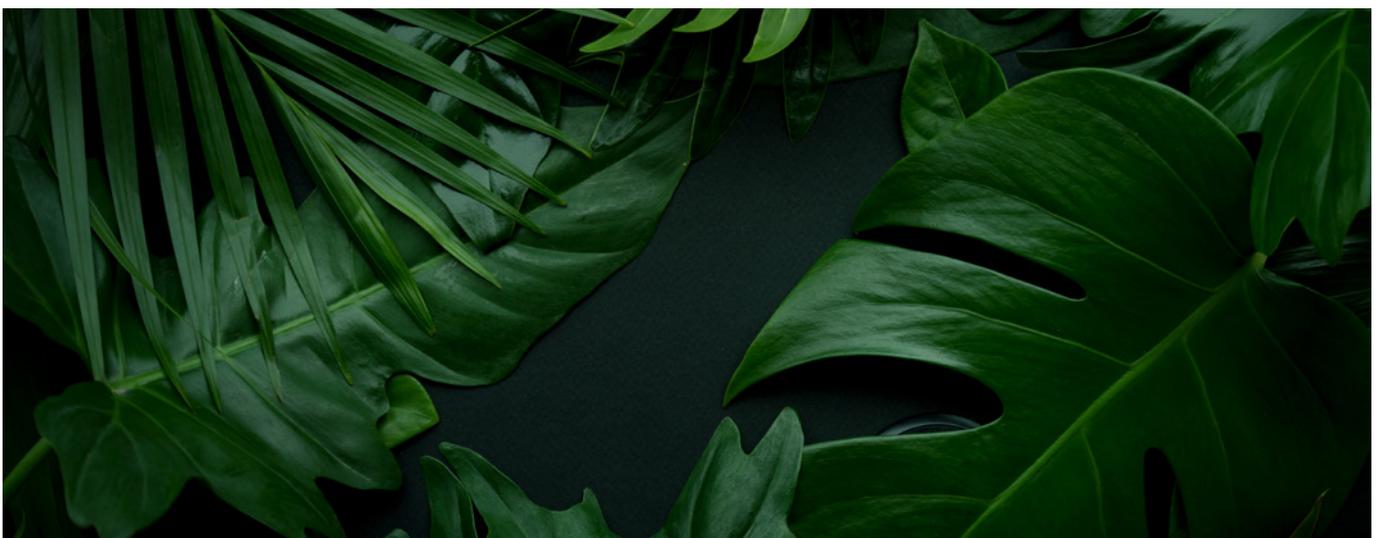
The legal, regulatory, and governance frameworks of a country influence its nesting architecture. The forest and land tenure regime, and the associated rights (forest ownership, management and exploitation rights, and/or the rights of local and Indigenous communities), as well as the governance of forest resources, and the status of private property rights in any given country, will influence its options for REDD+ design and nesting. Legal and regulatory frameworks, including those adopted in the context of REDD+, can help to clarify “carbon rights” and the procedures for approval and registration of REDD+ projects (see Section 11).

**To date, no REDD+ credits have been issued to national governments, and few governments have adopted laws or regulations that clarify the transactions of REDD+ credits.**<sup>42</sup> Currently, project-level forest carbon transactions happen largely in the context of voluntary carbon markets that establish carbon rights based on general laws; the forest and land resource ownership systems; and the contributions that local stakeholders make toward reducing GHG emissions and enhancing removals. Sovereign transactions that involve the transfer of verified ERs are only being piloted under the FCPF Carbon Fund, and in such cases the verified ERs are defined in contracts, such as the FCPF Emission Reduction Payment Agreements (ERPAs) (including under their General Conditions).<sup>43</sup>

### 5.2 Establishing Carbon Rights

Designing a nested REDD+ system requires understanding the rights of communities and individuals to benefit from ecosystem services as well as the resulting ERs. Such rights are often described as “carbon rights.” They define who has “the right to benefit from sequestered carbon and/or reduced greenhouse gas emissions.”<sup>44</sup> There is no universal definition of carbon rights, and establishing the right to ERs (as well as the related benefits) in REDD+ requires a careful evaluation of national laws and regulatory frameworks. *Broadly speaking, carbon rights can derive either from ownership of the land and forest resources and/or from an activity that reduces emissions or enhances removals (known as an ecosystem service).* They can be clarified by formal law or regulations (climate change laws, ministerial decrees, etc.) or, in the absence of a law or regulation, by contract. Carbon rights can lead to the right to commercialize ERs, or to participate in REDD+ benefit sharing (see Section 6).

**Carbon rights should be distinguished from issued and tradable carbon credits. Carbon credits** are defined units: generally, they represent one tonne of emissions reductions (ERs) that are traceable and tradable (see Box 6). They are issued in national or international carbon registries, and are identifiable through a serial number. **Carbon rights**, by contrast, describe an underlying entitlement to benefit from ERs or REDD+. They are not a defined or tradable asset.



<sup>42</sup> For example, Fiji's draft climate change law, Mozambique's REDD+ decree, and Madagascar's draft REDD+ decree.

<sup>43</sup> See General Conditions Applicable to Emission Reductions Payment Agreements, November 2014, found at: [https://www.forestcarbonpartnership.org/system/files/documents/FCPF%20ERPA\\_General%20Conditions\\_November%2014\\_0.pdf](https://www.forestcarbonpartnership.org/system/files/documents/FCPF%20ERPA_General%20Conditions_November%2014_0.pdf)

<sup>44</sup> Knox, A. et al. (2012). Forest Carbon Rights Guidebook: A Tool for Framing Legal Rights to Carbon Benefits Generated through REDD+ Programming.

## Box 6. Creation and Recognition of Carbon Credits

Carbon credits, or ERs, are created and recognized or defined by laws or regulations, private carbon standards, or contracts. Each of these contexts refers to different functions.

Carbon credits under international law:

- Can be traded under Article 6 of the Paris Agreement (see Section 3.4) as ITMOs (Art. 6.2) or as ERs (Art. 6.4);
- May allow for offsetting under international sectoral ER schemes such as ICAO's market-based mechanism, CORSIA.

Carbon credits under national (or subnational) law:

- Enable compliance with national regulation in places where forest owners are obliged to reduce emissions, such as in the New Zealand emission trading system;<sup>45</sup>
- Enable cost-effective compliance with cap-and-trade systems through offsetting ERs generated by projects that comply with offset protocols defined by the government regulator. For example, the Colombia carbon tax law allows carbon credits, including REDD+ credits, to be used against the carbon tax; and California's cap-and-trade system allows regulated entities to use domestic forest credits.<sup>46</sup>

Carbon credits under private standards:

- Enable private entities to purchase carbon credits with the assurance of their environmental integrity (Verra, Gold Standards, and others that certify ERs for use in the voluntary carbon market).

Carbon credits under contracts:

- Enable parties to engage in bilaterally defined transactions. (For example, under FCPF's ERPAs, carbon credits define the ecosystem service rendered and paid for under the agreement);
- The transacted ERs can be issued as a carbon credit in a registry, or they may remain a nontradable service between the contractual parties.

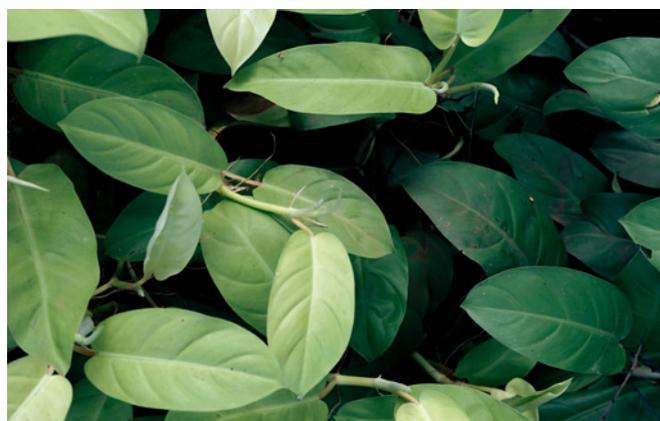
## Establishing Carbon Rights

**Carbon rights justify participation in REDD+ projects and benefit sharing for publicly managed REDD+ programs.** While agreements between the government and international partners can establish rights under international public or private law, carbon rights depend on the national legal system (See Box 7 Concepts and Definitions). Governments that have agreed to transfer ERs to international partners must ensure that those obligations are consistent with national laws. Of course governments do have the ability to alter the national legal order by adopting additional laws, or clarifying their laws through regulation, but those laws and regulations have to recognize the constitutional order of a country, and ensure alignment and consistency with generally applicable legal principles.

**So far, few tropical forest countries have adopted formal legislation that defines ERs, or that clarifies carbon rights, or participatory rights under REDD+.**

Such laws, where they exist, tend to define these rights in relation to the rights to the land or forest, or the participation in conservation activities. In the absence of a formal law that provides such clarification, these are the two most important indicators of carbon rights:

- **Rights to the land, forest, or trees**, which can imply full ownership, usufruct, or management rights under statutory, customary, or traditional legal systems, including the rights of Indigenous peoples and local communities.
- **Control of the activity that leads to reduced emissions or increased removals**, that is, the communities or households, farms, or legal entities that invest in activities that generate ERs.



<sup>45</sup> Details on New Zealand's emission trading can be accessed under <https://www.climatechange.govt.nz/emissions-trading-scheme/about/> (last accessed on 1 November 2020).

<sup>46</sup> See California Air Resources Board, "How Do I Buy, Sell, and Trade Compliance Instruments?" 2012. Available at <http://www.arb.ca.gov/cc/capandtrade/guidance/chapter5.pdf> (last accessed on 25 December 2015), and the Centre for Climate and Energy Solutions. "California Cap and Trade Brief." no date given, available [www.c2es.org/us-states-regions/key-legislation/california-cap-trade#Details](http://www.c2es.org/us-states-regions/key-legislation/california-cap-trade#Details) (last accessed on 1 November 2020).

## Box 7 Concepts and Definitions in Relation to Carbon Rights

A **carbon right** is a justified claim to the benefit obtained from reduced GHG emissions and/or sequestered carbon.

**GHG emission reductions and removals (ERs)** refers to a tonne of CO<sub>2</sub>e greenhouse gas, measured against the reference level or baseline that has been either avoided (emission reduction) or sequestered (removed). It is often defined with reference to a carbon standard.

**Right and title to ERs** refers to rights defined on the basis of a contract (for example, FCPF's ERPA), or a law (for example, local emission trading legislation) that assigns a transferable right to an ER.

**Carbon credit** refers to an ER that has been created (issued) according to the rules of a carbon standard, and that is tradable and traceable in a GHG registry.

**Benefits** refer to monetary and/or nonmonetary support received for the participation in forest carbon projects or a jurisdictional ER program. Participation in benefit-sharing arrangements might be based, among other things, on the holding of carbon rights to the generated ERs.

### The Right to Land and Its Associated Carbon

The ownership status of forest areas influences the design of a nested system:

**In many developing countries, forest resources are deemed to be the property of the state, which affords governments wide latitude for asserting some rights and denying others, particularly when new economic opportunities surface.** For example, in the **Democratic Republic of Congo (DRC)** all forests are owned by the state, and the national government passed a "Homologation Decree" in 2018 that asserts that it has the primary right to all forest-related ERs. However, these rights can be transferred to private project developers through a "certificate d'homologation."<sup>47</sup> In similar fashion, **Mozambique** considers all forest-related ERs to reside with the national government, though they can be transferred to project developers.<sup>48</sup> **Madagascar** has gone a step further by proposing in a draft REDD+ decree (not yet formally adopted) that the government owns all ERs

generated by REDD+ activities and holds the exclusive right to commercialize such rights.<sup>49</sup>

**In other countries, private forest holdings, or various customary, traditional, or statutory land rights exist that may make it harder to centralize all forest carbon rights within the government.** For example, **Guatemala** clarifies in their Law-Decree 7-2013 (Climate Change Law) that "the rights, title and negotiations of the carbon emission reduction units" belong to project developers and those with a title to manage the land.<sup>50</sup> This opens the door for private carbon market projects in Guatemala, and limits the government's ability to take a centralized approach to nesting, which requires either entering into arrangements with such rights holders in order to transfer ownership of the ERs, or having the authority to market and monetize them on behalf of the rights holder, in return for some kind of compensation (benefit-sharing mechanisms, or other means). The claim to forest carbon rights by the government in countries with strong private property systems, and without any aforementioned arrangement with the rights holder may result in an expropriation for which governments may have to compensate the original rights holders, if the government's claim of carbon credits limits the exercise of private property.<sup>51</sup>

In its recent Forest Code, the **Republic of Congo** clarified that carbon rights follow from the type of forest land tenure where the activity takes place.<sup>52</sup> In public forests, carbon rights are assigned to the state or other local public entities, while in community forests the ERs generated are either solely or jointly owned by the local community and/or by Indigenous peoples. The Forest Code also stipulates that the content of carbon rights covers both the right to generate carbon credits and the right to commercialize them.<sup>53</sup>

**In some countries carbon rights may be embroiled in land conflicts.** Weak recognition of tenure rights, failure to conduct meaningful stakeholder consultations, and growing demand for land have led to an increase in land conflicts. This has resulted in growing danger for communities and those defending their forest and land rights. Contestable land titles, overlapping tenure regimes, and land grabbing can lead to violence, illegality, and marginal livelihoods in many developing countries. In this context, clarifying

47 Arrêté ministériel No 047/CAB/MIN/EDD/AAN/MML/05/2018 du 9 mai 2018 fixant la procédure d'homologation des projets REDD+

48 Government of Mozambique. Regulamento Para Programas e Projectos Inerentes à Redução de Emissões Por Desmatamento e Degradação Florestal de Carbono (REDD+). 2018. Maputo, Mozambique.

49 Government of Madagascar. Draft Benefit Sharing Plan, ER Program Atiala Atsinanana; FCPF Benefit Sharing Plan Version 2.0; Antananarivo, Madagascar, 2020.

50 Article 22 (2), Decreto 7-2013, Congreso de la República de Guatemala. Ley Marco para regular la reducción de la vulnerabilidad, la adaptación obligatoria ante los efectos del cambio climático y la mitigación de gases de efecto invernadero.

51 The power of the state to claim private property for public use is sometimes referred to as eminent domain, land acquisition, compulsory purchase, resumption, or expropriation.

52 Art. 179 and ss. Loi n° 33-2020 du 8 juillet 2020 portant code forestier at <https://www.sgg.cg/JO/2020/congo-jo-2020-04-sp.pdf>

53 Art. 179 Loi N. 33-2020 portant code forestier de la République du Congo « Le droit de générer les crédits carbon et de les commercialiser est reconnu aux personnes physiques ou morales ».

the right to participate in REDD+ carbon crediting, or in a REDD+ jurisdictional ER program and its related benefit-sharing mechanisms by way of meaningful stakeholder consultations, is essential in order to strengthen the rights of Indigenous peoples and forest communities, and their long struggle to assert their land and resource rights. This can prevent having the question of who has the right to benefit from REDD+ from becoming a proxy for unresolved and contested rights to land and the associated economic opportunities.

**Nesting can help to implement REDD+ in countries that are in the process of decentralizing forest governance.** In many countries, forest policy has evolved in recent years toward decentralization of forest governance and the recognition of rights in favor of local and/or Indigenous communities and/or regional and local governments. REDD+ implementation should be consistent with such efforts. Allowing project REDD+ activities to be led or co-led by local communities, and recognizing their rights to the land and its natural resources—including the associated carbon rights—is aligned with this trend in forest devolution in many developing countries. Such empowerment of communities can, depending on the legal context of the country, mean that communities have the right to initiate and participate in projects, or that they are duly considered in the related benefit-sharing mechanisms.

**The forest tenure regime may influence the definition of rights to ERs as well as the type of REDD+ implementation model that is developed.**

- **For countries that recognize community or private rights in forest land, management, or resources, a decentralized nested system may be an appropriate approach for honoring such rights. Countries with a forest tenure regime that recognizes a diversified typology of forest ownership, such as public property (state, municipal, protected areas) and private property (individuals or Indigenous/ local communities' lands), typically recognize that carbon rights belong to the forest landowners or managers.**
- **Countries in which forest resources are attributed to the state by constitution or law, and the state retains the right to manage and/ or has established by law that all carbon rights rest with the state may choose to implement**

**a jurisdictional ER program (only) with benefit sharing, or to design a centralized nested approach.**

- **Countries with state forests, but laws that authorize private actors or communities to manage them may want to implement centralized-nested and/or decentralized-nested approaches. For countries that have national procedures in place for (i) allocating the management of state forests to private parties (through licenses or concessions); or (ii) recognizing ancestral land rights to local or Indigenous communities, with the state as the original holder of rights to ERs, a nested approach may be the most fitting.**

### Implementation and Control of the Activity

**Control of the activities that lead to forest-related emission reductions or removals by stewards of the forest can also lead to legitimate claims to monetize ERs or to participate in benefit sharing.** For example, Peru regulates carbon rights through the legislation of ecosystem services. Their legislation defines contributors to the environmental service as those that (i) contribute to the conservation, recovery, and sustainable use of the sources of the ecosystem services (“activity factor”) through the implementation of technically viable actions; and/or (ii) can demonstrate certain types of forest tenure, such as owner, possessor, concessionaire, or holder of assignment in use (“tenure factor”).<sup>54</sup> In other words, both land tenure and control of the activity play a role in the assignment of carbon rights.

**Carbon rights that are related to the control of an activity can accrue to a community, a municipality, or a government agency.** Project developers or investors often claim a secondary, transferred carbon right due to their role in financing and monetizing the ERs flowing from a project. Communities and individuals can transfer the right to monetize ERs in return for their participation in benefit-sharing arrangements. In the case of REDD+ projects, there are usually several entities that cooperate in implementing the activities that lead to the environmental service of ERs. In such cases, the rights to ERs are often defined in contracts agreed upon among the parties involved in the ER-generating activities.

<sup>54</sup> Art. 7. Reglamento de la Ley N° 30215, Ley de Mecanismos de Retribución por Servicios Ecosistémicos.

**Governments need to assess the rights of individuals and communities when deciding how to create incentives and integrate projects into national ER programs.**

National REDD+ programs involve a large number of actors. There may be many rights holders, and there may be many rights affected. Further compounding this challenge is the fact that in many countries land tenure is frequently contested; there is a general lack of forest land cadasters; and customary rights may conflict with statutory rights.<sup>55</sup> In such cases, governments may want to conduct consultations and develop participatory benefit-sharing systems that recognize the rights of communities and individuals to receive carbon benefits for the ecosystem services of their activities. Alternatively, they can integrate community-led projects into nested REDD+ systems.

Table 13 (in Section 5.3) provides examples of different types of forest land ownership and the likely associated carbon rights.

### 5.3 Application to Nesting Approaches

This section describes various nesting approaches as they apply to forest and land tenure regimes and carbon rights. These are summarized below in Table 13. Generally, centralized models tend to work better in situations where public forests are owned, controlled, and managed by the state, while the existence of private and community rights over forests and forest resources favors decentralized models. However, public ownership of forests, and control over their management does not prevent the implementation of a decentralized system; and a centralized system could be implemented even where there is a diversity of forest land ownership, with strong private property rights. For example, the government might make contractual arrangements with rights holders in which the rights holders assign their ownership rights to the government, or authorize the government to market and monetize ERs on their behalf in return for some form of compensation.

