VCS VERIFIED CARBON STANDARD
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VCS GUIDANCE

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Guidance for Jurisdictional and Nested REDD+ Program Design

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TABLE OF CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

The VCS Jurisdictional and Nested REDD+ (JNR) framework is the world's first REDD+ standard to fully account for emission reductions generated by countries' policies and measures that reduce deforestation and forest degradation, and enhance forest carbon stocks. JNR enables globally consistent accounting and crediting of national and state or provincial level REDD+ programs and nested projects in a robust and transparent manner. The JNR framework also includes requirements and guidance for monitoring and quantifying REDD+ activities across various scales (which may include combinations of national and/or subnational, and project levels), thereby incentivizing GHG emission reductions and removals while maintaining environmental integrity. As a result, governments can advance REDD+ programs with an immediately operational, integrated accounting framework, while keeping financing options open in the future.

The JNR Requirements are intended to assist governments, private entities, civil society organizations, local stakeholders and validation/verification bodies developing and assessing the performance of jurisdictional REDD+ programs and nested projects.

The JNR Requirements were developed by the VCS Jurisdictional and Nested REDD+ Initiative (JNRI), overseen by an advisory committee and technical expert groups, comprising representatives from national and subnational governments, leading experts in REDD+ and representatives from NGOs and the private sector[1].

The objective of this document is to assist in the development of jurisdictional programs and nested projects, as well as to provide further background and context to the JNR Requirements. It provides high level advice on program design and development and is accompanied by a second document Technical Guidance for Jurisdictional and Nested REDD+ Programs that provides advice on specific paragraphs of the JNR Requirements. The primary intended audience for these guidance documents is governments and their partners, rather than project developers.

A separate guidance document may be developed that will focus on guidance for nested project developers. The guidance documents may be further expanded to reflect additional guidance and lessons learned from implementation in due course. The guidance provided is not intended to be comprehensive.

[1] The JNR advisory group members and contributors to this document are available on the VCS website http://www.v-c-s.org/JNR-history.

The JNR Requirements should be read in full before developing or assessing jurisdictional baselines[2] and REDD+ programs that use the standard. This guidance document does not form part of the JNR Requirements nor does it contain VCS requirements. The interpretation of the JNR Requirements should, however, be consistent with the guidance set out in this document.

1.2 KEY REQUIREMENTS AND REFERENCES

Most of the requirements for Jurisdictional and Nested REDD+ are set out in the *JNR Requirements* document. Other rules, requirements and procedures may be found in the following documents:

- VCS Standard
- VCS Program Guide
- AFOLU Requirements
- Program Definitions
- JNR Registration and Issuance Process
- JNR Validation and Verification Process
- JNR Non-Permanence Risk Tool
- JNR Leakage Tool

The above documents are available on the VCS website (http://www.v-c-s.org) and are updated periodically. Readers should ensure they are using the most current versions. New requirements are effective immediately upon release, though a grace period is often provided to allow stakeholders developing jurisdictional programs sufficient time to transition to new requirements. It is acknowledged that a sufficiently long grace period and backward compatibility will be needed especially where jurisdictions have enacted JNR requirements through a decree or legislation that would subsequently need revision.

1.3 SEEKING CLARIFICATIONS FROM VCS

Jurisdictional proponents and project proponents of nested projects that need clarification directly from VCS may submit their questions to secretariat@v-c-s.org.

[2] VCS term “jurisdictional baseline” is equivalent to the UN term “reference emissions level” (REL).