**The elaboration of nested REDD+ systems is very context-specific, and often reflects complex preexisting tenure and rights systems.** For example, many countries have a mixture of state-owned and private lands. A country with strong private rights over forest land and resources can choose to implement a centralized approach over public lands while recognizing the right to private initiatives on nonstate lands. Or it can choose to restrict preexisting

land and resource rights, and claim the right to centralize the management of REDD+ benefits on the basis of a law. However, depending on the legal context, those with the rights to forest land and resources may demand compensation. On the other hand, governments may implement a decentralized approach within state-owned lands by passing laws that authorize private entities to implement projects within such lands.

**In the absence of laws and regulations that centralize all of the rights to managing REDD+, the public entities or communities and individuals that own or manage the land may have default claims to ERs.**

Governments may adopt laws that authorize or restrict the development of projects in certain areas of the country (for example, for religious or sanctuary forest areas, or isolated Indigenous communities' areas), and that encourage them in other parts of the forest. They can also regulate carbon projects on private and community lands by requiring the registration of projects and the reporting of ERs (and potentially taxing their sales). Finally, governments can recognize private rights to carbon and still involve private entities in the benefit-sharing programs of a REDD+ (nonmarket), results-based payment scheme.

Regardless of the design choices a government makes, the existing rights regime influences the particular direction or form that REDD+ implementation takes. Several options follow.

#### Jurisdictional ER Program (only), with Benefit Sharing

**This approach is easiest to implement in countries where the national government makes all relevant land-use decisions and manages all or most of the country's forests.** In cases where forest resources are state assets, the government claims senior (or original) rights to the associated carbon. In such cases, REDD+ projects cannot claim a right to benefit from REDD+ activities, and do not hold carbon rights, unless the government passes a law authorizing such activities and transferring the carbon rights. In this model, REDD+ activities are implemented through public programs that seek to influence actors through public monetary or nonmonetary incentives. The actors do not directly engage in ER transactions, but they can be included in the benefit-sharing mechanism of a country, and can receive payments in the context of incentive programs that the government might create (See Section 6 on benefit sharing).

<sup>55</sup> Streck, C. (2015). In the Market Current Developments in Carbon & Climate Law: Forest Carbon Rights - Shedding Light on a Muddy Concept. *Carbon & Climate Law Review (CCLR)*, 2015(4), 342-347.

**In most countries, even if forest resources or lands are publicly owned, there are legal constructs through which rights are granted, especially to local communities or Indigenous peoples.** In such cases, this model would have to recognize the devolution of rights to such communities, and either clarify through law or regulations that the communities are authorized to develop projects, or ensure their inclusion in the benefit-sharing mechanism.

### Centralized Nested Approach

**The centralized nested approach is adequate in countries where the state owns the forest resources, but wishes to create direct ER performance incentives on public lands.** In this case the state recognizes the right of land managers within public lands (such as individuals and communities delegated by law to manage public forest land through concessions, licenses, or national agreements) to benefit from REDD+. The government authorizes such actors to benefit from a share of ER payments, ERs, and/or the right to generate a specified volume of ERs based on the ER allocation (apportioning national-scale REDD+ performance). It may choose to impose additional requirements, such as applying project safeguards derived from national safeguards, accounting standards, or reporting obligations.

**A government can extend the centralized nested approach to private lands.** Where land managers in private lands have recognized carbon rights, the government may need to enter into contractual arrangements that recognize their right to receive a share of ER payments or ERs in return for authorization to use and receive payments for

generated ERs. When a REDD+ project transitions into this model, it could negatively impact its performance. Related risks of performance are covered in more detail in Section 8.

### Decentralized Nested Approach

**The decentralized nested approach is adequate where there are strong private property rights and there is mixed ownership of land and forest resources.** Under this approach, the government claims the carbon rights associated with public lands, and private owners or communities claim the rights derived from their recognized forest and land areas. Communities and individuals are also free to engage in REDD+ projects and to generate ERs. The government recognizes the right of private entities to benefit from activities implemented on their land, including the marketing and commercialization of ERs. As under the centralized nested approach, the government may choose to impose additional requirements, such as applying project safeguards derived from national safeguards, accounting standards, or reporting obligations.

### Project Crediting (only), No Jurisdictional ER Program

**When the government does not wish to benefit directly from results-based finance (RBF) or carbon finance, it can still recognize the rights of private entities to benefit from ERs.** Under this approach, the government recognizes (and encourages) the development of projects. It can regulate these projects, and mandate the use of allocated baselines and safeguards. It can also require the projects to report their ERs to the government.

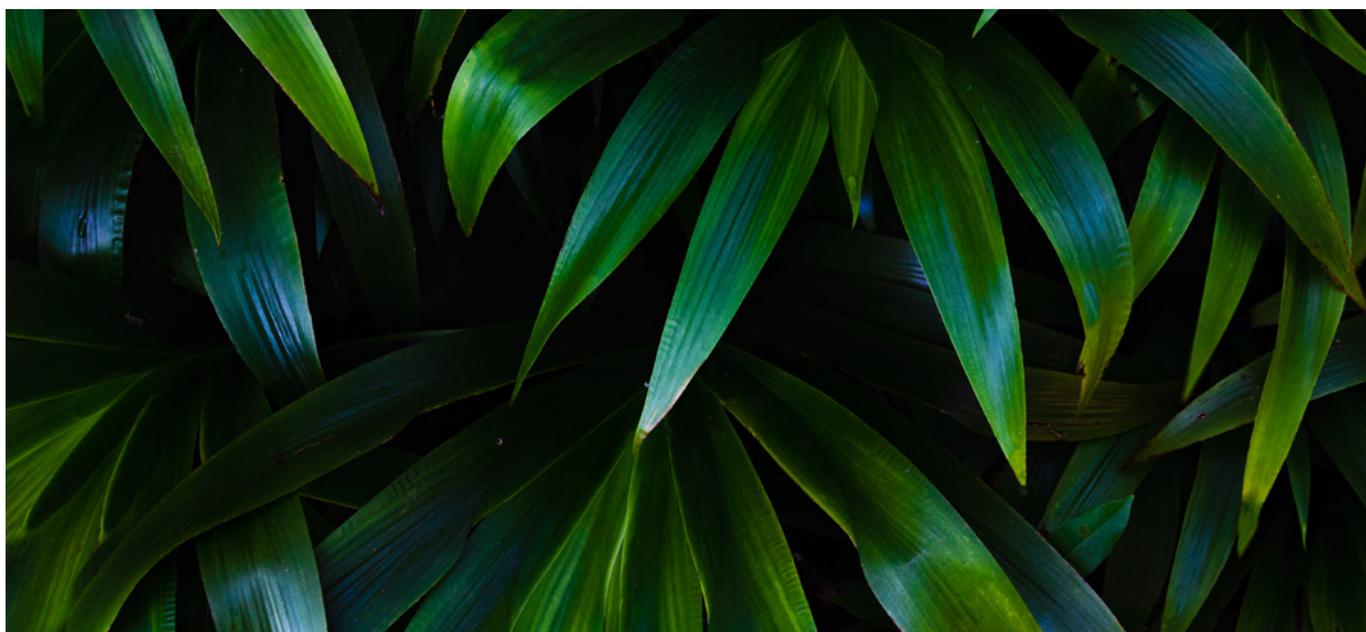


Table 13 Significance of Forest Land Tenure, Carbon Rights, and Claims to ERs Under Different Models

Type of Forest Land Tenure / Natural Resource Regime	Carbon Rights and Claims to ERs	Likely Nested Model
State controls forest land, resources, and management	<ul style="list-style-type: none"> <li>• Carbon rights rest with the state, and the state claims the benefits from ERs.</li> <li>• Only the state engages in the commercialization and management of ERs.</li> </ul>	<b>Jurisdictional ER Program (only)</b>
State controls forest land with licensed management by communities and private entities	<ul style="list-style-type: none"> <li>• Carbon rights rest with the state.</li> <li>• The state engages in RBF or carbon finance.</li> <li>• The right to benefit from ERs is transferred by the state to the private entities and communities that manage forest resources.</li> </ul>	<b>Centralized Nested</b>
Recognition of a variety of property types and diverse land management systems	<ul style="list-style-type: none"> <li>• Carbon rights rest both with the state and with nonstate (private community) entities.</li> <li>• The state can engage in RBF or carbon finance.</li> <li>• Nonstate actors are entitled to market and monetize ERs.</li> </ul>	<b>Decentralized Nested</b>
Nonstate entities (communities, private entities) control large parts of the forest land	<ul style="list-style-type: none"> <li>• Carbon rights rest both with the state and nonstate (private community) entities.</li> <li>• Nonstate actors control a significant percentage of land and forest resources.</li> <li>• The state does not market and monetize ERs.</li> <li>• Nonstate actors are entitled to market and monetize ERs.</li> </ul>	<b>Project Crediting (only)</b>

## 6. BENEFIT SHARING

### 6.1 General Considerations

**In the context of REDD+, benefit sharing refers to the sharing of benefits that accrue from results-based and carbon finance from programs and projects.**

Governments and private entities that benefit from results-based finance (RBF), or that sell emission reductions (ERs) allocate a portion of the proceeds from these transactions to private and community actors. Such benefits can be either monetary or nonmonetary, and governments can distribute them as part of their defined benefit sharing arrangements. In addition, they can allocate the right to monetize ERs. The Forest Carbon Partnership Facility (FCPF) has published a guidance for countries on how to develop fair and effective benefit sharing arrangements,<sup>56</sup> and has collected good practices in benefit sharing.<sup>57</sup>

**When engaging in REDD+ implementation, policymakers have to decide where and how communities and individuals will benefit from the monetary and/or nonmonetary incentives of REDD+.**

Effective allocation of incentives is essential in order to create an effective REDD+ system and to achieve sustainable results. Carbon rights are important considerations when designing a benefit-sharing system. However, benefit-sharing arrangements can calibrate carbon rights – and the related legal constructs -- such as land or tree ownership, customary or ancestral rights, and the ability to relate to ecosystem services against notions of equity and fairness in the discussion of carbon rights and the ensuing benefit-sharing decisions. Stakeholder consultations and participatory decisions are essential in creating a stable benefit-sharing system.

**Countries should consider developing a benefit-sharing framework that can apply to all REDD+ projects and programs, and enable them to develop specific benefit-sharing arrangements.** Many countries are operating multiple REDD+ programs —such as the FCPF Carbon Fund and the Green Climate Fund (GCF)—as well as various bilateral donor-supported programs and voluntary market projects. They may want to consider applying one consistent approach rather than making *ad hoc* decisions regarding benefit sharing in response to each source of financing. Having different, and sometimes conflicting, policy decisions with respect to the interpretation of carbon rights, and allocating benefits and risks differently, can create confusion.

Furthermore, countries that are experimenting with different benefit-sharing arrangements at the project and program levels will find it challenging to scale them up to the national level if they are not supported by consistent policy and benefit-sharing principles.

#### Incentives and Benefit-Sharing Frameworks

**Governments might want to consider whether, and if so how, to link rewards and incentives (benefits) to ER performance.** When elaborating a benefit-sharing framework, governments have to balance the need to finance national policies with creating local-level incentives for private investors and communities. They are faced with the challenge of evaluating where, how, and by whom deforestation can be reduced. This implies making decisions about how to reward those who are actively contributing to it. Generating ERs requires participatory consultations with the stakeholders who are eligible for benefit sharing. Considerations of, for example, the historic and cultural aspects of Indigenous communities may also be needed. A government might also decide to use REDD+ benefits to contribute to harmonized regional development, by guaranteeing minimum percentages of benefits to regions. For these reasons, **participatory consultations are essential in the decision making and design of a benefit-sharing framework.** They help to create stakeholder support and ownership for the REDD+ initiatives, clarify roles, and provide an understanding of the types of monetary and nonmonetary incentives to be shared with the beneficiaries.

**There are multiple ways to structure benefit sharing.** The distribution of monetary and nonmonetary benefits by the government is the most common way to distribute benefits in the context of jurisdictional REDD+. Nested REDD+ offers the additional option of providing direct incentives through the authorization and integration of project-level carbon finance into a REDD+ system. Governments will also have to put into place the institutional and policy frameworks that are required to implement the benefit-sharing instruments and to disburse payments. Some countries may already have such policies and institutional frameworks in place; for example, there may be a functioning national payment-for-ecosystem (PES) services system that could be used for the implementation of REDD+ benefit sharing.

<sup>56</sup> <https://www.forestcarbonpartnership.org/bio-carbon/en/bd-bs-mechanism.html> Note: These are currently being used for benefit sharing of first payments from the FCPF Carbon Fund, so they still need to be tested.

<sup>57</sup> <https://openknowledge.worldbank.org/handle/10986/32765>

**Governments may decide to establish incentives to protect forests in the form of either ex ante finance or ex post rewards.**<sup>58</sup> In the case of ex ante finance, they can provide upfront financing to actors in order to change behavior and contribute to ERs, with the expectation that REDD+ results-based finance (RBF) will retroactively compensate the government for such expenses, and/or enable an increase in ambition over time. In the case of ex post finance, a system is set up to provide incentives linked to REDD+ performance. In this case, there are additional options with regard to how closely such rewards are linked to greenhouse gas (GHG) performance metrics, and whether nested projects are paid per generated ERs achieved, or they receive an allocation of ERs based on the GHG performance at the national or subnational level. Countries could also combine ex ante finance to support national actors in the initial stages of implementing REDD+ RBF, with ex post rewards in subsequent phases of REDD+ RBF implementation.

**A government benefit-sharing framework should also consider rewarding the stewards of forests and ecosystems, such as Indigenous peoples and local communities.** A country can decide to assign ER benefits to certain categories of actors, for example Indigenous peoples or local communities, independently of their contribution to forest conservation, for reasons of equity or poverty reduction. Such is the case in the Democratic Republic of Congo (DRC), where there are fixed percentages of benefits allocated to Indigenous communities under the benefit-sharing plan adopted in the context of the FCPF ER program. Indigenous peoples that hold ancestral rights over the land and have a long history as stewards of forests have often had a history of being marginalized. REDD+ benefit sharing offers an opportunity to reward them for their role as guardians of the forests. Governments will also have to invest in conservation efforts to avoid future deforestation frontiers. In such cases—where considerations beyond GHG performance are considered—nested forest carbon projects may receive fewer benefits (whether in terms of ERs or funding) than they could potentially secure if they were to market all their ERs independently.

**There is a continuum regarding how closely, or directly, incentives are tied to the generation of ERs.** For example, in the case of ex ante finance, the link is weak, since the incentives are provided before GHG performance is known. In the case of ex post rewards, the link is obviously stronger if rewards are

closely tied to GHG performance metrics. Similarly, an ER allocation approach in which actors or projects and programs at the smaller scales receive only a portion of the higher-scale reward will be weaker than an approach in which projects and programs can generate ERs, and thus receive carbon finance directly, without being limited by the higher-scale jurisdictional performance.

**Benefit sharing also applies to REDD+ projects in which project benefits or ERs are required to be shared with local actors.** Carbon standards require projects to share benefits with local actors. Governments may supplement this guidance by defining benefit-sharing criteria for REDD+ projects.

## 6.2 Application to Nesting Approaches

**When a government sees forest carbon projects as critical to achieving their ERs, projects should be rewarded commensurate with their GHG contribution;** that is, in proportion to how much they have reduced emissions from deforestation. Depending on their experience with PES services and existing institutions, this can usually be achieved more easily under either a centralized or decentralized nesting system. Where governments have programs and institutions in place that can assign benefits, centralized systems may offer an efficient and effective solution. Where institutions are absent or weak, authorizing projects in decentralized systems provides an alternative to government programs. The direct allocation of benefits based on ERs may not be economically and institutionally feasible for smaller projects. In situations where the measurement of GHG performance is too cumbersome under centralized systems, proxies such as trees planted or hectares conserved can be used to assess performance.

**The allocation of incentives for projects under any nested system does not preclude having other benefit-sharing arrangements with various stakeholders, including Indigenous peoples and local communities, municipalities, or other local actors.** Project-based benefit sharing describes only one element of a REDD+ benefit-sharing framework.

### Jurisdictional ER Program (only), with Benefit Sharing

**In the centralized approach, benefit sharing is managed and/or regulated by the government.** Therefore, the efficacy of the distribution of benefits falls on the government and its ability to maintain

<sup>58</sup> For more detail, and a discussion of ex-ante vs. ex-post rewards, see D. Lee et al. 2018. Approaches to REDD+ Nesting Lessons Learned from Country Experiences. The World Bank. <https://openknowledge.worldbank.org/handle/10986/29720>

the benefit-sharing arrangements. The government monetizes ERs and uses the resulting proceeds to finance its REDD+ program, thus initially exercising full control over REDD+ finance. This usually includes allocating benefits to the communities, private actors, etc. who are implementing REDD+ activities on the ground, and covering government expenses such as operational costs. Under the fully centralized approach, government-led benefit-sharing arrangements may foresee the allocation of incentives based on project-level monitoring of indicators related to performance. Nongovernmental means (for example, NGOs, or the private sector) may also be used to channel benefits to local actors. However, they may use *ex post* payments to create domestic incentives linked to environmental performance through payments for ecosystem services, or other metrics.

### Centralized Nested Approach

**The centralized nested approach also relies on the government to manage benefit sharing.** In this model, the government rewards projects with monetary, nonmonetary, or carbon benefits based on their GHG performance. Private entities can develop projects, but they are unable to autonomously monetize ERs unless the government allows them to do so. This model is dependent on the government's ability to effectively implement benefit-sharing arrangements, whether it is managing and distributing financing, or ERs.

**Governments that choose a centralized nested system should define a method for allocating the distribution of ERs as part of the benefit-sharing framework.** They could focus on particular regions, encourage particular stakeholders to participate, or emphasize the protection of important ecosystems (for water, biodiversity, or other reasons). In doing so, they should avoid the creation of perverse incentives; for example, rewarding areas where emissions have happened in the past, and undermining those areas where the forest has been conserved or sustainably managed. As previously noted, it is important to involve relevant stakeholders in the decision-making process, and to promote equity and fairness in the allocation approach.

**The allocation system will determine the level of incentive for achieving GHG performance.** The allocation of benefits will follow an agreed-upon "ER allocation method," as discussed in Section 4.4. This method may include a full reward for private efforts, or it may require projects to support government

programs in return for a share of the ERs. Systems where projects depend on the government to generate ERs carry a high burden of risk for projects, and are thus likely to be of limited appeal for private investors or project developers.

**If the centralized nested approach is distributing financing, one important decision is how the government will channel such benefits to projects.**

This could be done via government-controlled funds, dedicated funds, or direct payments from supporters of national REDD+ programs to nested projects. The use of dedicated funds could help to remove the risk of default in payments. Similarly, the use of tested institutions could avoid delays in payments that might affect the financial viability of REDD+ projects.