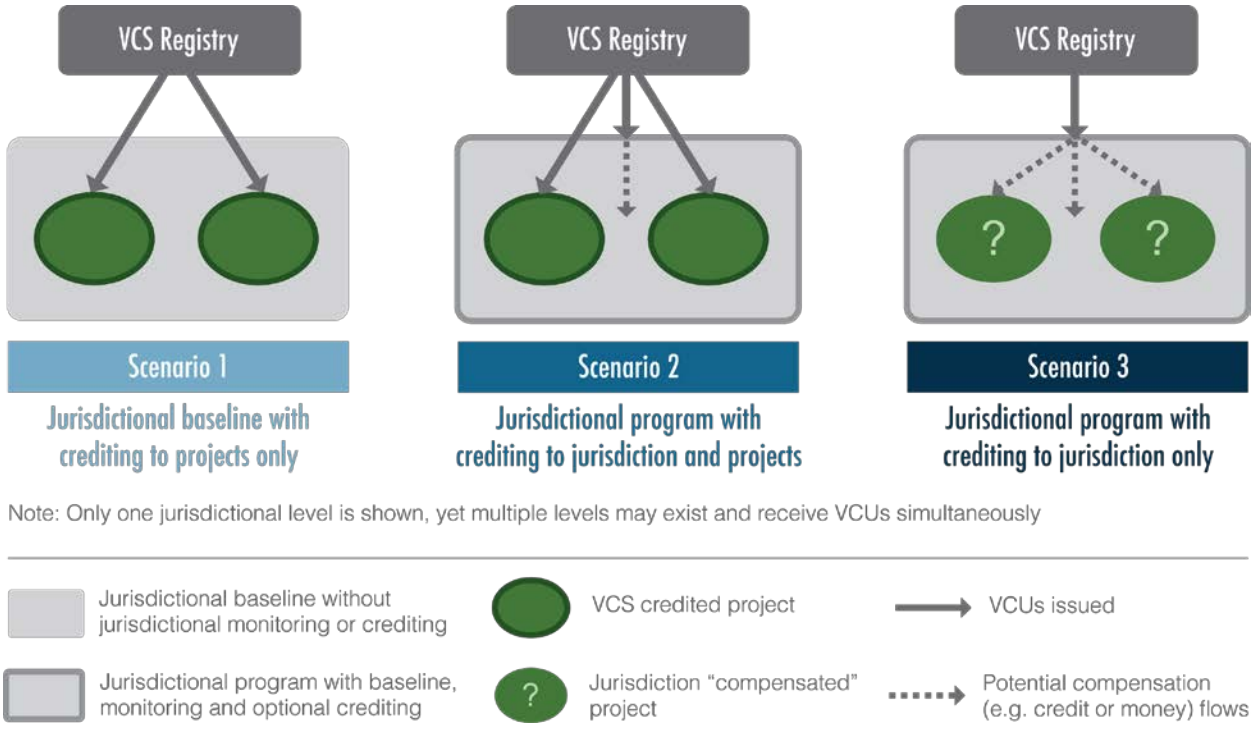
2 | OVERVIEW OF JNR PROGRAM CYCLE AND CREDITING SCENARIOS

The *JNR Requirements* ensure REDD+ interventions are consistently monitored and quantified across various scales, thereby incentivizing GHG emission reductions while maintaining environmental integrity. This gives governments a comprehensive, integrated reporting, accounting and crediting framework to help operationalize REDD+ policies and programs and build on existing REDD+ projects, while ensuring projects are properly integrated and aligned with governmental programs. The *JNR Requirements* defines all the key elements to support robust REDD+ accounting: baselines, monitoring, reporting, verifying emission reductions and/or removals, addressing potential leakage and permanence of credited reductions.

The *JNR Requirements* allow for customized application, enabling jurisdictions to choose their preferred approach. For example, each jurisdiction can determine regionally appropriate systems for monitoring, allocating benefits and establishing environmental and social safeguards. The *JNR Requirements* may be applied at the national and/or subnational levels and may or may not include nested subnational jurisdictions and projects, as determined by the jurisdictional government and relevant stakeholders.