### Decentralized Nested Approach

**The decentralized nested approach does not require the inclusion of projects as part of a government-run benefit-sharing arrangement, since projects can directly monetize ERs.** Under this model, government agencies—for example, park authorities, communities, NGOs, and private-sector entities—can all develop and participate in carbon projects, either alone or in cooperation with each other. The decisions regarding benefit sharing in the context of these projects is done in accordance with carbon standards, and project agreements. Governments may require reports on project performance, and may consolidate their measurement, reporting, and verification (MRV) and accounting systems, but REDD+ projects are not dependent on the government to pass on the benefits to them. Projects can independently take decisions on when, how, and for what price to market ERs. The government would not be able to sell the ERs generated by projects, and would have to deduct the project ERs from the national accounting when seeking carbon or results-based finance.

**Under a decentralized benefit-sharing system, incentives for projects are delinked from the performance of government programs.** Governments are uniquely placed to generate ERs over the long term through policy and governance reforms, while projects are well placed to support specific conservation efforts; for example, to provide support for measures targeting deforestation hotspots. Some governments may require projects to contribute a share of their ERs, or their proceeds, to government-led programs or local communities as part of the project's benefit-sharing strategy, but projects retain the right to participate directly in private carbon markets. This model creates

a strong link between project GHG performance and rewards, and is more attractive to private carbon investors.

**Project Crediting (only), No Jurisdictional ER Program**

**Under this model, the government does not generate or directly receive rewards for ERs; consequently, there is no need for a benefit-sharing framework at the national level.** Projects generate credits and can monetize them; they also put into place

benefit-sharing arrangements in accordance with the requirements of national regulation or carbon standards. The government may seek to align the MRV systems of projects with national reporting, and it can provide guidance to projects on how to share carbon benefits; however, the benefits flow only from the project to local actors—for example, from a project operator or developer to local communities or landowners. This approach provides incentives for projects; where government action is required, it must occur in the absence of carbon finance.

Table 14 Implications of Benefit Sharing for Each of the Four Models

<b>Government control over how benefits are shared</b>	<b>Carbon incentives for local nonstate actors (communities, individuals, local public agencies)</b>	<b>Relevant nesting model</b>
Very strong, since the government is the body monetizing and managing the funds received from ERs	Incentives are not based on the actual ERs generated (they can be based on proxies to performance) and are received through benefit-sharing arrangements.	<b>Jurisdictional ER program (only), with benefit sharing</b>
Strong, since government manages the allocation of ERs	Incentives are based on ERs generated by projects. Rewards (payments and ERs) hinge on overall performance of the national program.	<b>Centralized Nested</b>
Moderate, as projects can directly monetize ERs and share them with local actors	Incentives are based on ERs generated and monetized directly by projects. Projects have their own benefit-sharing arrangements. They might have to comply with national guidance on benefit sharing in order to protect local communities and Indigenous peoples.	<b>Decentralized Nested</b>
Moderate, since government does not directly receive benefits from ERs (but is enabling its political constituents to do so)	ERs are generated and monetized directly by projects, and projects have their own benefit-sharing arrangements. They might have to comply with national guidance on benefit sharing in order to protect local communities and Indigenous peoples.	<b>Project-Crediting (only), no jurisdictional ER program</b>

## 7 . SAFEGUARDS

### 7.1 General Considerations

**The Cancun (COP-16) Conference adopted safeguard guidelines for REDD+.** To address the concerns and risks that REDD+ implementation could generate, and to further promote the multiple benefits of REDD+, in 2010 UNFCCC's parties agreed to seven social and environmental safeguards for REDD+. These safeguards address the risks associated with implementing REDD+, and aim to enhance its positive impacts by promoting and supporting the following safeguards:<sup>59</sup>

- i. Actions complement, or are consistent with, the objectives of national forest programs and relevant international conventions and agreements;
- ii. There are transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
- iii. Respect for the knowledge and rights of indigenous peoples and members of local communities is demonstrated 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;
- iv. The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, is included in the actions referred to in paragraphs 70 and 72 of this [COP 16] decision;
- v. 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 FCCC/CP/2010/7/Add.1 27 protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits;
- vi. Actions to address the risks of reversals are taken;
- vii. Actions to reduce the displacement of emissions are included.”

At COP-17, held in Durban in 2011, the parties to UNFCCC agreed that the relevant safeguard provisions adopted at COP-16 would be applicable regardless of the source or type of financing.<sup>60</sup> The Warsaw Framework for REDD+ complements the Cancun safeguards with requirements that countries need to provide a summary of information on safeguard implementation via their national communications, or communication channels agreed to by the Conference of the Parties, or, on a voluntary basis, via the web platform on the UNFCCC website.<sup>61</sup>

**Safeguards are implemented in keeping with national laws and policies.** Over the last few years, many countries have made progress in the implementation of safeguards and safeguard information systems (SIS).<sup>62</sup> UNFCCC does not offer any methodological guidance on how to implement the Cancun safeguards and put into place an SIS. Countries are free to choose how they will interpret the safeguards in the context of their own legal systems, as well as how they will implement them, and operationalize the SIS.<sup>63</sup> However, countries should consider carefully from which entities, if any, they would seek ER payments, and ensure that they develop safeguard systems that would be satisfactory to the entities. For example, if a country intends to become involved in REDD+ under either the Forest Carbon Partnership Facility (FCPF) or the UN-REDD program, it should follow the safeguards guidance contained in the Readiness Preparation Proposal (R-PP).<sup>64</sup>

Although countries have some flexibility in how they choose to implement international requirements on safeguards, development of a safeguards framework for an ER project or program would typically involve the following steps:

1. **Assessment of key social and environmental risks and potential impacts** (both positive and negative) of REDD+ strategy options; likely implementation arrangements; and stakeholders. Such assessment during consultations with stakeholders and preparation of the REDD+ strategy would be extremely valuable during the preparation of the REDD+ strategy itself, and the climate finance plans. The completed assessment should be publicly disclosed.

<sup>59</sup> Decision 1, UNFCCC COP 16, Appendix 1, Paragraph 2 at <https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>

<sup>60</sup> Decision 2/CP.17 Paragraph 63 and 64.

<sup>61</sup> Decision 12/CP.19 at <https://unfccc.int/resource/docs/2013/cop19/eng/10a01.pdf#page=33>

<sup>62</sup> Safeguards Country Resources Hub - UN-REDD Programme Collaborative Online Workspace

<sup>63</sup> Decision 2/CP.17 states that SIS should be implemented “taking into account national circumstances and respective capabilities, ... recognising national sovereignty and legislation, and relevant international obligations and agreements ...”

<sup>64</sup> <https://www.forestcarbonpartnership.org/requirements-and-templates#temp-read5>

2. **Based on the risks and impacts identified in the assessment, key stakeholders develop a program/project-specific framework. The Environmental and Social Management Framework (ESMF), or a similar safeguards risk management plan can be used to set forth a relevant policy and legal framework for the management of safeguards issues; the risk avoidance, minimization, and mitigation measures that will be implemented; measures to enhance positive social and environmental impacts; definition of institutional roles and responsibilities; monitoring arrangements; budget required and source(s) of funding; a feedback and grievance redress mechanism (FGRM); and the plan for ongoing stakeholder consultations.**
3. Monitor safeguards implementation, including taking into account feedback from the FGRM.

**National environmental and social safeguards are applicable to all REDD+ activities.** Consequently, in a nesting context, where implementation is occurring at multiple scales, this means that safeguard policies should apply to national programs as well as to nested REDD+ projects. How a government chooses to ensure that safeguards are applied and enforced may differ depending on the type of nested system chosen. But as part of the national legal framework, national REDD+ safeguards must be fulfilled by any REDD+ project or activity.

**Most governments have defined criteria and requirements that translate the UNFCCC Cancun safeguards<sup>65</sup> to fit their national programs.** If a country wishes to align safeguard application at multiple levels of REDD+ implementation, this may require interpreting and adjusting safeguard requirements according to the national regulatory framework so that they can apply to site-scale or project-level activities (see Box 8). The operationalizing of safeguards is not easy, though. The national institutions that are in charge of the SIS face the challenge of collecting different types of safeguard information from the various institutions and actors involved. Therefore the SIS should be able to consolidate information from national and subnational entities, as well as projects.

**To facilitate REDD+ safeguards compliance, countries should clarify who is involved—project developer, landowner, etc.—and how the nested projects will implement safeguards and report on their compliance.** They also have to regulate the periodicity, the content of the information, safeguard indicators, and the authority to which the information needs to be provided, as specified in the ESMF or a similar national document. Safeguard compliance templates can streamline and facilitate this reporting. The information provided by nested projects helps the country demonstrate how its social and environmental safeguards are being addressed and respected through the REDD+ safeguards information they report on under SIS. When projects are integrated into national REDD+ national programs such as the FCPF Carbon Fund, satisfactory safeguards compliance in line with the World Bank’s policies and standards is required in order to receive payments. Other facilities and donors might also have specific safeguard standards that need to be fulfilled by beneficiary governments, and the projects integrated into the national programs.

**The private sector may also impose safeguard requirements on carbon projects, or credits—for example, some require climate, community, biodiversity (CCB) certification.** In such cases, projects may already be compliant with national requirements. Countries could accept certification under such standards as proof of fulfillment of the national safeguards. Where projects are CCB-certified, the information provided and audits undertaken under the standard can inform the SIS. Site-specific information allows for effective identification, management, and monitoring of social and environmental risks and benefits.<sup>66</sup> Project-level REDD+ information will have to be integrated into the SIS, which provides publicly available information on how safeguards are being addressed across all types of REDD+ implementation activities. **The national FGRM will also have to be able to record and address project-level complaints.**

<sup>65</sup> Decision 1.CP.16, Appendix I. Check also: <https://www.unredd.net/knowledge/redd-plus-technical-issues/safeguards.html>

<sup>66</sup> REDD SES, IUCN. 2015. *Considerations for Countries on Using Information from Nested Projects for REDD+ Safeguards Information Systems.*

## Box 8 Examples of How Countries Define Safeguard Requirements for a Nested System

Few countries offer specifications concerning the fulfillment of safeguard requirements by projects in their REDD+ legislation, although many of them have adopted national frameworks such as ESMF and FGRM to accommodate the requirements of the multinational initiatives in which they participate.<sup>67</sup>

Several examples are provided here to illustrate the range of requirements currently considered by countries, in addition to the requirements of the REDD+ initiatives they are part of:

- The Democratic Republic of Congo (DRC) simply specifies that in the preparation and implementation of the REDD+ investment, the project developer is required to comply with socioenvironmental safeguards in accordance with the regulations in force.<sup>68</sup>
- Madagascar intends to use differentiated indicators to gather safeguards information at the national, subnational, and local levels.<sup>69</sup> Its recent Advanced Benefit Sharing Plan stipulates that safeguards instruments will be applicable to any REDD+ activity that receives carbon benefits.<sup>70</sup> A future decree will detail the specific safeguard requirements concerning any REDD+ activity implemented in Madagascar.
- In Mozambique, the national REDD+ regulation merely mentions that REDD+ projects and programs need to respect environmental and social safeguards.<sup>71</sup> However, the country has elaborated its ESMF in the context of their REDD+ Strategy.<sup>72</sup>
- Guatemala has analyzed the compliance of existing REDD+ initiatives registered under voluntary carbon standards with World Bank FCPF requirements and Cancun safeguard requirements.<sup>73</sup> Yet there are no general guidelines on how REDD+ initiatives should fulfill national safeguards; however, the country has already elaborated its ESMF.
- In Peru, an analysis of the ESMFs of ongoing projects and the ER program framework will be carried out in order to identify gaps that need to be filled.<sup>74</sup>
- Colombia submitted the first summary of information on safeguards to UNFCCC in 2017. This submission sheds some light on the requirements applied to the activities that seek to be nested. Under Colombian nesting legislation, REDD+ projects must report information regarding compliance with environmental and social safeguards in the national ER registry, especially regarding project participants; conditions of ownership and land tenure in the area of intervention; consent of the owners, possessors, or occupants of the properties in which the initiative will be implemented; and compatibility with land management and planning instruments.<sup>75</sup>
- Mexico provides a good example of coordination between national and federal states in the development and implementation of safeguards. The country submitted its first summary of information on the implementation of the Cancun safeguards to UNFCCC in 2017. Safeguards are implemented and monitored jointly at the federal and state levels. Most of the Mexican states have developed legislation in relevant areas such as forest governance, financial and distribution benefit mechanisms, Indigenous peoples' rights, and development stakeholders' participation in decision-making. Mexican federal states are also in charge of preparing state safeguard plans that will be linked to the national SIS.

67 For a list of countries participating in the FCPF Carbon Fund that have already advanced ESMF see, <http://www.forestcarbonpartnership.org/safeguards>.

68 Art. 24, 9 mai 2018. – Arrêté ministériel n° 047/CAB/MIN/EDD/AAN/MML/05/2018 fixant la procédure d'homologation des investissements REDD+ en République démocratique du Congo (J.O.RDC., 1er juillet 2018, n° 13, col. 58).

69 Yasin Mahadi Salah et al. "Jurisdictional Approaches to REDD+ in Africa: Emerging Lessons." Yasin Mahadi Salah, UN-REDD Program, March 2019.

70 Advanced Benefit Sharing Plan: The Atiala-Atsinanana Emission Reduction Program. January 2020.

71 Art. 18 of Decreto n.º 23/2018, Regulamento para Programas e Projectos Inerentes à Redução de Emissões por Desmatamento e Degradação Florestal Conservação e Aumento de Reservas de Carbono (REDD+).

72 <http://documents1.worldbank.org/curated/es/970171484819513642/pdf/SFG2885-EA-P160033-Box402875B-PUBLIC-disclosed-1-18-17.pdf>

73 Guatemala National Program for the Reduction and Removal of Emissions, November 2019.

74 Reducing emissions from San Martin and Ucayali in the Peruvian Amazon, Peru, June 2019.

75 Resolution No. 1447, August 1, 2018. Ministry of the Environment and Sustainable Development, Colombia

## 7.2 Application to Nesting Approaches

### Jurisdictional ER Program (only), with Benefit Sharing

**Under this model, the country defines national safeguards but does not need to formulate specific safeguards for integrated private projects.** The government is responsible for implementing and enforcing nationally defined safeguards, as well as ensuring that safeguards are followed by all subnational and local-scale actors that have access to REDD+ benefits. While this approach limits the adoption of safeguards to a set of national REDD+ implementation standards, their implementation can be more challenging, since the government is fully responsible for adherence to the safeguards across the entire country.

### Project-Crediting (only), No Jurisdictional Program

**Under this model, the government needs to formulate its own safeguard requirements for private and community-led projects.** The government can distinguish between different safeguard requirements depending on the type of project, the involvement of various stakeholders (for example, Indigenous communities), and the location of the project

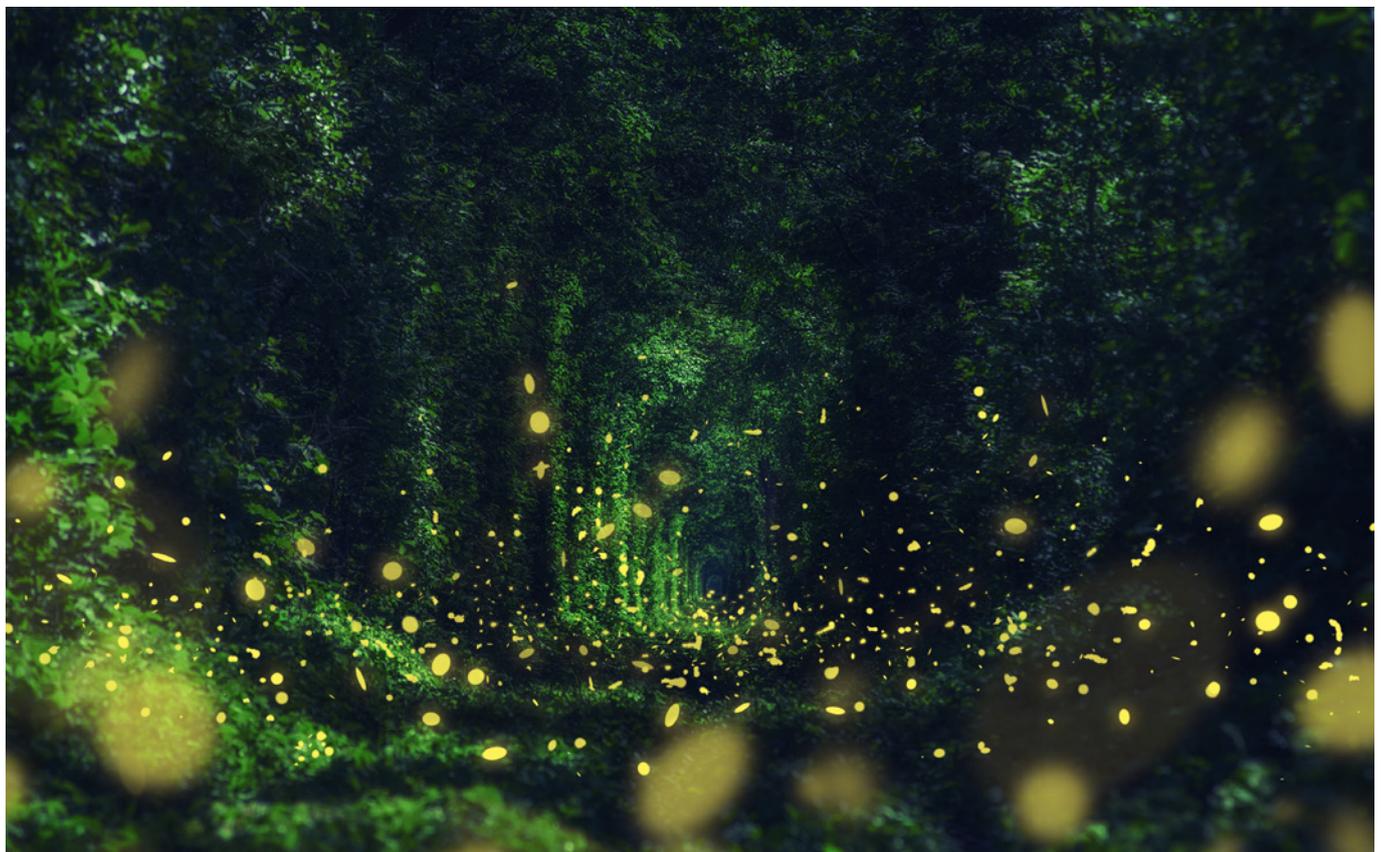
(for example, within a biodiversity hotspot). The government can define reporting requirements and specific templates for safeguard compliance, with practical indicators that can be easily measured and reported, and can require proof of compliance. Where private projects are certified under a private standard, the auditors of such projects should be required to check for compliance with national safeguards. However, such private certification would not remove the obligation of the government to also check for compliance with national safeguards and/or to enforce the national safeguard system.