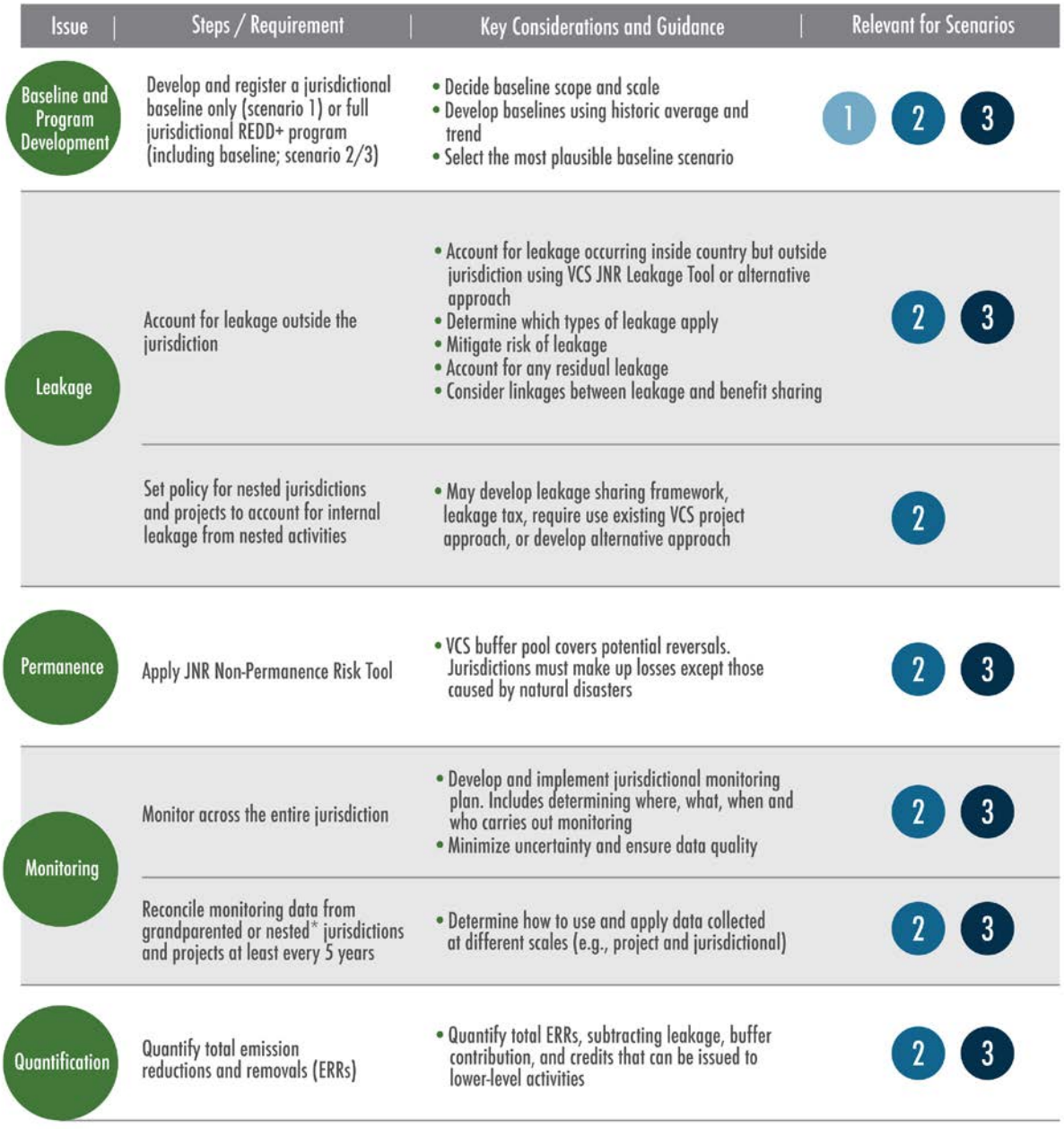
The *JNR Requirements* offers the choice of three accounting and crediting scenarios. Figure 1 and the rest of this chapter provide a high level overview of the three scenarios.

Figure 1: Simplified crediting scenarios



Jurisdictional proponents (eg, national or subnational governments – see Section 5, *Selection of responsible entities* for guidance) may determine which scenario is to be applied within the jurisdiction, and may move from one scenario to another over time (see Section 4, *Transitioning between scenarios* for guidance). Figure 2 provides a high level comparison of the key steps to develop each scenario. More detailed guidance on developing jurisdictional programs and factors that affect the choice of scenario are contained in Section 3.