**The government may also recognize existing safeguard systems as fulfilling all national requirements.** It could, for example, recognize certain approved safeguard-related certifications (for example, CCB), or multilateral operational rules (for example, World Bank safeguards<sup>76</sup>) as meeting the requirements of national safeguards systems. Subnational jurisdictions may also develop their own safeguards policy to complement the national framework, as is the case in Mexico.

### Centralized Nested and Decentralized Nested Models

The centralized and decentralized nested models must regulate and apply both jurisdictional and project safeguard requirements, as described in Section 7.1.

76 World Bank. Environmental and Social Framework. 2017.



## 8. RISK MANAGEMENT

### 8.1 General Considerations

**Different models of REDD+ implementation carry different risks.** Nesting is generally considered a strategy for reducing risks. By integrating projects into larger accounting and implementation frameworks, they can be better aligned with public policies; and by harmonizing measurement, reporting, and verification (MRV) and baselines, the risk of emission reduction (ER) inflation and/or undetected leakage (displacement) is greatly reduced, provided that the national systems are conservative and well managed. However, the linking of projects and national programs creates its own set of risks. These risks include:

- **ER performance: If the government and private projects and programs perform well, they will all receive the full reward for their actions, regardless of whether nesting happens via the benefit sharing, centralized, decentralized, or a mere project-crediting model.** However, there are risks that can arise in nested systems, for example:
  - **Underperformance risk.** This can occur if one party (whether the government or a project) has poor REDD+ performance, while the other performs well. The situation where one party “underperforms” is closely related to the challenges of managing leakage and permanence in nested systems, including decisions on who is responsible (and liable) for them.
  - **Nationally Determined Contribution (NDC) compliance risk.** Where the transfer of ER results is linked to a corresponding adjustment, this may affect a country’s ability to achieve its NDC. If the country is required to subtract the ER claims by projects or programs within its borders—for example, if projects and programs are allowed to sell their credits with a corresponding adjustment, the government will need to take this transfer into account in their efforts to meet their NDCs.
- **Financial risks: Another type of risk is that of payment default;** this risk is not unique to nesting, but there can be potentially compounded payment risks to parties in a nested/linked system. For example, if a buyer fails to honor its agreements with a government, this could impact projects linked to the government benefit-sharing system.

And if projects generate fewer ERs than they previously predicted, it may reduce the funding that governments can access.

- **Legal/regulatory risk: Private actors may claim damages from the government, for example, by initiating legal action if their rights to commercialize ERs are impinged on due to the implementation of nesting. Existing projects may lose (or reduce) their right to monetize GHG performance once regulated in a jurisdictional-only or centralized nested system.** Risks for projects also arise if the government does not follow through on decisions and agreements made within the nested system, particularly regarding the sharing of benefits, whether they are monetary, nonmonetary, or carbon benefits.
- **Political risk: Nesting can either reduce or compound the risk of social conflict and political support for the government REDD+ strategy. Where nested systems empower local actors, nesting can increase the real and perceived fairness of REDD+ implementation. Where local actors do not participate in national programs, this may compromise national ER systems.**
- **Environmental integrity risk. Nesting can address the risk of ER inflation and double counting, mitigating the risk to environmental integrity.**

**Centralized approaches** assign more powers to the government, and allow public actors to control the process of generating, and in some cases monetizing, ERs. However, these models may have higher legal risks for the government, particularly if the establishment of a centralized system impinges on the rights of constituents to benefit from forest carbon performance. There are also greater risks to projects in a centralized system, since the benefits are tied to national GHG performance.

**Decentralized systems**, where actors operate more independently from each other, tend to have lower risks of conflict and default. However, if the drivers of deforestation in a country can only be tackled largely through changes to government policies, a system focused on project-scale activities may not achieve as many ERs overall, and the country’s achievement of its NDC may consequently suffer.

**A government should carefully consider the risks of the model it has chosen, and define strategies for managing them.** For example, in a centralized system, where national ER performance risk is particularly

relevant for projects, governments can guarantee certain payments to affected communities, even in cases where it falls short in accessing international finance. Political risks can be managed by employing a participatory approach, and empowering communities

in the context of REDD+ activities and projects. It is particularly important that attention be paid to the integration of existing projects into national ER programs.

## Box 9 Integrating Early-Action Projects in a REDD+ Program

In order to integrate existing projects into a national ER program, a process may be needed **to transition project and/or subnational activities from their “stand-alone” status to the nested system**. In many cases, REDD+ projects have already been operating prior to the formulation of a jurisdictional program. When a country sets up a nested system, those projects will be affected. A well-implemented national ER program may improve the situation of projects, since they are then embedded in a comprehensive suite of mitigation measures, which helps them to gain credibility and possibly access to additional funding. However, the financials of early-action projects can also suffer from nesting. For example, nesting can change a project’s baseline, thus changing its ability to access finance (see Section 4 on MRV). If a project loses income through nesting, it may petition the government or even claim legal damages, depending on national laws. In addition, local and Indigenous communities involved in early-action projects can suffer from discontinued funding if the integration of projects into the nesting system affects the assumptions about benefit distribution that these communities considered when initially accepting participation in the project. These **“early action risks”** can result in protest or complaints by private developers and participating communities, which can make the implementation of REDD+ difficult. **Integrating existing projects into such a system may be achieved over a fixed period through agreements among projects, and with the national government, on how to regulate such a transition.**

In the next section we explain in more depth how **different models result in a different set of risks**. We also try to clarify where the risk lands (whether on the government, or on projects), and offer potential mitigation measures for each risk.



## 8.2 Application to Nesting Approaches

### Jurisdictional ER Program (only), with Benefit Sharing

Under this model, the government carries full responsibility for REDD+ performance, and is also solely responsible for generating and monetizing ERs. As such, it carries the ER performance risk as well as the default risk if a partner fails to pay for ERs that have been achieved. Considering that currently most contractual partners are multilateral organizations such as the World Bank, or donor countries such as Norway and Germany, which have high credit ratings, such default risk is limited. Since the government does not recognize project crediting, the ER underperformance of projects and programs, or NDC compliance risk due to transactions by projects, does not pose concerns for the government. However, an additional risk relates to the capacity of national institutions to channel the payments received to local actors. This risk does not relate to the absence of finance, but to the efficiency of procedures by which national institutions transfer funds to such actors.

In a jurisdictional-only approach, a country might carry the risk that national stakeholders may claim a legal right or take legal action if they are not authorized to engage in projects and/or be considered in the country's REDD+ benefit-sharing arrangements. This risk depends on the rights that local stakeholders are entitled to under the national legal system, based on land and forest resource ownership, or the right to manage and benefit from forest lands. There is also the risk that existing early-action projects may claim damages if they are not integrated into a government REDD+ system. Depending on the credit rating of a REDD+ country, local actors may worry that the government will not honor an agreement to pass on nonmarket results-based finance (RBF), or carbon finance received for national GHG performance. Since such agreements are often executed between international donors and the host country bilaterally, it is essential that the country has a functioning and accessible feedback and grievance redress mechanism (FGRM). This is helpful in making RBF partners aware of potential problems, which may also lead to a default provision under the agreement between the government and the donor: for example, in the case of FCPF Carbon Fund ERPAs.

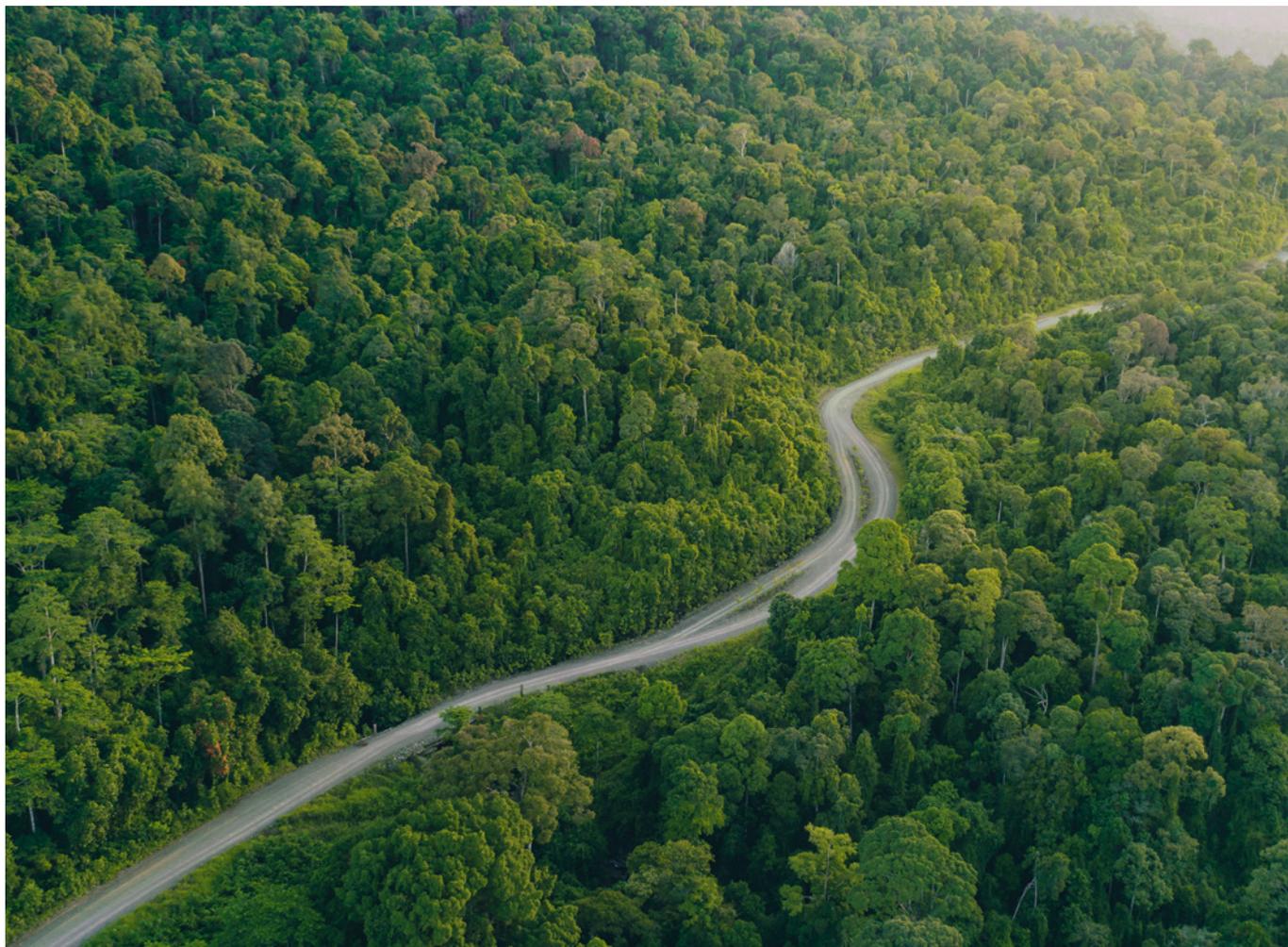


Table 15 Risks Inherent in the Jurisdictional-Only Approach

Type of risk	National Risk	Project Risk*	Specific Risks and Mitigation Measures
ER performance	√		REDD+ performance depends on effective implementation of government policies and measures. Effective implementation rewards local activities through benefit sharing, but may take time if institutions are weak and policies nascent. Leakage is captured in national accounting, and the government program is responsible for the permanence of the ERs. There is no NDC compliance risk.
Financial risk	√		Payment and default risk are fully assumed by the government, and can be mitigated by promoting various streams of finance to support a REDD+ strategy beyond carbon finance.
		√	Local actors who are implementing the activities may face a risk that the government will fail to channel benefits to them under a benefit-sharing mechanism. Such risk can be mitigated by developing accountability mechanisms implemented by the institutions in charge of disbursing benefits and implementing the REDD+ strategy. An FGRM is also an essential risk-mitigating measure.
Legal and regulatory risks		√	Early-action projects may face risks if the government decides to close off options for such projects to operate. To manage this risk, the government may assume responsibility for and compensate project proponents, while also taking over the responsibilities toward communities.
	√		Where private actors have the right to independently develop REDD+ projects and commercialize ERs, the government must take measures to compensate those actors for the loss of such rights based on laws or rules that apply when the government takes (that is, expropriates) such rights.
Political risk	√	√	There is a risk of social unrest if the benefit sharing is considered unfair, or is not implemented; the legal, social, and political rights of actors should be included in the development and implementation of benefit-sharing arrangements to mitigate such risks.
Environmental integrity risk	√		The risk of double counting is reduced, since only the national ER program is claiming ERs. Risk of environmental integrity could occur if the methods overestimate the ERs; this risk can be reduced by using accurate methodologies.

\*In this instance, “project” refers to local actors engaged in activities with the expectation of participating in a benefit-sharing program.



## Centralized Nested Approach

Under the centralized nested approach, the government is still responsible for national REDD+ performance, but it relies in part on projects to contribute to it; at the same time, projects depend on overall national performance to receive their monetary, nonmonetary, or carbon benefits. In other words, the lack of performance by a national program may impact the ability of projects to receive their own “rewards.” This can have serious implications for the viability of projects, and can also impact the local communities and smallholders who are the ultimate beneficiaries. This exposure to host country performance risk may discourage projects from participating in a centralized nested approach, unless the government accepts liability for such risk on behalf of the projects. However, the government takes a risk if project performance is poor; it may need to

impose liabilities on the projects for leakage and other reversals that occur due to their activities.

### Private actors may claim participation in REDD+.

As in the jurisdictional-only approach, it is essential that the government consider preexisting rights and legally relevant expectations when it develops its benefit-sharing system and defines the allocation of ERs to projects. The risk is particularly prominent in relation to the integration of early-action projects into the national program, especially in cases where such integration results in monetary losses by private projects. If projects are forced to default under investment treaties, the litigation can extend to international project partners. This risk can be addressed by participatory design of the ER program, and the inclusion of grace periods and “grandfathering” arrangements.



Table 16 Risks Inherent in the Centralized Nested Approach

Type of Risk	National Risk	Project Risk	Specific Risks and Mitigation Measures
ER Performance	√		<p>The government depends in part on projects to generate ERs. This makes the government dependent on private performance. If projects fail to perform and the country fails to achieve the planned results, it may not be able to access the full amount of RBF or carbon finance, or it may not achieve its NDC. Mitigation measures include:</p> <ul style="list-style-type: none"> <li>• Conservatively assessing the contributions that projects will be able to make to national performance, and ensuring that ERs are also generated by public programs.</li> <li>• Withdrawing or suspending “nested” project authorizations and approvals.</li> <li>• Reducing the allocated quotas to nonperforming projects, and reassigning them to performing projects.</li> </ul> <p>The creation of a buffer fund to compensate for performance failures (whether due to leakage or reversals) is another way to mitigate ER underperformance, but an agreed-upon system would be needed in order to decide on how contributions to the buffer are made, and how any liability for underperformance will be handled.</p>
		√	<p>If the government does not perform, projects may not receive their rewards—this has the effect of discouraging private investment into site-based activities. Projects may also face risks if the government changes the overall FREL or ER allocation method under which projects must nest. A government could mitigate this risk by:</p> <ul style="list-style-type: none"> <li>• Creating a buffer pool of ERs, or a fund to compensate for performance failures in years of poor performance.</li> <li>• Authorizing projects to market ERs in case of a failure to generate ERs at the national scale—in other words, the option to fall back to the decentralized approach in cases where projects are (still) registered with a voluntary carbon market standard.</li> <li>• Providing a guarantee to projects to purchase a minimum volume of credits at a given price, independently from national performance, and the country accessing RBF or carbon finance.</li> <li>• Some combination of the above.</li> </ul>
Financial Risk	√	√	<p>Payment and default risks are assumed by the government; however, in the case of a default by the buyer, the government may authorize projects to directly market their ERs.</p>
		√	<p>Projects may face a risk that the government will not channel benefits to actors under the benefit-sharing mechanism. Such risk can be mitigated by:</p> <ul style="list-style-type: none"> <li>• Holding in trust a part or all of the international RBF and carbon finance available for disbursement against project or program performance.</li> <li>• Agreeing with donors that funds will be transferred directly to nested projects, following preestablished procedures.</li> <li>• As above, a fallback option could be that projects may issue and monetize their ERs directly if there is a government failure.</li> </ul>

Legal and Regulatory Risks		√	<p>Early-action projects may be at risk when a nested system is implemented. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>• Engaging with projects to find an acceptable solution for both sides.</li> <li>• Negotiating a “transition” of such projects into the national program. “Grandparenting” agreements should be contractually confirmed between early-action projects and the government, and could include a time limitation for existing projects, and a cut-off date for full integration into the national program. Transition periods are also defined under existing private standards, such as VCS’s JNR.</li> </ul>
	√		<p>International or domestic private actors may claim damages from the government, especially if the government constrains their ability to monetize ERs, or if it monetizes ERs that belong to private actors. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>• Continuous consultations with projects, including international partners.</li> <li>• Agreeing on a transition period, and measures that delink the ability of projects to access rewards for GHG performance, at least partly, from national REDD+ performance.</li> <li>• Adopting a clear and transparent nesting policy.</li> <li>• Avoiding claiming ERs where governments do not hold land and management rights. (This is addressed under FCPF, and private standards such as JNR).</li> </ul>
Political Risk	√	√	<p>Social unrest may occur if benefit sharing or the allocation of ERs, or the way they are implemented, is considered unfair. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>• Including existing and future project proponents and local communities in the design of benefit sharing and nesting agreements.</li> <li>• Ensuring the monitoring, compliance, and impact of benefit-sharing arrangements.</li> <li>• Establishing an FGRM, or facilitating access to the courts.</li> </ul>
Environmental Integrity Risk	√		<p>The risk of double counting is reduced, since ERs generated by the sum of REDD+ projects cannot exceed those generated at the national level. Risk of environmental integrity could occur if the methods overestimate ERs (but this can be reduced if accurate methodologies are used); or if the method used to allocate ERs to REDD+ projects is not accurate.</p>

## Decentralized Nested Approach

**Under the decentralized nested approach, projects are sheltered from host country performance risks because credits can be marketed even if the country (or jurisdiction) as a whole underperforms.**

This is why this approach is attractive to the private sector. However, such an approach may come with reputational risks for projects if the country consistently fails to reduce emissions, and leakage risks are high. The decentralized approach does reduce litigation risks for the government, since landowners and communities—those who may claim the rights to forest carbon—are not constrained in their ability to generate, issue, and monetize ERs.

**This model requires effort and commitment in order to be successfully managed.** Potentially, it can engage the greatest number of streams of finance; for example, the potential of multiple streams of private financing. Government and project proponents can separately manage the market and payment risks,

reducing the country’s overall default risk through diversification. This makes this model resilient to the default of one buyer, but also increases the complexities, and requires greater institutional capacities.