Figure 2: Comparative overview of JNR scenarios



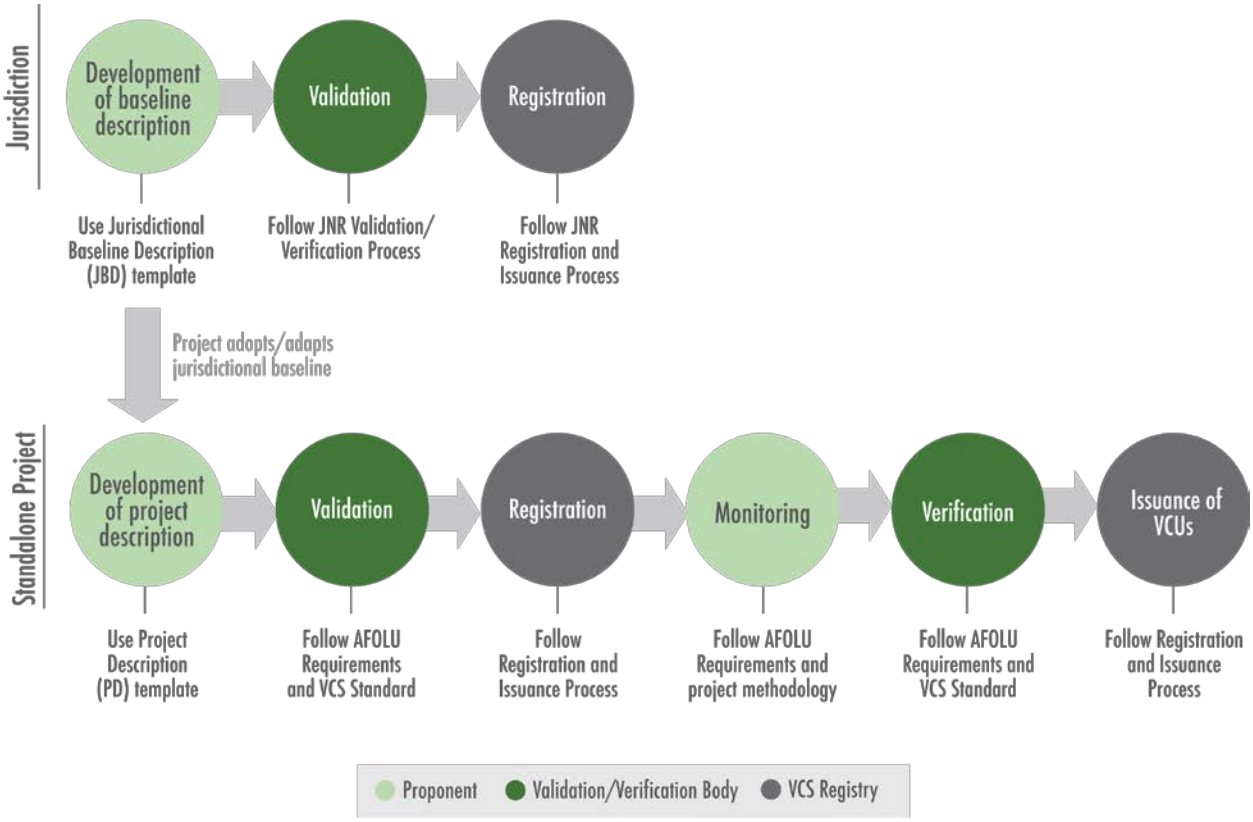
* Nested jurisdictions and projects are only relevant for Scenario 2.

2.1 SCENARIO 1

Scenario 1 is designed to support the development of REDD+ projects in a way that ensures the use of a consistent baseline and facilitates integration into future jurisdiction-wide accounting frameworks. It does not require developing a jurisdictional program as with scenario 2 and 3 - it requires developing and registering a jurisdictional baseline only. There is also no jurisdictional monitoring or issuance of Verified Carbon Units (VCUs) to the jurisdictional proponent.

Projects are able to use the approved jurisdictional baseline to develop independent projects in accordance with the VCS *AFOLU Requirements* and carry out project level monitoring to receive VCUs. Similarly a subnational jurisdictional program (eg, in a state or province) may use a higher-level (eg, national) jurisdictional baseline developed under scenario 1. A summary of the program cycle for scenario 1 is contained in Figure 3.