**Projects may face risks due to an uncertain regulatory environment, particularly where governments are prone to frequent review, updating, and changing of the rules for REDD+ projects.** Drastic changes in the rules can create instability that can seriously damage or affect a project’s viability. Legal certainty also helps to maintain a stable nesting approach. While governments have legitimate grounds for reviewing and updating the key rules that permit the nesting REDD+ system to evolve and improve based on new information (for example, to update MRV requirements), drastic rule changes that lead to the adoption of different nesting approaches can cause serious damage to the viability of projects and affect their legitimate expectations.

Table 17: Risks Inherent in the Decentralized Nested Approach

Type of Risk	National Risk	Project Risk	Specific Risks and Mitigation Measures
ER Performance	√		<p>The government may put its ability to claim ERs in certain contexts at risk if projects perform well, but areas outside the project perform poorly. For example, it may not achieve its NDC, or may not be able to access results-based payments if project performance exceeds national performance. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>Ensuring that there are robust government efforts to achieve REDD+ performance outside project areas.</li> <li>Allowing corresponding adjustments to project credits only after estimating the countrywide performance.</li> <li>Defining a robust FREL allocation methodology.</li> </ul>
		√	<p>Projects may face reputational or credibility risks if the overall national performance is poor and leakage risks are high. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>Designing activities for reducing leakage, and communicating why the project has reduced emissions even if the country's emissions are not reduced.</li> </ul> <p>Projects may also face risks if the government changes the overall FREL under which they must nest (see Section 4 on MRVs for more detail). This can be mitigated by:</p> <ul style="list-style-type: none"> <li>Providing predictability to the extent possible, on when and how the FREL and the allocation will take place, in clearly stated nesting rules; and establishing a calendar for future amendments of FREL.</li> <li>Defining buffers to enable compensation for this risk, similar to mitigating the risk of nonpermanence.</li> </ul>
Financial Risk	√	√	<p>Payment and default risk are assumed by the corresponding actors: that is, the government at the jurisdictional level, and projects at their specific scales. Both have direct access to market ERs.</p>
Legal and Regulatory Risks		√	<p>Early-action projects may be at risk when a nested system is implemented. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>Negotiating a transition of such projects into the nested program. "Grandparenting" agreements should be contractually confirmed between early-action projects and the government, and could include a time limitation for existing projects, and a cut-off date for full integration into the nested program. (This may also be addressed by private standards).</li> </ul> <p>Government changes to nesting rules can put projects at risk. This risk can be mitigated by:</p> <ul style="list-style-type: none"> <li>Adopting a clear set of predictable rules and procedures for changing such rules in the future, and allowing for "grandparenting" if the rules are changed.</li> </ul>
	√		<p>International or domestic private actors may claim damages from the government, in particular if the proportion of the FREL allocated to the projects reduces its capacity to perform. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>Agreements with projects, an agreed-upon transition period, and measures that delink the ability of projects to access rewards for GHG performance.</li> <li>Adopting clear and stable nesting rules.</li> <li>Avoiding claiming ERs where governments do not have the right to do so.</li> </ul>
Political Risk	√	√	<p>Social unrest may occur if the allocation of FREL, or its implementation, is considered unfair. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>Including existing and future project proponents and local communities in the design of nesting agreements.</li> </ul>
Environmental Integrity Risk	√	√	<p>The risk of double counting could occur, since the sum of the parts could be more than the total. Overestimation of ERs could occur if carbon accounting methodologies at the REDD+ project level or the ER program level are not accurate, or consistent. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>Defining an accurate FREL allocation methodology.</li> <li>Defining accurate and standardized carbon accounting methodologies and monitoring to be applicable to all levels.</li> </ul>

## Project Crediting (Only), No Jurisdictional Program

Under the project crediting (only) approach, the government does not seek payment for jurisdictional performance, but it encourages and regulates projects in the context of its national REDD+ strategy. This approach may constitute a starting point for countries

that are moving toward nested approaches. However, if projects are insufficient for achieving national REDD+ goals, it will likely require the government to take action without itself accessing RBF. It may receive other sources of international support for implementing its REDD+ strategy, however, such as climate finance or development assistance.

Table 18: Risks Inherent in the Project Crediting (Only) Approach

Type of Risk	National Risk	Project Risk	Specific Risks and Mitigation Measures
ER Performance	√		<p>The government does not participate in crediting programs. It does not run any risk of conflict with international or local partners. However, it remains responsible for achieving REDD+ results and meeting its NDC targets. Where the projects' transfer of ERs involves corresponding adjustments, this could represent a risk to achieving its NDC targets, especially if the ER performance of projects is overestimated. This may be mitigated by:</p> <ul style="list-style-type: none"> <li>Designing a system that aligns ER claims of REDD+ projects with national GHG reporting.</li> </ul>
		√	<p>Projects are responsible for their own performance, including for the management of leakage and reversals. There is no link to government performance.</p>
Financial Risk		√	<p>Only relevant for projects. The project must manage crediting and monetizing of ERs via private contracts as well as default risks.</p>
Legal and Regulatory Risks	√		<p>The government is liable for adopting and enforcing clear and transparent project rules, and running a smooth authorization system, in particular where project transfer of ERs involves corresponding adjustments.</p>
Political Risk	√	√	<ul style="list-style-type: none"> <li>There is no national benefit-sharing program that could result in conflict. Projects have their own benefit-sharing systems. Social unrest may occur if the benefit-sharing arrangements are perceived as being unfair, or if they are not adequately implemented. Governments can define safeguards and demand Free Prior Informed Consent (FPIC) for project benefit-sharing systems.</li> </ul>
Environmental Integrity Risk	√	√	<p>The risk of double counting could occur if there is a geographical overlap between projects or their leakage belts. Risk of overestimation of ERs could occur if carbon accounting methodologies at the REDD+ project level are not accurate. This can be mitigated by:</p> <ul style="list-style-type: none"> <li>Defining accurate and standardized carbon accounting methodologies for projects, including for the management of leakage.</li> </ul>

# PART III NESTING IMPLEMENTATION

This part summarizes the administrative steps that need to be taken to implement nested REDD+.

## 9. CONSULTATIONS ON THE ADOPTION OF A NESTED SYSTEM

### 9.1 General Considerations

**Negotiation, consensus-building, and agreements on the specific features of nesting are key to achieving a smooth and efficient nesting approach.** However, stakeholder consultations on nesting may present features that render them particularly complex. For example:

- **A high level of technicality.** Discussions about nesting often focus on technical aspects such as compatibility between existing voluntary project baselines and the national FREL, the development of jurisdictional baselines, or the allocation of a FREL to projects. These issues will need to be incorporated into the technical and policy nesting guidelines. This level of technicality adds complexity to consultations, and may result in few of the actors having a full understanding of the issues under discussion.
- **Deficiency in the understanding of nesting at the political level.** Determining a nesting strategy is a highly political and strategic challenge for a government. In many cases, policymakers are insufficiently acquainted with the details of REDD+, and nesting issues are too complex for nonexperts to grasp. For example, the relevance of nesting for a country's NDC is not always obvious. Furthermore, there is often a gap between the level of understanding that REDD+ project developers and public officials have. This gap often affects the quality of national discussions on nesting, and can produce delays in the adoption of decisions that must be taken by government on the most appropriate nesting strategy to use.
- **Complications for early-action projects.** Addressing the nesting of early-action REDD+ projects is a difficult task. These projects were developed under voluntary carbon standards. They are often quite advanced in terms of their implementation, and project developers have performance and payment expectations that might be frustrated when their project is nested according to national rules. Furthermore, while in some countries early-action projects enjoy the full support of governments, in others they have been developed without consulting with the government and are therefore eyed suspiciously by the government.
- **Challenges in the timing of consultations.** One common challenge is how to engage stakeholders in various ways during the national REDD+ process, and how to determine the ways in which various types of stakeholder engagement are most useful in the design and implementation process. Early engagement of existing private REDD+ projects and their beneficiaries in discussions with country officials builds trust and enables a mutual understanding of each other's expectations and interests. The consultation process in nesting has often proven to be long and inefficient. This is often due to early consultations that are focused on issues such as the distribution of benefits or the implications of the national FREL for projects. Unless the government has a strategic plan on how to achieve benefits, consultations on benefit sharing may create false expectations and lead to future frustration. Consultations should follow a clearly communicated time plan. For example, before allocation methods are discussed or criteria are defined for benefit distribution, it is useful for a government to gather data and test scenarios.
- **Sensitive social contexts.** In some cases, stakeholders do not take part in consultations because participating in them could represent a

risk in their immediate or near future. For example, local constituents may not be willing to provide their views in a public meeting in which authorities are present if they are afraid of reprisal.

**Safeguard compliance is also part of a participatory approach to REDD+, which demands fair and accessible consultations.**

Ill-conceived REDD+ programs and projects could harm communities, relevant stakeholders and beneficiaries, and generate perverse outcomes. When activities are rushed, there is often a failure to consult and obtain consent from relevant stakeholders. Stakeholder nesting consultations should be carefully designed, taking into consideration the historic and cultural contexts of countries. Within a REDD+ nesting framework, the consultation process needs to include several levels:

- Private projects and their stakeholders, including potential beneficiaries.
- Decentralized entities (provinces, municipalities, regions), and their stakeholders.
- The national REDD+ program and its stakeholders.

**At each of the above levels, the consultation process is essential in order to identify potential benefits and co-benefits, as well as the potential spillover effects of REDD+ programs and measures.** Consultations are also essential for establishing a safeguard information system (SIS) and a feedback and grievance redress mechanism (FGRM). Countries with existing donor-supported economic incentive schemes or other geographically bound forest-related economic activities, such as forest community concessions or payment-for-ecosystem services (PES) systems, can build on existing experiences with consultations.

## 9.2 Application to Nesting Approaches

### Jurisdictional ER Program (Only), with Benefit Sharing

**Public consultations involving all REDD+ stakeholders take place at the national level, as well as in the areas where REDD+ programs are being implemented.** REDD+ consultation should operate similarly to consultations undertaken for other public policy programs. Because it is the government that controls the entire flow of REDD+ funds that the country can receive, consultations should focus on ensuring an understanding of their overall use; the possible creation of a national REDD+ fund and how it will be controlled; the geographic and social distribution

of the funds; and their impact on the financing of existing policies, or those that will be established to foster a reduction in deforestation and to support conservation. In this model, where the state exercises full control over REDD+ resources, and where one of the main risks is the misuse of such resources, transparency about and understanding of the processes and channels of REDD+ fund disbursement are most likely to be the main purposes for public consultations. Consultations should also take place in those areas of the country where REDD+ activities are being implemented.

### Project Crediting (Only), No Jurisdictional Program

**Under the project crediting (only) approach, consultations take place mainly within REDD+ projects, to discuss issues such as the requirements related to safeguards and benefit sharing.** The government may also wish to promote consistency across REDD+ projects, for example by imposing certain measurement, recording and verification (MRV) rules that also align with the national methods for estimating GHGs. The government should consult with project or program developers about the impact of any new MRV rules, or the feasibility of implementing safeguards, benefit-sharing arrangements, or other requirements.

### Centralized and Decentralized Nested Approaches

**In both the centralized and decentralized nested approaches, a fair and inclusive consultation process is of the essence.** Consultation regarding nested models should take place both at the national level and directly with REDD+ projects and their stakeholders. They should begin with discussion of the overall objectives and design of the nested system. They should also involve the ultimate beneficiaries—communities, small farmers, private owners—and should clarify the implications of the nested system for the programs and projects in which they participate. Nesting consultations serve not only to guarantee the establishment of an approach that respects all rights and justified interests, but also to educate all stakeholders about the purposes, objectives, and procedures of REDD+ and nesting.

**Consultations should include technical discussions on FREL data and its use.** Data used by REDD+ projects to make ER claims should be agreed upon. These early consultations should be led by the technical agencies and institutions in charge of REDD+ policies, and they should share their results

directly with project developers and investors. At this early stage of consultations, the purpose should be to obtain an agreement on existing data, as well as to identify gaps and understand the various nesting options and their implications for REDD+ projects or programs.

**Once the discussions on technical data are complete, consultations may begin on any necessary “allocation” system.** In the case of the centralized nested approach, this will be focused on the approach to ER allocation, whereas for a decentralized nested system the focus may be on the allocation of FRELs. For nested projects, it is important to understand the assumptions and criteria guiding the allocation methods, since they determine how benefits will flow to projects. Discussions may also include the risks of underperformance (as discussed in Section 8.2).

Particular attention should be paid to finding a robust compromise on how to nest early-action projects, including by allowing for a transition period and for grandparenting existing transactions. The technical design of the allocation system should be led by technical experts and public officials. However, it should also involve the decision makers who will have to make the final decisions on the national nesting strategy, based on a full understanding of the implications of the various options. The participation of stakeholders in the development of allocation methods at an early stage will promote confidence in the system.

### **Project Crediting (Only), No Jurisdictional Program**

**Under the project crediting (only) approach, consultations take place mainly within REDD+ projects, to discuss issues such as the requirements related to safeguards and benefit sharing.** The government may also wish to promote consistency across REDD+ projects, for example to impose certain MRV rules that also align with the national methods for estimating GHGs. The government should consult with project or program developers about the impact of any new MRV rules, or the feasibility of implementing safeguards, benefit-sharing arrangements, or other requirements. Similarly, REDD+ projects should maintain a dialogue with government officials in order to be informed about, as well as to inform, the national requirements. The establishment of national procedures for consulting with project developers and other stakeholders concerning amendments to legislation relative to MRV, benefit

sharing, and safeguards provides additional certainty to REDD+ projects.

## **10. INSTITUTIONAL REQUIREMENTS FOR NESTING**

**In order for nesting to be implemented effectively, it is essential to assign clear responsibilities among ministries and public agencies for the operations related to the nesting process.** Successful implementation of REDD+ requires policy changes and governance reforms, in forestry as well as in other sectors—for example, to disburse REDD+ payments. However, weak forest governance in most of the REDD+ countries constitutes one of the main challenges for REDD+ implementation, carbon effectiveness, cost efficiency, and equity.<sup>77</sup> What makes things even more complex is that REDD+ is inherently a multilevel endeavor; there is thus a need for policy coherence and coordination across the various levels of governance, as well as the relevant sectors in order to make it work. Nesting adds complexity to policymaking by requiring additional considerations regarding the integration of the various levels of MRV and carbon accounting, the grandparenting of early projects, and/or the management of risks.

**Nested REDD+ policies should therefore be supported by enduring institutional arrangements.**

### **Institutional Assessment and the Allocation of Responsibilities**

**Institutions define who has the power to make decisions and who will have access to REDD+ benefits.** These benefits may flow, for example, from international sources to national budgets, and from there to various stakeholders. Thus, nested approaches require procedures that allow for the flow of funds, the collection and analysis of information, and a way to link the national system to international reporting obligations. In all nested models, institutions are needed to manage the technical, financial, administrative, and supervisory aspects of REDD+ finance. The architecture that forms the nested system can build on existing institutions or create new ones.

Institutional coordination for the implementation of nesting frameworks implies (i) an assessment of institutional needs; (ii) an assignment of regulatory and oversight responsibilities; (iii) the creation of new

77 Korhonen-Kurki, K., Brockhaus, M., Bushley, B., Babon, A., Gebara, M. F., Kengoum, F., et al. (2016). Coordination and Cross-Sectoral Integration in REDD+: Experiences from Seven Countries. *Climate and Development* 8 (5): 458–71.

institutional arrangements where needed; and (iv) the staffing and resourcing of institutions.

### **Institutional Requirements: MRV and Accounting**

**Nested MRV should be embedded into national forest monitoring, which includes data collection for REDD+, as well as other domestic needs and international reporting commitments, such as UNFCCC or the Food and Agricultural Organization of the United Nations (FAO) Forest Resource Assessment.** Additional institutional arrangements may be needed in order to manage the MRV and carbon accounting requirements of a nested system. A government may need to estimate emissions, establish baselines, and monitor REDD+ results—in some nested models, at multiple scales.

**There are some specific elements in the centralized nested, decentralized nested, and project-crediting (only) approaches that must also be considered in making institutional arrangements.** For example, under both the centralized and decentralized nested models, allocation systems—whether emission reduction (ER) or forest reference emissions levels (FREL)—must be designed and implemented. Data and information will be generated at multiple scales, from the project level to the national level. To integrate, manage, and ensure the quality of this data and information, the government may need to have a quality data management system. It may also seize the opportunity to improve information in an integrated way, which would benefit both project-scale and national-scale MRV systems. Governments should consider the institutional arrangements and responsibilities that are needed to make the nested system operational. When assigning nesting responsibilities, the government should take into consideration which of their national institutions have the capacities needed to implement the tasks, and then estimate the technical capacity gaps that will need to be covered.

### **Institutional Requirements: Benefit Sharing**

**Many forest countries suffer from limited administrative/technical capacity, which hinders the quick implementation of an effective, efficient, and equitable REDD+ program.** In most cases, these countries do not have specific legislative frameworks that are adapted to regulating the allocation or distribution of REDD+ benefits and finance. While many countries have already started to implement REDD+ policies, the scarcity of resources and weak

forest governance often slow the implementation of effective REDD+ frameworks. If countries opt for nesting in this context, they may permit projects to proceed while the national frameworks are being finalized so that early GHG gains can be achieved. In this situation, it may be advisable to define minimum benefit-sharing criteria for projects, and enact a simplified interim approval process that ensures that projects can transition into a fully nested system once the national systems are established.

**Under a jurisdictional ER program (only), with benefit sharing and centralized nested approaches, governments need to establish or appoint institutions to allocate and disburse both monetary and nonmonetary carbon benefits to projects.** In the case of a centralized nested approach, the allocation of such benefits is contingent on projects having successfully reduced their GHG emissions. Some countries may have experience with payment-for-ecosystem services (PES) and/or contractual models for distributing and assigning benefits that might be useful in the context of nesting. Other countries may have funds that are experienced in dispersing cash benefits for specific purposes (for example, in extractive industries) that can be used to support nested REDD+. Payments can either follow a budget or a trust fund approach. Under a budget approach, payments to projects should be structured through national budgets while avoiding extra-budgetary funds or earmarking. A trust fund approach, in contrast, ring-fences funds and may be useful where donors and recipients want to make sure that benefits for projects are safeguarded. (See Section 7.2 on risk management.)

**Governments should execute contracts for early-action projects that define the allocation of benefits and their conditions.** Individually negotiated agreements may allow the inclusion of early REDD+ projects in the first phase of nesting. Agreements between national authorities and projects can be a solid foundation that provides legal certainty to project developers regarding the conditions for accessing payments under a nesting system.

**Under a decentralized nested or project-crediting (only) model, projects are not included in the benefit-sharing arrangements of the government.** However, governments may require projects to meet regulatory demands: for example, reporting requirements on MRV-related data and information; requirements on disbursing REDD+ benefits to guarantee that local and Indigenous communities have access to them; or

specific requirements related to the implementation and reporting of data on the distribution of benefits to be incorporated in the safeguard information system. Such regulation requires additional government capacity, and a dedicated institutional structure in order to enforce such rules.