Figure 3: Scenario 1 program cycle



Scenario 1 allows for standalone projects to benefit from the establishment of a consistent, broader scale jurisdictional baseline. The jurisdictional baseline helps reduce the projects' transaction costs and promotes environmental integrity across the aggregate of REDD+ projects being developed within the jurisdiction. Scenario 1 is seen as a useful option for jurisdictions that want to only support projects, want to test jurisdictional baselines before transitioning to another scenario, or do not have the resources to develop a jurisdictional program under scenario 2 or 3.

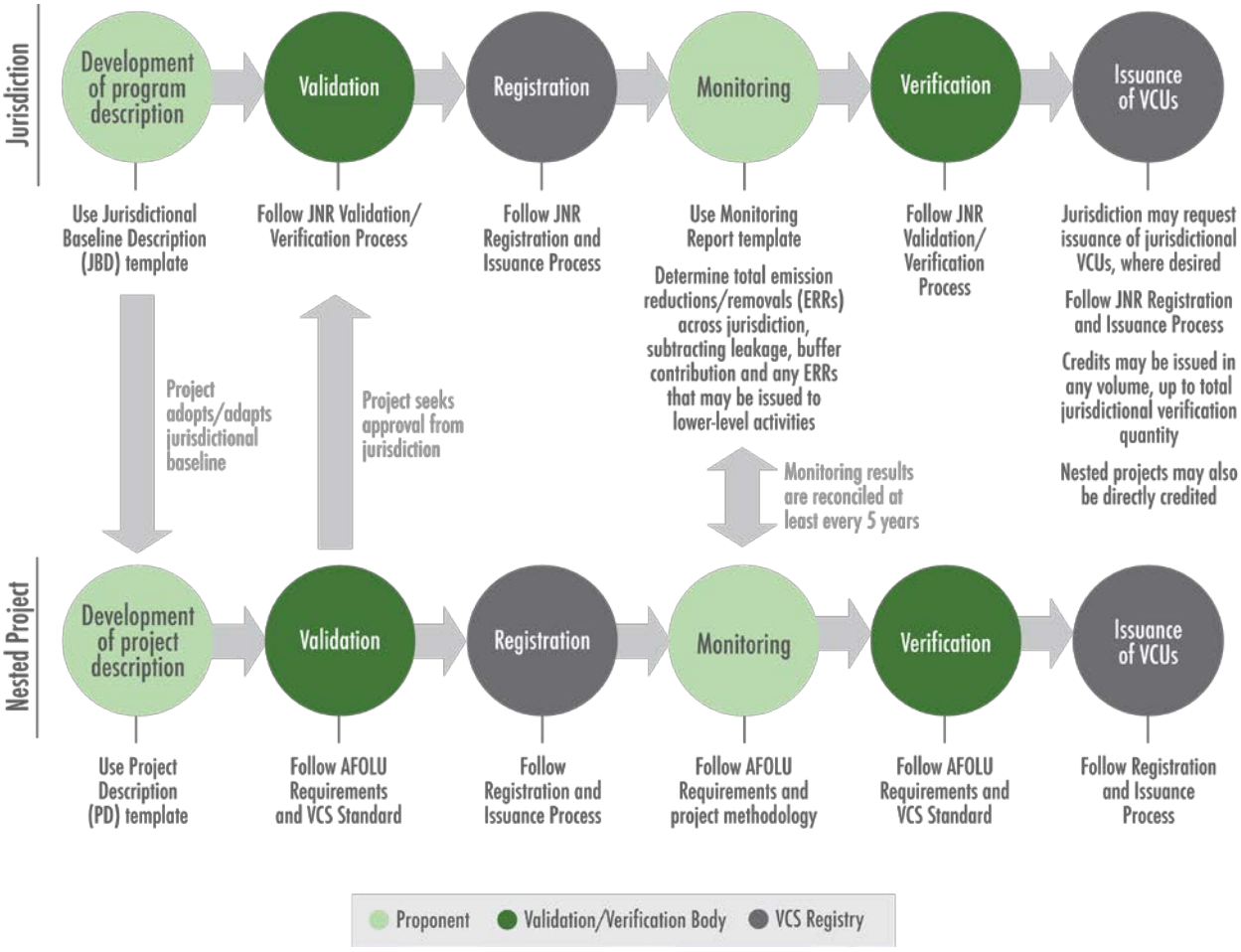
For example, a jurisdictional baseline is developed for province A. Each individual project within the province uses the registered jurisdictional baseline in accordance with the *JNR Requirements*. New projects are then developed, validated, registered, monitored and verified in accordance with the *AFOLU Requirements* and the relevant methodology (not including the baseline requirements), and may request issuance of VCUs. The jurisdictional proponent does not conduct monitoring and does not seek issuance of VCUs. Note that projects may also be registered prior to the registration of a jurisdictional baseline and in such case shall be subject to the grandparenting requirements set out in the *JNR Requirements*.

2.2 SCENARIO 2

Scenario 2 allows for the development of a jurisdiction-wide REDD+ program that may include nested projects and/or nested jurisdictional programs. The nested projects and/or programs use the jurisdictional baseline for the project or program area where the jurisdictional baseline is spatially explicit. Where such baseline is not spatially explicit, nested projects or programs use their own location-specific baseline that is derived from the higher jurisdiction's data.

Monitoring is carried out across the jurisdiction and the jurisdictional proponent may choose to allow VCUs to be issued to registered nested projects and programs only, or may request VCUs to be issued for the emission reductions and removals achieved across the entire jurisdiction (ie, issued directly to nested projects or programs and issued to the jurisdiction for other areas within the jurisdiction that fall outside the boundaries of nested projects or nested programs). Because VCUs can be issued for emission reductions or removals generated across the entire jurisdiction a number of additional steps are required compared to scenario 1. These additional steps include carrying out jurisdiction wide monitoring, accounting for leakage at the jurisdictional level, completing the *JNR Non-Permanence Risk Tool,* and meeting *right of use* requirements. An internal allocation or benefit-sharing mechanism to share benefits or further distribute VCUs to stakeholders in the jurisdiction may also be developed. A summary of the program cycle for scenario 2 is contained in Figure 4.

Figure 4: Scenario 2 program cycle



Two crediting options are available for scenario 2. In one, any nested projects or nested programs request VCUs but the highest level jurisdictional proponent does not request VCUs to be issued for "non-project areas" within the jurisdiction – ie, areas within the jurisdictional boundary that are not covered by projects or lower-level jurisdictions. In the second option the highest level jurisdiction requests VCUs to be issued for non-project areas in addition to any requests for VCUs from nested projects or programs. In this second option the jurisdictional proponent will need to demonstrate right of use for those non-project areas where VCUs are being claimed, which is not required in the first option. In this option it is also strongly encouraged that a benefit-distribution or internal allocation mechanism is developed.

In both options the highest level jurisdiction needs to conduct monitoring across the jurisdiction and ensure that project leakage and any reversals (see VCS document *Program Definitions* for definition of reversal) within the jurisdiction are accounted for and that environmental integrity is maintained at the jurisdictional level. This differentiates it from scenario 1 where there is no jurisdiction-wide monitoring.

Both projects and the jurisdictional proponent conduct monitoring and leakage assessments, and apply the relevant non-permanence risk tool to determine their respective buffer withholding requirements. The projects may use the monitoring results from the jurisdiction if it meets minimum accuracy and precision requirements. Both the jurisdictional program and projects undergo verification and contribute GHG credits to the jurisdictional buffer pool. The references to projects also apply to subnational jurisdictional programs nested within a higher-level (eg, national) jurisdictional program.

For example, in the first crediting option under scenario 2, a jurisdictional baseline is developed for Province B. Province B wants to stimulate investment into projects by the private sector but does *not* want to request issuance of VCUs for GHG emission reductions or removals achieved in non-project areas within the jurisdiction. Province B does, however, intend to conduct monitoring across the jurisdiction and seeks to ensure that project leakage and any reversals within the jurisdiction are accounted for and that environmental integrity is maintained at the jurisdictional level, and may be rewarded for jurisdictional performance under another program or agreement.