### **Institutional Requirements: Safeguards**

**Institutions play a role in ensuring the fair and effective design and implementation of the REDD+ safeguard approach, with respect to national safeguard policies and procedures, as well as the safeguard information system (SIS).** Countries that have existing policies and regulations and REDD+ safeguards, including the specifications necessary for the nesting of projects and programs, should build on their existing frameworks. This includes regulations for the protection and consideration of ecosystem functions, forests, and biodiversity, as well as those that provide social protection, participation, and empowerment to the people. REDD+ safeguards also require systems for collecting and reporting the information that the country will need to report under the SIS. However, the country's systems and institutions will need to be carefully assessed in order to determine how well they meet the requirements of the chosen nesting approach.

**Under the centralized model, nesting does not demand additional safeguard requirements beyond those established in the context of national REDD+ implementation.** This includes any procedures adopted to meet the requirements for particular donors and funding streams. Donors may also require the establishment of new institutional requirements, such as a feedback and grievance redress mechanism (FGRM). Under the project-crediting-only approach, such adjustments are not necessary, and the safeguard requirements for projects follow the existing national safeguard policies and procedures, or the requirements of the carbon standard certifications they seek.

**Both the centralized and decentralized nested models require the involvement of actors at multiple levels who will develop and implement the nested projects.** The national safeguards are government policies that apply to all REDD+ national activities. In the context of such safeguards, a government might wish to provide details on how nested projects and programs can fulfill national safeguard policies. It may also clarify which authorities are in charge of enforcing such rules. Nested projects should also be reported under the SIS.

Authorities can create an information platform and can engage in outreach activities to ensure that projects are aware of safeguards requirements. It can also help projects provide relevant information to the SIS by developing templates to facilitate effective use of the project information, setting up reporting procedures, and establishing quality control mechanisms.

### **Institutional Requirements: Registries**

**Nested systems require a data management system, and in some cases an additional transaction registry (see Section 9).** REDD+ data management may be linked to GHG recording and tracking systems that are set up for other sectors. But registries in existing GHG trading and transaction systems follow different institutional models. While some regulators have assigned the registry to a government agency—generally the agency that is in charge of environmental issues—others have mandated a range of independent and reliable third parties.

**Countries can also decide to outsource registry functions.** The World Bank is offering such services to REDD+ countries through its transaction registry platform. During a transitional period, projects could also use the accredited registries of voluntary standards, and issue credits under those standards. Then, once a national (or subnational) trading registry is in place, the accredited registries under the voluntary standard could either be linked to or integrated into the national registry.

## **11. REGULATIONS AND APPROVALS**

### **11.1 General Considerations**

**Regulations and approvals facilitate the implementation of any REDD+ system.** Clear rules offer REDD+ actors legal certainty. Within the context of the REDD+ regulatory framework, a country's nesting strategy and benefit-sharing arrangements may need to be translated into a legal act. Nested models that officially approve projects must define the requirements that projects and project developers are required to meet in order to be formally recognized by the government. Nesting also requires adoption of the procedures by which projects will be nested in national systems. Once there is more clarity under Article 6 of the Paris Agreement, procedures will also have to cover the reporting necessary to undertake corresponding adjustments, to the extent they apply.

## REDD+ Regulation

**Nested REDD+ is inherently a multilevel endeavor; thus, there is a need for policy coherence and coordination across the various levels of governance and agencies in order for it to work.** Nesting brings another level into an already complex international, national, and subnational sphere of decision making. A country may need legislative changes in order to provide the necessary legal endorsement and capacity to administer REDD+-related activities and funds. Even in cases where the government does not decide to authorize carbon projects as part of the country's REDD+ strategy, it will have to establish the legal basis for implementation of the benefit-sharing and registry arrangements, and consultation requirements.

### Project and Program Approvals

**A regulation that officially approves projects and programs could establish the purpose for nesting.** Such a regulation can provide clarity for potential project developers on the objectives that the government is pursuing in recognizing projects as part of its REDD+ strategy—for example, facilitating nonstate engagement in REDD+, empowering communities, mobilizing investment for the forest sector, supporting the achievement of the country's nationally determined contribution (NDC), and so on—and define how projects can apply for inclusion in the program. Such a regulation should include the types of projects and actors that can be authorized to nest projects or programs; the conditions for doing so, including the technical specifications concerning baselines; and the criteria a project must comply with in order to remain in the program; for example, measurement, reporting, and verification (MRV) and safeguard requirements.

**Approval procedures link projects, MRV, and benefit-sharing arrangements.** Such procedures can be used as a tool for translating the benefit-sharing arrangements into the regulatory context of the country. Depending on the nesting approach, this may include the allocation of credits or funding to projects, or the authorization to commercialize project ERs, possibly up to a defined cap. They may also implement the risk management approaches of the government (see Section 7.2); define the consequences of jurisdictional underperformance for REDD+ projects; and instruct projects on the use of an approved registry. They also include procedures regarding the authority in charge, deadlines, appeals, and so on. (See Box 10).

## Box 10: Summary of Approval Requirements

Government tasks concerning the eligibility of projects and programs, as well as the continued compliance of nested activities include:

- Defining *ex ante* criteria (including definitions and protocols) that projects and programs must meet in order to qualify for nesting;
- Defining ongoing MRV and safeguards requirements for projects and programs;
- Allocation of baselines;
- Adopting and disseminating the approved eligibility and compliance rules;
- Ensuring a swift approval process and continued enforcement of rules;
- Defining the rules for transitioning early-action projects into a nested system;
- Coordinating with various agencies to ensure full complementarity and consistency of the rules with other environmental and social regulations.

**By June 2021, few countries had presented project approval procedures for nesting (see Box 11).**

Countries that do not yet have project approval procedures in place but are preparing its drafting can draw on experiences such as the clean development mechanism (CDM) approval procedures. While REDD+ requires material provisions that differ from CDM, particularly regarding MRV and benefit allocation, the basic procedures of project approval are similar.

## Box 11 What Types of Approval Procedures Are Countries Developing?

One of the most comprehensive legal frameworks for nesting is in Colombia; it has been used as an example of transparency and recognition for REDD+ projects.<sup>78</sup> The Colombian regulation applies to all individuals or legal entities, public or private, that intend to register their GHG mitigation initiative in order to participate in results-based finance (RBF) or similar compensations, as well as those who intend to register in order to demonstrate mitigation results within the framework of compliance. The regulation applies to all types of ER activities, but contains specific and detailed provisions on REDD+ programs and projects.<sup>79</sup> It offers very precise guidelines on the nesting of REDD+ programs; REDD+ projects; the overlapping of REDD+ programs and projects; and the

<sup>78</sup> Resolution NO. 1447 August 1st, 2018 on National mitigation action monitoring, reporting and verification system mentioned in article 175 of Act 1753 of 2015.

<sup>79</sup> Art. 28. and ss. Ibid.

procedures for excluding REDD+ projects from REDD+ programs, as well as provisions that are applicable to the registration of ongoing REDD+ projects. For this last case, the regulation includes grandparenting provisions that are applicable to existing REDD+ projects, by which the state determines the GHG mitigation potential for the period from January 2016 to December 2019.<sup>80</sup>

Countries like the Democratic Republic of Congo (DRC) and Mozambique have also adopted REDD+ legislation that includes partial procedures on the nesting of programs and projects, albeit with less detail than Colombia's.<sup>81</sup> Mozambique's legislation sets out in considerable detail the requirements that must be observed by holders of state-issued licenses to carry out REDD+ projects in the country, and the validity of those licenses. Rules also establish that the boundaries of REDD+ projects have to align with the boundaries of municipalities.<sup>82</sup> In the Democratic Republic of Congo (DRC) REDD+ regulation procedures, the country has specified very general guidelines for the approval of REDD+ and projects.<sup>83</sup>

## NDCs and Corresponding Adjustments

**For most developing countries with significant forests, REDD+ is part of their strategy for meeting their NDCs.** Where the transfer of ERs in the form of an International Transferable Mitigation Outcome (ITMO) under Article 6.2 or 6.4 of the Paris Agreement occurs, a corresponding adjustment (CA) is necessary. Parties account for these transfers in order to ensure the avoidance of double counting.<sup>84</sup> It is not entirely clear yet which metrics CAs will use, nor is the basis for accounting clear; that is, against which parameters they will be accounted. Another open question is whether CAs should occur at the end of the parties' implementation periods, or continuously throughout the duration of the project. In general, at the time of writing this report, CAs remain poorly understood.

**However, governments will have to keep in mind that a new reporting framework may need to be created for the purposes of consolidating the various streams of information and reporting to UNFCCC, including for CAs.** Some nested projects may also demand or require CAs outside of Article 6 transactions, for example in the context of CORSIA. Under some circumstances, countries and corporations may agree

to CAs in cases where the government, corporate investors, or standards require them.

**Corresponding adjustments may eventually become relevant to all nested REDD+ models.** If the government enters into an Article 6.2 Paris Agreement transaction with a partner country, CAs will need to be made to reflect ERs authorized for use toward another party's NDC. In this case, REDD+ projects can form part of such a collaborative approach, and can demand CAs. In the case of the decentralized nested or project-crediting (only) approach, CAs might be necessary under certain circumstances, but this is still under discussion (see Section 3.4 for more detail.) In such cases the country may want to promote alignment in the ER transactions under Article 6 and NDC accounting, and record their transactions in the data management system or transaction registry. This will require significant capacities, resources, and procedures; however, few of the requirements will be specific to nested REDD+.

## 11.2 Application to Nesting Approaches

### Jurisdictional ER Program Only

**Under a jurisdictional-only crediting approach, in which the government centralizes the design, implementation, and monetization of REDD+, the government has to implement the benefit-sharing arrangements through one, or several, regulatory acts.** The government is not required to adopt procedures for projects. However, it has to establish the legal basis for the arrangements, that is how carbon finance will be distributed among national institutions and national actors. Within that regulation it should also establish timelines, the areas to be financed, and the eventual conditions for access to financing as part of the benefit-sharing arrangements.

### Centralized or Decentralized Nesting Approaches

**REDD+ regulation should define the conditions, rights, and obligations of nested projects and programs.** Approval procedures need to contain at a minimum (i) the actors and projects authorized to nest projects or programs; (ii) the conditions for doing so, including any technical specifications concerning baselines and other MRV aspects; safeguards compliance; benefit sharing by projects; and any definition of liabilities that could be incurred by the

<sup>80</sup> Art. 40 and 41. Ibid.

<sup>81</sup> Decreto n.º 23/2018 de 3 de Maio: Regulamento para Programas e Projectos Inerentes à Redução de Emissões por Desmatamento e Degradação Florestal de Carbono (REDD+).

<sup>82</sup> Art. 19 of Decreto n.º 23/2018 de 3 de Maio: Regulamento para Programas e Projectos Inerentes à Redução de Emissões por Desmatamento e Degradação Florestal de Carbono (REDD+) refers to the prohibition of nesting projects within existing programs in certain cases but it is not clear in its scope and does not offer neat criteria.

<sup>83</sup> 9 mai 2018. – Arrêté Ministériel n.º 047/CAB/MIN/EDD/AAN/MML/05/2018 fixant la procédure d'homologation des investissements REDD+ en République Démocratique du Congo.

<sup>84</sup> paragraph 36, Decision 1/CP.21

government or the REDD+ projects and programs; (iii) in the case of centralized nesting, the implications of underperformance; (iv) the conditions applicable to existing REDD+ initiatives and the eventual transitional period; (v) the conditions for the opening of private accounts in the national registry, if such a registry exists (or the authorization to use external registries); (vi) rules regarding the involvement of carbon-rights holders (communities and Indigenous peoples); and (vii) the procedures for approvals (the authority in charge, deadlines, appeals or contesting of national nesting decisions, etc.).

### **Project Crediting (Only), No Jurisdictional Program**

**Although project crediting (only) recognizes that REDD+ projects can generate carbon credits**

**unilaterally and can monetize them, the government may adopt program rules intended to regulate such projects.** Such rules could align project ER claims with the national MRV system and national reporting requirements. In such cases, the government should also establish procedures indicating the obligations projects have with respect to MRV. A country may also pass regulations for safeguard application or benefit-sharing rules to ensure that affected communities are provided with a fair share of proceeds from carbon sales. Along with this, the country should approve the procedures for projects to access the national transaction registry if it opts for the creation of one; and the opening of private accounts or, alternately, reporting requirements into a data management system if applicable.



## 12. REGISTRIES

### 12.1 General Considerations

Countries that engage in nested REDD+ may need to develop GHG accounting and tracking systems to ensure consistency between national, jurisdictional, and project-level processes and results. These systems would consist, at a minimum, of data management systems that systematically record and monitor information to ensure transparency and consistency, and in some instances to avoid the double counting or double sale of ERs.

**If countries seek to engage in market-based transactions (including REDD+ or other forest carbon units), they will need a registry to allow for the unique identification and tracking of carbon units.** Such registries are important in order to track transactions between different accounts within one registry, as well as between different national or international registries. The government will also have to establish protocols to ensure the “conversion” of carbon credits into fungible units, or, alternatively, to allow for units to be traded within the same system.

**In some cases, a government will not need to develop a transaction registry.** Governments can engage in results-based finance (RBF) without generating transferable carbon credits. In addition, voluntary carbon credits can be tracked in third-party registries; for example, Verra operates a registry for verified carbon units generated under its Verified Carbon Standard (VCS) program. In such cases, a national emissions trading registry is not needed; **a simple data management system is sufficient to fulfill the requirements of a nested system that is comprised of national nonmarket payment for results, combined with voluntary carbon crediting.**

Box 12 summarizes the main questions policymakers should consider when making decisions about the development of a registry or data management system.

### Box 12 Considerations When Deciding on a Registry System

A country that is contemplating a nested REDD+ approach needs to consider the following questions regarding the accounting and tracking of carbon credits:

- Does the country need a full transaction registry, or would a data management system, potentially with a link to existing voluntary carbon market registries or other international carbon registries (like the carbon registry under the FCPF Carbon Fund) be sufficient?
- Does the country already have a GHG registry for nonforest sectors? If so, is expanding this registry to include REDD+ units a preferred option?
- Does the country foresee including the accounts of public or private nonstate actors (subnational, private, or not-for-profit entities) in a national trading system?
- Does the country have the institutional capabilities for operating a transaction registry, including the necessary security provisions and protocols? If not, are there operational third-party systems that could provide registry services?
- Does the country foresee any type of internal carbon market in which carbon units (forestry or others) will be eligible as offsets?
- Which government institution is best suited to maintaining and operating a data management system, or transaction registry?
- Which legal provisions will be necessary in order to establish a data management system or transaction registry?
- What risks need to be considered and managed?
- Will there be enough ER transactions in the country to justify the costs of setting up and operating a transaction registry?

## Data Management Systems and Transaction Registries

**The complexity of data management, accounting, and tracking systems depends on the number of accounting levels there are in the national implementation of REDD+, and which of these levels are linked to carbon markets.**<sup>85</sup> Carbon accounting and incentive allocation frameworks are a central component of REDD+ mitigation programs, and in structuring these frameworks decisions need to be made about how to reach the REDD+ objectives in a timely, economically efficient, and socially and environmentally sustainable manner. Establishing accounting frameworks at the project and program levels may form part of the public system of benefit sharing, or it can help to facilitate direct private sector investments into voluntary carbon market projects.

**Nested REDD+ requires the consolidation of data from projects and programs at both the subnational and national levels, and checking their compliance with nesting rules.** The government will also have to consolidate MRV information, and apply fair and transparent program rules that handle the overlapping programs or projects that are responsible for maintaining the environmental integrity of the ERs claimed. Such approaches could deduct the ERs that are earned by lower-level programs from a national total; cap the ERs that lower-level programs can claim; or exclude areas covered by subnational programs or projects from the national accounting.

**While the participation in public results-based finance (RBF) programs will not require the establishment of full registry capacities, the nesting of projects adds a layer of complexity to carbon tracking and accounting that may require additional data management.** A data management system can fulfill several program and project-level tracking functions, such as collecting basic information about project-level activities or subnational programs, and recording applicable safeguards and technical requirements, land-use rights, distribution of benefits, or other information. It may evolve over time as REDD+ continues to develop and be implemented. Tracking systems can be created at the subnational level instead of, or in addition to the national level.

**Registries that help manage Article 6, or CORSIA units, would have to link to NDC accounting in order**

**to make corresponding adjustments.** Under the Paris Agreement, the use of international transfers toward NDCs is voluntary, and must be “authorized by participating Parties.” The approval of Article 6 rules is expected to provide more clarity on carbon market transactions.

**Registries are not specific to REDD+, and many countries are in the process of establishing transaction registries for other sectors.** Where such registries already exist, or are being developed, it is not necessary to establish a separate REDD+ registry. Rather, the existing registry can simply be expanded to include REDD+ units. This ensures the efficient use of institutional capacities, promotes the harmonized use of security protocols, and, most importantly, facilitates the consistent accounting and tracking of carbon units. This is particularly important in cases where a country already has a carbon trading system that covers the forest sector (see Box 13 below).

**The registry will need to manage the risks of permanence, project or program leakage, and/or national underperformance.** Such risks can be managed, for example, with buffer accounts through which a portion of the ERs are held to cover the risk of reversal (as is done in the FCPF Carbon Fund and the Verified Carbon Standard (VCS) of the Jurisdictional and Nested REDD+ (JNR). The national registry can adopt procedures that enable the application of buffer accounts. It would have to establish and manage such accounts at the entity or project level, or pool them across all registered projects and programs: a pooled buffer provides additional assurance that risks at the project or program level can be managed.

**Managing registry systems requires significant capabilities.** Countries may consider approaching entities such as the World Bank, or private operators that offer registry solutions. These solutions can be tailored to a country’s specific registry needs, and can help ensure compliance with the necessary security protocols. For example, a country might not need a fully elaborated transaction registry, but may want to be able to transfer carbon credits to market buyers in a safe environment. In this case outsourced solutions may be adequate, and can help the government avoid the effort and expense of establishing its own national registry. The outsourcing of registry functions can also be considered as a temporary solution until the country has set up its own national registry.

<sup>85</sup> For a general overview of registry options, see “Partnership for Market Readiness: Forest Carbon Partnership Facility,” 2016. *Emissions Trading Registries: Guidance on Regulation, Development and Administration*. Washington DC: World Bank. available at <http://hdl.handle.net/10986/25142>

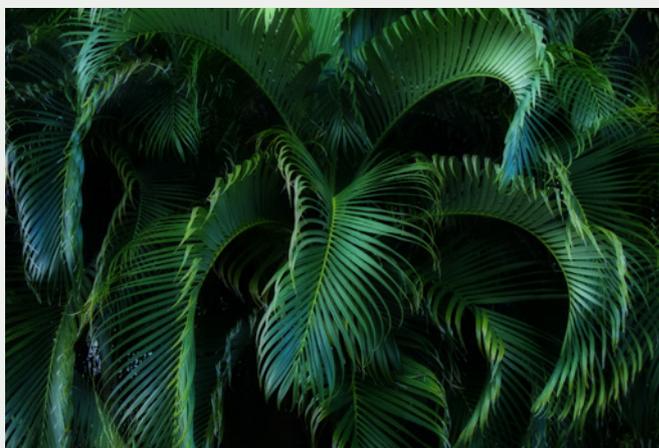
## Box 13: What Types of Registries are Countries Developing?