This therefore differentiates scenario 2 from scenario 1 where there is no jurisdiction-wide monitoring. The jurisdictional proponent develops a jurisdictional REDD+ program that allows direct crediting for projects but does not request issuance of any VCUs for non-project areas. Individual projects apply the registered jurisdictional baseline and register their projects (applying additional rules established by the jurisdiction). Both projects and the jurisdictional proponent conduct monitoring and leakage assessments, and apply the relevant non-permanence risk tool to determine their buffer withholding requirements. Both the jurisdictional program and projects undergo verification and contribute GHG credits to the jurisdictional buffer pool but only the projects request issuance of VCUs.

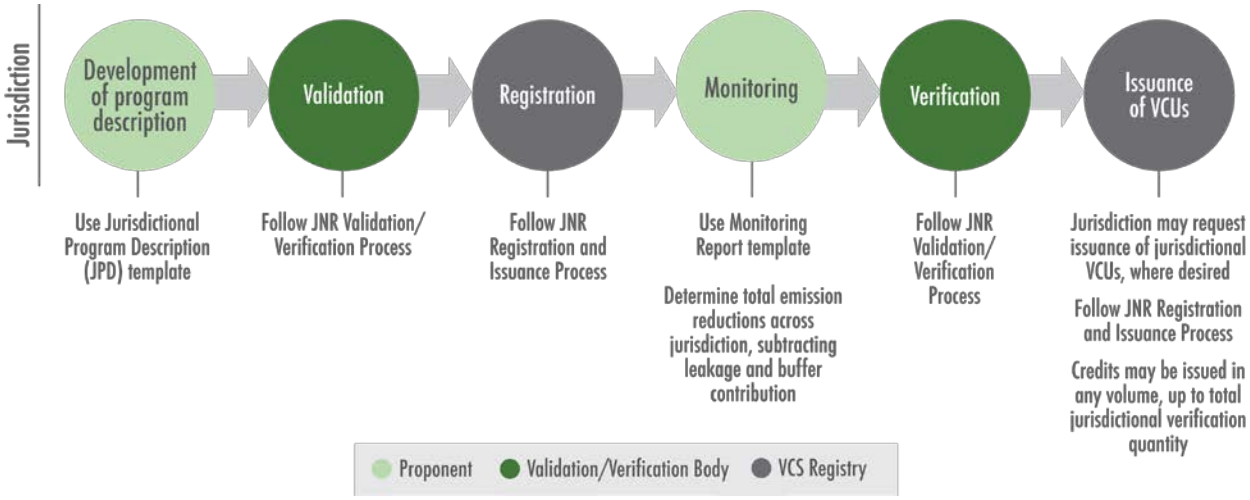
In the second crediting option under scenario 2, for example, Province C develops a jurisdictional baseline. The province intends to request issuance of VCUs for GHG emission reductions and/or removals achieved across the entire jurisdiction by the REDD+ policies and programs it implements, and seeks to stimulate private-sector investment in projects. The province develops a jurisdictional program that allows crediting to both the jurisdiction and projects simultaneously. Projects apply the registered jurisdictional baseline and are registered following the *JNR Requirements* and the additional rules established by the jurisdiction. Both projects and the jurisdiction conduct monitoring and leakage assessments, and apply the relevant non-permanence risk tool, contribute GHG credits to the jurisdictional buffer pool and request issuance of VCUs.

An overview of the accounting requirements for scenario 2 is set out in Figure 2.

2.3 SCENARIO 3

Scenario 3 allows for the development of a jurisdiction wide REDD+ program but does not allow direct issuance of VCUs to nested projects and/or nested jurisdictional programs (after the grandparenting period for existing projects or programs expires). A summary of the program cycle for scenario 3 is set out in Figure 5.