The type of registry and/or database system that a country needs depends on the REDD+ implementation approach selected by the country. Several examples are provided below:

- **New Zealand issues carbon units for avoided deforestation, to be traded under the New Zealand Emissions Trading System (NZ ETS). It operates a full transaction registry that is linked to the Kyoto Protocol registry under UNFCCC via the International Transaction Log.**<sup>86</sup>
- **Colombia allows the use of forest offsets under its carbon tax program. It launched its National Register of GHG Emissions Reductions (Registro Nacional de Reducción de Emisiones de Gases Efecto Invernadero, or RENARE) in September 2020.**<sup>87</sup> This register consolidates carbon project information and accounts for ERs from registered projects all in one place. Operated through a web-based platform, RENARE defines the national MRV system that is applicable to all mitigation activities in the country.<sup>88</sup> Colombia requires REDD+ projects to have a mechanism for managing the risk of the nonpermanence of ERs; it does not include a pooled buffer in its system.
- **Mozambique's REDD+ regulation states that it intends to develop a REDD+ transaction registry or, if the national transaction registry is not in operation at the time of the relevant transaction, the country could approve an alternate ER transaction registry approved by the government. The country's transaction registry has not yet been operationalized. The Mozambique regulation stipulates the creation of single accounts per project and program, and requires the establishment of single-buffer accounts (there is no intention of having a pooled buffer).**<sup>89</sup>

- **Guatemala is developing a regulation, in accordance with their Climate Change Law Framework**<sup>90</sup> and their National REDD+ Registry resolution,<sup>91</sup> that focuses on the development of a national database management system; it does not intend to create a transaction registry.
- **Peru intends to create both a database system and a transaction registry (the National Mitigation Measures Registry), which will be linked to the Registry of Retribution Mechanisms for Ecosystem Services with respect to carbon sequestration and storage. Their registry will recognize ERs from international carbon standards, and their conversion to national carbon credits, for the purpose of international transfers or NDC compliance, and will be implemented by IHS Markit.**<sup>92</sup>

The technical, operational, and financial requirements for operating a transaction registry have led most countries participating in the FCPF Carbon Fund to choose not to develop an internal transaction registry, and to use instead, at least in the first phase, the transaction registry that is being designed by the World Bank. This registry could become the standard registry to be used in the long term; it is open to both countries and other entities, that is, to buyers and sellers, outside the FCPF Carbon Fund.<sup>93</sup>



<sup>86</sup> <https://www.epa.gov/tg/industry-areas/emissions-trading-scheme/the-emissions-trading-register/>

<sup>87</sup> <https://www.minambiente.gov.co/index.php/noticias-minambiente/4497-renare-plataforma-para-registrar-reducciones-gases-efecto-invernadero>

<sup>88</sup> <http://renare.siac.gov.co/GPY-web/#/ingresar>

<sup>89</sup> Art 27 and ss. Decree n.° 23/2018, Regulation for the Implementation of Projects Inherent to the Reduction of Emissions from Deforestation and Forest Degradation, Conservation and Increase of Carbon Stocks.

<sup>90</sup> Additional Final Rule, 4, Law N.30754 -2018, Climate Change Law Framework.

<sup>91</sup> Ministerial Resolution No. 197-2016. Ministry of Environment.

<sup>92</sup> ER Program: Reducing Emissions from San Martin and Ucayali in the Peruvian Amazon, Peru, June 2019.

<sup>93</sup> The FCPF Carbon Fund is currently preparing the User Guidelines, Business Plan, and Operational Guidelines. These documents have not been analyzed in the preparation of the present document.

## 12.2 Jurisdictional ER Program (Only), with Benefit Sharing

**The jurisdictional-only crediting approach requires only a simple accounting system.** In this model, the government accounts for ERs at the national level, and may decide to issue carbon credits and transfer them to international accounts. The state is the sole owner of ERs; the primary recipient of results-based finance (RBF) and carbon finance; and it retains the right to generate and market ERs. For countries that wish to participate in markets, Annex I registries, which exclude the clean development mechanism (CDM)/ Joint Implementation (JI) functionality, may serve as a model.

**If a country only anticipates participating in nonmarket RBF, it may only need a data management system.** Because there are few technical and financial requirements for operating such an accounting system, in this case the country would not need a transaction registry. A simple data management system would help to keep track of ERs, and would be likely to generally satisfy donor demands for RBF. Such a system could also incorporate details about the programs and activities implemented at the national, subnational, or site-specific levels, as well as information concerning the types of activities implemented, the areas they cover, the number of beneficiaries, and the types of benefits they receive, as well as the status of activities under implementation. Such a system could complement the safeguard information system (SIS) as a transparency information tool.

### Centralized Nested Approach

**Under the centralized nested approach, at a minimum, a data management system with the functionality for tracking ER performance at the project level is needed.** The registry will not need to feature accounts for private sector project proponents if they implement REDD+ but they are not issued forest carbon credits. However, information about the performance achieved by specific entities—based on the criteria of the ER allocation system—should be recorded. The data in the data management system would provide the basis for the distribution of benefits to approved projects.

### Decentralized Nested Approach

**The decentralized nested approach requires a transaction registry, although a country may use**

**a third-party registry, combined with a national data management system, to fulfill this obligation.** Since this approach allows the direct marketing of ERs by private entities, the registry requirements are more stringent. The government needs to keep track of government and project GHG performance (at a minimum with a data management system), while private entities can hold their own accounts for tracking and commercializing ERs. If nested projects sell ERs into carbon markets, the transaction registry needs to record such transactions—but this can be done by a third-party registry.

**Under a decentralized nested approach, the tracking of units may require the ability to recognize, hold, and convert various units.** Private sector accounts will need to be integrated (nested) into the national or subnational REDD+ framework. This requires significant administrative capacity and resources, and should be done only after a careful cost-benefit analysis. Augmenting the number of market participants greatly increases the cost and complexity of monitoring and verifying ER activities, and tracking the ownership and use of forest carbon credits. REDD+ countries will need to determine whether they can feasibly develop this capacity, and if so, the extent to which the benefits of private sector involvement outweigh the added transaction costs. The integration of private accounts into a national tracking system (whether a data management system or a registry) also calls for enhanced security and data protection.

**The government may also outsource some or all functionalities of the registry to other registries or registry providers.** As mentioned above, credits can be issued to the accredited registries of standards that are used by projects or jurisdictional programs. Thus, a country can start with just a data management system, which can evolve into a more sophisticated transaction registry over time. Once a national (or subnational) transaction registry is in place, the accredited voluntary standard registries could either be linked with, or integrated into, the national registry.

### Project Crediting (Only), No Jurisdictional Program

**In cases where only projects are generating tradable ERs, if private projects sell ERs under Article 6.2 or Article 6.4 of the Paris Agreement to foreign buyers, or if they are authorized to generate ERs with corresponding adjustments, at a minimum, a data management system is needed.** The government must be able to receive and process the information necessary to make corresponding adjustments and to

ensure robust NDC accounting. Under a decentralized approach, a country might also want to adopt a system for tracking information on its various REDD+ initiatives and projects, and for compiling information about project transactions.

**Private entity transactions of carbon credits also need access to a transaction registry and to its**

**associated accounts.** The government can recognize the registries of approved carbon standards, and/or can establish its own transaction registry and authorize private entities to open an account in it. This may be an option if the country already operates a transaction registry for other sectors, or if it integrates REDD+ projects in a national carbon market.

Table 12 Types of Registries Linked to Various Nesting Models

Nesting Model	Description	Country Examples	Registry Implications
Jurisdictional-crediting (only)	The government records ERs at the national level. It may issue carbon credits and transfer them to international accounts.	Ecuador, where forest carbon credits are only issued at the national level.	<ul style="list-style-type: none"> <li>• A simple, single-account system where the national government is the sole owner of forest carbon credits.</li> <li>• Few technical and financial needs for operating the account system.</li> <li>• Where forest carbon credits are transferred to international sovereign buyers, a link to the registries of buyer countries might be useful.</li> <li>• A data management system can incorporate additional information, such as benefit-sharing implementation.</li> </ul>
Centralized- nested model	The government records ERs at the national level. It also records the data necessary to operate the ER allocation to projects/programs.	DRC, Mozambique, Brazil (sharing of ERs with states)	<ul style="list-style-type: none"> <li>• Nested projects have specific accounts for recording performance (as input to ER allocation).</li> <li>• Where forest carbon credits are transferred to international sovereign buyers, a link to the registries of buyer countries might be useful.</li> <li>• Transactions from nested projects that participate in selling ER to voluntary markets can be tracked.</li> </ul>
Decentralized-nested model	National and REDD+ project ERs need to be tracked.	Cambodia, Colombia	<ul style="list-style-type: none"> <li>• A transaction registry with private accounts is needed where ERs are being transacted in markets.</li> <li>• Countries can allow REDD+ projects to be registered under third-party registries. Once a national transaction registry is in place, the registries are linked, or integrated into the national registry.</li> <li>• The functioning of a transaction registry requires technical and financial capacities. This can either be established within the country, or it can be outsourced.</li> </ul>
Project-crediting (only)	Only projects commercialize ERs, which requires tracking	New Zealand	<ul style="list-style-type: none"> <li>• A transaction registry is required for transactions of private entities; a third-party registry can be used for voluntary markets.</li> <li>• A national registry is needed in the context of a national carbon accounting standard or market.</li> <li>• The government can also operate a data management system to record information about national projects and their GHG performance.</li> </ul>

# APPENDIX A: GLOSSARY

As a complementary resource, please consider the Forest Carbon Partnership Facility (FCPF) Glossary of Terms (April 2020), which can be [accessed here](#).

**Annex I Countries:** A term used under UNFCCC; it includes the industrialized countries that were members of OECD (the Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States.

**Article 6 Transactions:** The transfer of ERs in the form of International Transferable Mitigation Outcomes (ITMOs) under Article 6.2 (collaborative approaches) or Article 6.4 (mechanism to support sustainable development) of the Paris Agreement.

**Article 6 Projects:** Projects that serve to pilot Article 6.2 of the Paris Agreement, and that require a corresponding adjustment (CA) in order to be allocated to projects from national performance. These are pilots in anticipation of meeting the requirements of Article 6. Examples include pilot projects promoted by Japan in Cambodia and Switzerland in Peru.

**Benefits:** Monetary and/or nonmonetary support received for participation in forest carbon projects, or a jurisdictional ER program.

**Benefit sharing:** Refers specifically to the arrangement by which a government institution allocates, administers, and channels benefits funded by payments for emission reductions to national actors.

**Carbon credit:** An ER that has been created according to the rules of a private or public carbon standard and is issued, tradable, and traceable, in a GHG registry.

**Carbon finance:** A subcategory of result-based finance (RBF) that involves the issuance of tradable carbon credits.

**Carbon rights:** The rights of communities and individuals to forest-related ERs. When used in the context of REDD+, carbon rights are mostly understood as the right to benefit from ERs or to participate in a REDD+ benefit-sharing system.

**Carbon unit:** Carbon credits, emissions allowances, or any other unit linked to GHG markets that is issued, tradable, and traceable in a GHG registry.

**Compliance carbon market:** A regulated market that by law holds entities accountable for their GHG emissions. The regulatory regime that covers the compliance market can be set up at the national, regional, or international levels.

**Corresponding adjustment (CA):** An accounting adjustment made to reflect the use of ITMOs toward an NDC under Article 4 of the Paris Agreement or other international system, such as ICAO's CORSIA.

**Crediting:** The accounting of ERs against a forest reference emission level (FREL), or project baseline.

**Data management system (DMS):** A system that systematically records and monitors project, program, and transaction information to ensure transparency and consistency.

**Deforestation:** The conversion of forest land to other land uses.

**Domestic compliance market:** GHG emissions trading systems established in the national context with the goal of reducing GHG emissions.

**Double counting:** Under the Paris Agreement, this refers to the accounting of a GHG emission reduction or removal toward more than one nationally determined contribution (NDC).

**Emission reduction (ER) program:** A program under which a government is seeking to claim GHG ERs at a jurisdictional scale, and access financial rewards for such a program. ER programs—for example under the FCPF Carbon Fund, ART TREES, and VCS JNR—have a set of requirements that must be met in order to be considered as a jurisdictional program.

**Environmental integrity: A carbon market-based mechanism has environmental integrity if the transfer of credits through that mechanism leads to the same, or lower, aggregated global emissions.** Integrity is ensured through accounting that avoids double-counting (that is, using the same unit twice to offset emissions), as well as through the quality of the ER baseline or reference level estimates, additionality, permanence, uncertainty, and leakage.

**Greenhouse gas (GHG) emission reductions and removals (ERs)** refers to a tonne of greenhouse gas expressed in CO<sub>2</sub>e measured against a reference level or baseline that has been avoided (emission reduction) or sequestered (removal), often defined with reference to a carbon standard. In this report, we focus on forest-related ERs in relation to avoided deforestation (AD) and REDD+.

**Forest degradation:** Reduction in the capacity of a forest to produce ecosystem services such as carbon storage as a result of anthropogenic activities.

**Forest reference emission level (FREL):** A benchmark for emissions from deforestation and forest degradation (REDD only).

**Incentives:** Government-set, market-based incentives to reduce GHG emissions and implement REDD+ activities.

**International transferred mitigation outcome (ITMO):** Emissions reductions and removals through a cooperative approach under Article 6.2 of the Paris Agreement, which involves the international transfer of mitigation outcomes authorized for use toward an NDC; or mitigation outcomes authorized by a participating party for use under an international system other than for achievement of its NDC, such as ICAO's CORSIA.

**Jurisdictional:** A governance level that covers an administrative area for which public authorities can take decisions (for example, the national or federal level, subnational states, regions, counties or departments, municipalities, and/or communities).

**Nesting:** The coordinated and harmonized implementation of REDD+ programs and activities at multiple accounting scales and governance levels within a country.

**Nationally determined contribution (NDC):** The pledge made by a party to the Paris Agreement, communicated to the UNFCCC Secretariat, to take climate action.

**REDD+** The international policy framework that provides incentives for reduced emissions from deforestation and forest degradation, and promotes the role of conservation, the sustainable management of forests, and enhancement of forest carbon stocks in developing countries (REDD+).

**Program or REDD+ program:** Policies and activities that generate forest-related ERs.

**Project or REDD+ project:** A forest carbon project-level activity that is accredited, or that is seeking accreditation under a carbon accounting standard.

**Results-based finance (RBF):** Payments for results (mostly in the form of ERs), which may or may not involve the issuance of tradable carbon credits.

**Right and title to ERs:** Rights defined on the basis of a contract (for example, the FCPF ERPA) or a law (for example, local emission-trading legislation) that assigns a transferable right to an ER.

**Safeguards:** Measures to prevent and mitigate harm to people and the environment, and to increase benefits for them in the context of REDD+ activities.

**Subnational:** A region within a country that has its own system of governance, such as a province, state, or municipality.

**Transaction registry:** An online database that issues, records, transfers, and tracks the carbon units that are exchanged within carbon finance market mechanisms.

**Voluntary carbon market:** Transactions in ERs and carbon credits that are **not** generated or acquired with the intention of surrendering them into a regulated carbon market.

# APPENDIX B: INSTRUCTIONS FOR THE DECISION SUPPORT TOOL

**This appendix shows decision makers how to use the accompanying Decision Support Tool (DST) for nesting REDD+ initiatives at various scales.**

The Decision Support Tool (DST) that accompanies this manual is intended to assist countries in identifying gaps that may exist in the implementation of their REDD model or nesting system.<sup>94</sup> Identification of these gaps may serve as the basis for a roadmap with concrete actions to take toward definition of the country's nested system.

Two categories of countries are expected to use this tool:

- **Countries with no prior experience with REDD+ nesting initiatives. The information presented in this manual can be used to identify various approaches to the nesting of REDD+ initiatives, specific to the country's context;** and to identify gaps that will need to be overcome in designing the system.
- **Countries with experience in implementing REDD+ nesting initiatives could use the manual to review their progress, with a view toward identifying gaps or strengthening design elements in order to scale up implementation.**

The DST guides users through the following steps:

**Step 1: Helps the user understand** broadly which nesting model is most desirable for a given country, and whether a centralized, decentralized, or nested model is best. This is achieved through six simple questions that help to identify the country's objectives vis-à-vis nesting.

**Step 2: Based on the** answers to the questions in Step 1, the country selects the model that it wishes to evaluate. They then evaluate their level of progress toward, or completion of a set of actions conducive to the development of all the important elements to consider for a nesting system.

The tool is based in MS Excel, and has been organized under five different tabs.

All users will have to use the tabs named "Readme" and "Questions." The answers to the Questions tab will serve to identify the nesting model that is most appropriate for a given country. To achieve this, the user needs to provide an answer to each of the six questions presented. Once all of the questions have been answered, based on the responses received, the DST will provide a recommendation on the most appropriate nesting model.

The remaining tabs, ("Jurisdictional ER program," "Centralized Nested," "Decentralized Nested," and "Project Crediting Only") describe the elements of each REDD+ implementation model, as well as which actions are needed in order to implement the relevant model. The elements cover all of the issues necessary to establish the recommended nested system (MRV, carbon rights, benefit sharing, consultations, safeguards, and institutional elements), as well as registry and regulatory issues. As users check the boxes of the tasks that have been completed, the progress made toward the various elements is automatically updated in a dashboard at the top of the tab, providing graphic information about the country's degree of development toward a desired REDD+ implementation model.

<sup>94</sup> The DST may be accessed here: <http://documents1.worldbank.org/curated/en/548791631769281867/Decision-Support-Tool.xlsx>

**Readme Tab**

The main purpose of the Readme tab is to provide information that will help the user complete the DST. This tab has a blue button labeled “Start the tool.” Clicking this button will initiate the completion of Step 1. The “Start the tool button” has been highlighted with a red circle in **Figure 21**.

Figure 21. Detail of the “Readme” Tab

Instructions

**1) This tool presents two distinct steps to assist in the construction of a nesting system:**

- A)** The first step helps the user understand what broad nesting model is desired for a given country: whether a **centralized, decentralized, or a nested model**.
- B)** The second step provides a **checklist with all the important elements** to consider for the selected system. As elements are addressed, progress in the establishment of the selected system is automatically updated in a dashboard.

**2) Disclosures:**

- A)** This tool provides the framework for the selection of broad model archetypes for the implementation of REDD+ including and excluding nesting.
- B)** Although **in practice each model design will be country-specific** (it is possible to select elements from different models), the establishment of archetypes and the different elements to be considered provides the user with the opportunity to explore the complex relation existing across different elements
- C)** It is **highly recommended to read the Nesting Manual** in parallel with this tool

**Start the tool**

**Questions Tab**

The “Questions” tab aims to guide the user in selecting the most appropriate nesting model according to various national circumstances. To do so, the DST displays in its recommendation box the most suitable of the four nesting models. The recommendation appears as a message colored in red. (Figure 22).

Figure 22 Recommendation Box, «Questions» Tab

Recommendation\*:

**Centralized-nested**

**Click on the button below to proceed to Step 2: Process overview & timeline for the selected model**

Jurisdictional ER program (only) with benefit sharing

Centralized-nested

Decentralized - nested

Project crediting (only) within no jurisdictional ER program

\*Please ensure only one response is selected for each question

To enable the DST to provide a recommendation, the user needs to answer six questions. Only one answer per question can be selected, and all six questions must be answered. To select an answer, the box situated to the right of each possible answer needs to be ticked. (Figure 23.)

Figure 23. Answer Check Boxes under “Questions” Tab

←  
 Back to Start

**Step 1: Select your model!**

Please respond to the following questions by marking **only one box**, reflecting what is **closest** to your situation:

Questions	Manual	Answer I	Select	Answer II	Select
#1: Who should benefit from REDD+ finance?	Section 1.2	The government who will implement the key actions to slow, halt and reverse deforestation	<input checked="" type="checkbox"/>	Both the government and local actors, but the government is best fit to distribute payments and other benefits to local actors	<input type="checkbox"/>

If more than one answer is ticked for the same question, the user receives an error message, as shown in Figure 24.

Figure 24. Error Message, Recommendation Box, «Questions» Tab

As can be seen above, Step 1 can be completed once the user has provided only one answer to each of the six questions. At this stage, the DST suggests the most appropriate model for the combination of circumstances reflected in the answers. By clicking the blue buttons that are highlighted in a red circle in Figure 25, the user can proceed to Step 2 under the selected nesting model. If the user needs to go back to the “Readme” tab, he or she can press the button “Back to Start” situated on the top left corner of the screen: this button is highlighted in a purple circle in Figure 25.

Figure 25. Example of DST Screen When Step 1 Is Completed.

Questions	Manual	Answer I	Select	Answer II	Select	Answer III	Select	Answer IV	Select
#1: Who should benefit from REDD+ finance?	Section 1.2	The government who will implement the key actions to slow, halt and reverse deforestation	<input type="checkbox"/>	Both the government and local actors, but the government is best fit to distribute payments and other benefits to local actors	<input type="checkbox"/>	Both the government and local actors, but local actors will respond best to an ability to access carbon finance independently from the government	<input type="checkbox"/>	Local actors that implement REDD+ projects and programs	<input type="checkbox"/>
#2: Which describes best the role your government should play with regard to REDD+?	Section 1.2	As manager of a national program, responsible for implementing REDD+ actions and with full control over funds and ERs	<input checked="" type="checkbox"/>	As manager of a national program, with full control over funds and ERs, some (or all) of which will be dispensed to incentivize local actors	<input type="checkbox"/>	As a regulator, setting a framework and/or rules for REDD+ activities, but allowing local actors to directly access carbon finance opportunities	<input type="checkbox"/>	As a regulator, setting a framework and/or rules for REDD+ activities, but allowing local actors to directly access carbon finance opportunities	<input type="checkbox"/>
#3: What carbon finance opportunities are most relevant for your country?	Section 1.2	REDD+ results-based finance (e.g. GCF or bilateral) or market-based finance at the national (or subnational) level	<input type="checkbox"/>	REDD+ results-based finance (e.g. GCF or bilateral) or market-based finance at the national (or subnational) level	<input checked="" type="checkbox"/>	REDD+ results-based finance at national level and carbon market finance at project scale (funded by the private sector)	<input type="checkbox"/>	Carbon market finance at project scale (funded by the private sector)	<input type="checkbox"/>
#4: Which reflects the country's land and forest ownership?	Section 1.2	All forest land is owned and/or controlled by the State	<input checked="" type="checkbox"/>	Forest land is owned by the State, but communities and private actors are licensed to manage forest land	<input type="checkbox"/>	Diverse forest land ownership and contested land titles make special regulation of carbon rights necessary	<input type="checkbox"/>	Diverse forest land ownership and strong property law regime	<input type="checkbox"/>
#5: What describes your view towards REDD+ voluntary carbon market projects?	Section 1.2	No intention to allow or recognize voluntary market crediting within the country	<input type="checkbox"/>	Desire to integrate such projects into a jurisdictional ER program (e.g. as part of a benefit-sharing plan)	<input checked="" type="checkbox"/>	REDD+ projects are encouraged, but also desire to regulate them to allow the co-existence of jurisdictional programs	<input type="checkbox"/>	REDD+ projects are encouraged	<input type="checkbox"/>
#6: Which situation most closely reflects the NDC of the country and Article 6 approach?	Section 3.2	REDD+ is essential to achieving the NDC. National REDD+ credits may be exchanged if the country overperforms	<input type="checkbox"/>	REDD+ is essential to achieving the country's NDC. National REDD+ credits may be exchanged if the country overperforms	<input type="checkbox"/>	REDD+ is included in the country's NDC target. The country may share ERs with other market participants; or REDD+ is not in the country's NDC	<input type="checkbox"/>	REDD+ is included in the country's NDC target. The country may share ERs with other market participants; or REDD+ is not in the country's NDC	<input type="checkbox"/>

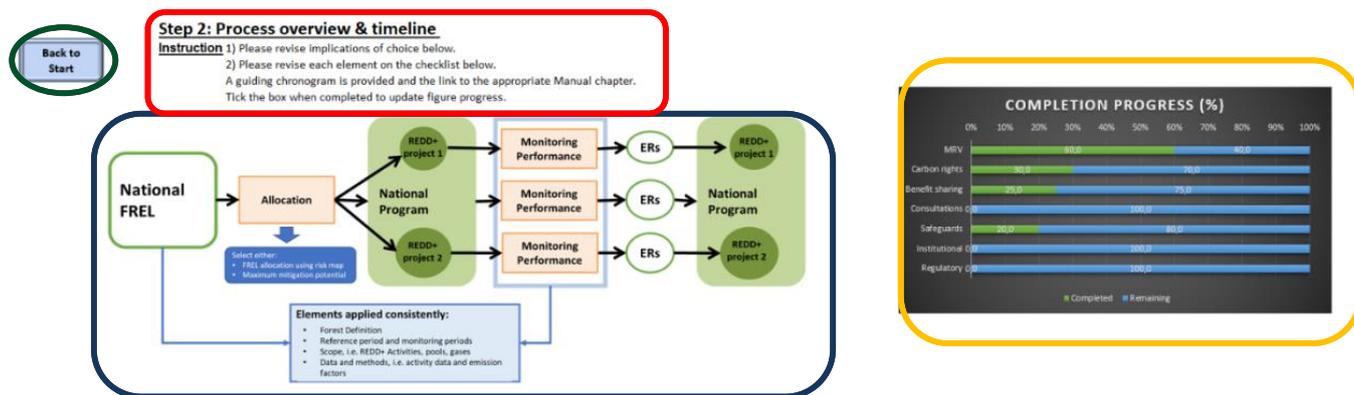
### Tabs for “Jurisdictional ER program,” “Centralized Nested,” “Decentralized Nested” and “Project Crediting Only.”

After completing Step 1, the user will complete Step 2 for each of the tabs dedicated to one of the four specific nesting models, (hereinafter referred to as the model tabs).

The REDD+ implementation model tabs present a schematic representation of the nesting model selected, as seen in the red circles in Figure 26. In this representation, the main features of the selected models are summarized. On the top right part of the screen, the bar graph presents information on the progress achieved toward implementation of the selected model, which is highlighted in a yellow circle. The progress graph

gets automatically updated as the user advances toward the completion of Step 2. The user can consult the instructions to progress toward Step 2 on the top side of the screen, which is highlighted by a green circle. The user can go back to the Readme tab by clicking on the blue button, highlighted in purple.

Figure 26. Information Dashboard of Nesting Model Tabs



To complete Step 2, the user considers whether the country has successfully concluded the tasks associated with the elements that are considered relevant for the establishment of a particular nesting system (MRV, forestry regimes, carbon rights, benefit sharing, consultations, safeguards, institutional elements, and registry and regulatory issues). As shown in Figure 27, each element is reflected in a separate section, with tasks to be completed, relevant elements and considerations, and the chapter of the nesting guidance in which the issue is discussed.

Figure 27. Components and Distribution of the Nesting Element

1	MRV	Checklist	Number	Chapter	ELEMENTS NEEDED	Tasks
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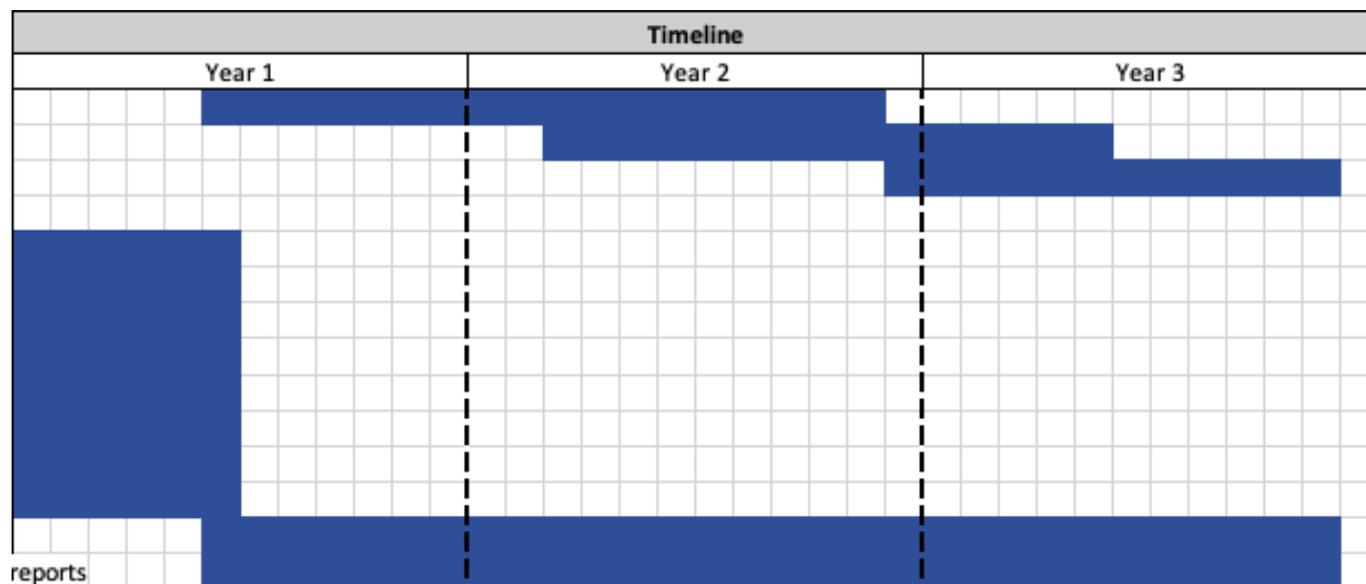
To reflect the successful completion of a task, the user can tick the boxes located under the checklist column that can be found in each of the nesting elements, as shown in the red highlighted circles in Figure 28. The progress achieved by the country toward each nesting subject can be consulted in the horizontal graph at the bottom of each nesting FREL section, highlighted in green circles in Figure 28.

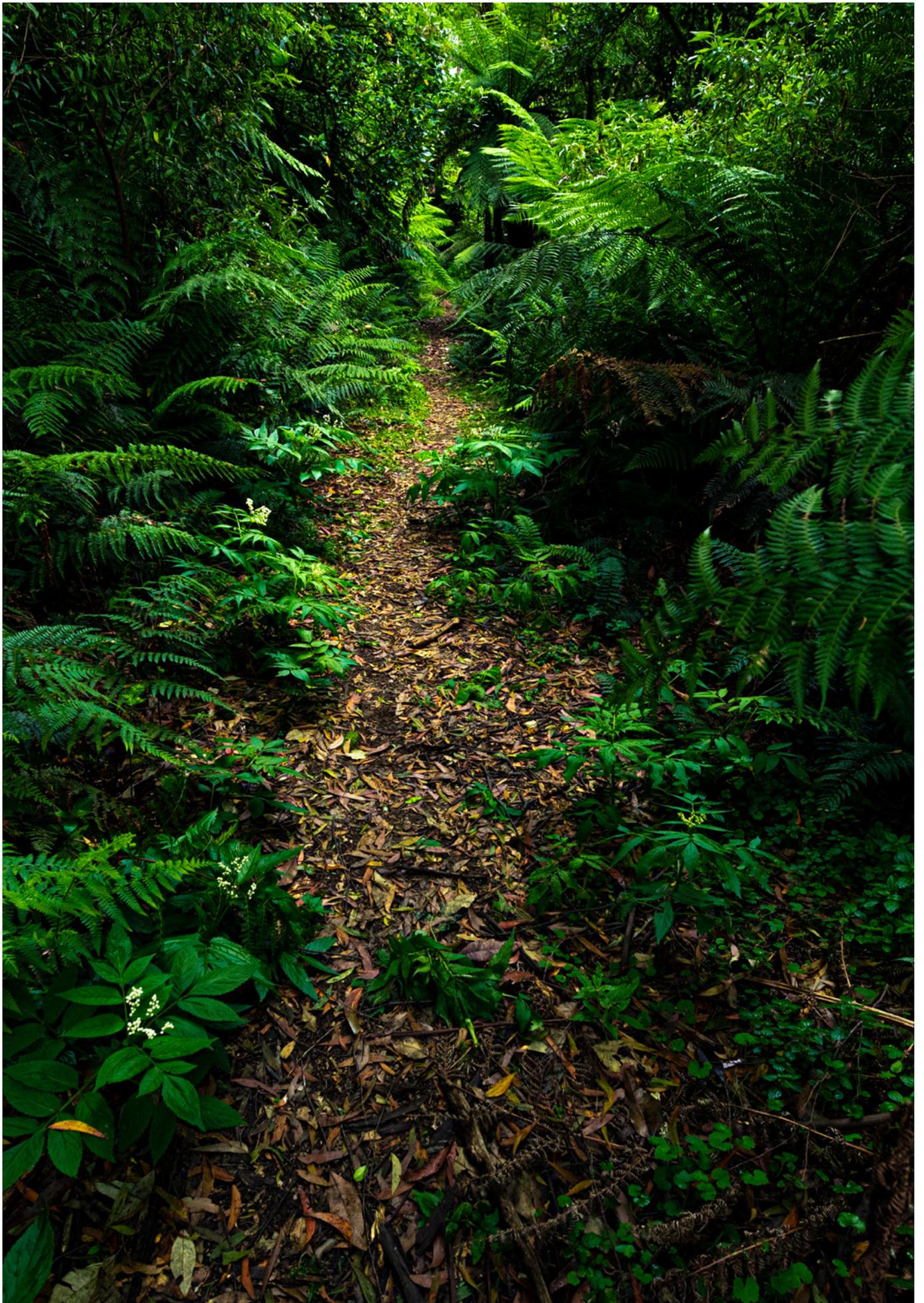
Figure 28. Location of Checkboxes and Subject Progress Bars in Nesting Model Tabs

1	MRV	Checklist	Number	Chapter	ELEMENTS NEEDED	Tasks
<input checked="" type="checkbox"/>	1	Section 5.1.3	Forest Reference Emission Level	- Is the FREL developed at the national/jurisdictional scale robust enough to allocate a different scales?		
<input checked="" type="checkbox"/>	2	Section 5.1.3	FREL Allocation System	- Has an ER allocation system from the national/jurisdictional results scale to the project level been established?		
<input type="checkbox"/>	3	Section 5.1.3	Monitoring Performance	- Has a system to monitor performance been established at the national/jurisdictional scale?		
<b>CONSIDERATIONS:</b>						
<input checked="" type="checkbox"/>	a	Section 5.2.2	Forest definition	- Is the definition of forest consistent between the FREL, the allocation method and monitoring at projects and jurisdictional scale?		
<input checked="" type="checkbox"/>	b	Section 5.2.3	Reference period	- Has a reference period established for the FREL? - Projects must use same reference period as part of FREL allocation		
<input checked="" type="checkbox"/>	c	Section 5.2.1	REDD+ Activities, Pools, Gases	- Are REDD+ activities, pools, and gases consistent between the FREL and jurisdictional monitoring system? - Recommended for FREL allocation method, particularly for RED/AD - Recommended to allow projects to engage in additional activities (and report data to national forest monitoring system)		
<input checked="" type="checkbox"/>	d	Section 5.2.2	Stratification	- Is the stratification consistent between the FREL, the FREL allocation method, and monitoring reports at different scales? - Projects could use more granular stratification but should follow guidance to consistently aggregate land use/ forest cover categories		
<input checked="" type="checkbox"/>	e	Section 5.2.3	GHG estimation methods	- Are the data, calculation methods and baseline approach (historical average, trend, etc.) consistent between the FREL, allocation - Projects may generate their own AD and/or other specific EFs (which may be integrated into the allocation method) in their monitoring		
<b>PROGRESS</b>					60.0	
2	FORESTRY REGIMES AND CARBON RIGHTS ELEMENTS NEEDED	Checklist	Number	Chapter	ELEMENTS NEEDED	Tasks
<input type="checkbox"/>	1	Section 1.2, Section 6.2	Property regime of forests and forest resources	- Have the property regime of forests and forest resources been clarified? In this nesting model both state and non-state ownership to be considered		
<input type="checkbox"/>	2	Section 6.2	Carbon rights related to land	- Have (forest) carbon rights been clarified? In this nesting model the ownership by the respective land owner must be considered		
<input type="checkbox"/>	3	Section 6.2	Carbon rights related to activity	- Have the carbon rights related to activities been clarified? Relevant where the government authorized management activities on public lands		
<b>CONSIDERATIONS:</b>						
<input checked="" type="checkbox"/>	a	Section 6.2	Forest management/ownership	- Is the public management/ownership of forest resources established by law and considers mixed forest ownership systems (state, community, private)?		
<input checked="" type="checkbox"/>	b		Carbon rights property	- Has the property of carbon rights for each of the possible forest owners been clarified? The State is entitled to carbon rights over state lands		
<input checked="" type="checkbox"/>	c	Section 6.2	Monetization of carbon rights	- Government can recognize/assign carbon rights to entities that provide ecosystem services in public land areas - Has it been clarified which forest owners have the right to monetize carbon credits rests? Private entities and communities can commercialize ERs generated on public lands		
<input checked="" type="checkbox"/>	d	Section 1.2, Section 12.2	Rights of non-state actors	- Private entities are entitled to develop carbon projects.		
<input checked="" type="checkbox"/>	e	Section 1.2, Section 12.2	Variations	- Government should approve legislation to clarify carbon rights, in particular where land disputes exist		
<b>PROGRESS</b>					30.0	

To allow the user to efficiently manage the resources considered necessary for the completion of Step 2, the DST provides a timeline that describes the usual starting points and duration of tasks associated with each subject. This timeline is informative only in a very general sense; it does not take into account the particularities and national circumstances of any of the users. A graphic description of the timeline is provided in Figure 29.

Figure 29. Example of Timeline for a Nesting Subject







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