Figure 5: Scenario 3 program cycle



VCUs are only issued to the jurisdictional proponent (or its authorized representative(s)) for emission reductions or removals generated across the entire jurisdiction. Scenario 3 is similar to scenario 2 in that VCUs can be issued for emission reductions or removals generated across the entire jurisdiction. This requires accounting for leakage at the jurisdictional level, completing the *JNR Non-Permanence Risk Tool,* meeting right of use requirements, and carrying out jurisdiction wide monitoring. Jurisdictional proponents should also develop an internal allocation or benefit-sharing mechanism, such as, for example, a payment or ecosystem service program or another system to incentivize or compensate stakeholders. Scenario 3 is distinct from scenario 2 in that only the jurisdictional proponent may request issuance of VCUs or receive payment for emission reductions - nested project or program cannot be directly credited from a VCS registry.

For example, a jurisdictional baseline is developed for Province D. The province intends to claim emission reduction and/or removal credits across the entire jurisdiction for policies and programs it implements. The jurisdictional proponent implements a payment for ecosystem services program that involves paying for the protection of forest under threat along with the conservation of less threatened forests that may not have been eligible or viable as REDD+ project activities.

In this example, the jurisdictional proponent develops a jurisdictional REDD+ program and internal allocation or benefit-sharing mechanism that documents such plans and demonstrates that the province has a right of use over the forest areas falling under the payment for ecosystem service program. This follows the requirements for stakeholder involvement. The jurisdictional proponent conducts leakage assessments and monitoring, and undergoes verification and requests issuance of VCUs for emission reductions and/or removals generated in areas where right of use is established, which may be less than the entire jurisdiction. The jurisdictional proponent then either allocates VCUs to participants in the domestic REDD+ program or sells the VCUs and uses proceeds to fund the payment for the ecosystem services program and other aspects of the jurisdictional REDD+ program, such as MRV.

For an overview of the accounting requirements for scenario 3 see Figure 2.

The JNR Requirements are designed to be flexible to allow users to access multiple markets and sources of funding. The *JNR Requirements* have been updated to allow, for example, jurisdictional proponents to simultaneously comply with the criteria and indicators of the Forest Carbon Partnership Facility's Methodological Framework (MF) and the *JNR Requirements.* The *JNR Requirements* are also designed to be compatible with the UNFCCC decisions on REDD+.

For example, a VCS jurisdictional program could form part of a national REDD+ plan or strategy required under the UNFCCC. If a jurisdictional proponent develops a baseline following the *JNR Requirements* this could be submitted to the UNFCCC as a national or interim subnational reference level/reference emission level. The safeguard requirements contained in the *JNR Requirements* were also developed to be compatible with the UNFCCC REDD+ safeguard requirements, and a national safeguards information system developed as part of a VCS jurisdictional program could be used for UNFCCC purposes. Further information on how JNR aligns with the UNFCCC and the FCPF MF, as well as guidance for meeting both the JNR and MF is set out in Appendix II of the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*.

3 | DEVELOPING JURISDICTIONAL REDD+ PROGRAMS

This section provides guidance on how to develop a jurisdictional REDD+ program including:

- How to choose the level (subnational or national) and, for subnational programs, the location of a jurisdictional program.
- How to choose a JNR scenario.
- Other program design issues.

Technical, operational, financial, and political and policy considerations will guide all of these decisions. Each of these broad topics contains a number of further inter-related factors that can be taken into account in the decision making (see Table 1).

Table 1: Key Considerations

General topic	Additional factors
Technical	Location, scale and nature of drivers, agents and underlying causes of deforestation
	Technical expertise and capacity
	Data availability and cost
Operational	Evaluation of REDD+ strategies, policies and measures and their potential to generate emission reductions and/or removals
	Operational considerations
	Social and environmental considerations
	Decentralization and forest administration
Financial	Financial considerations and Cost effectiveness of generating emission reductions and/or removals
Political and policy	Lower-level JNR programs and AFOLU projects
	Demonstrating right of use

Each of these factors is described below. The list of factors is not exhaustive and the relative importance of each factor may vary between countries, while other factors not discussed may also be relevant for some jurisdictions.

3.1 LOCATION, SCALE AND NATURE OF DRIVERS, AGENTS AND UNDERLYING CAUSES

The forces that drive forest cover change are often complex, with multiple forces operating at different scales and locations. A deep understanding of how rural development of a nation or subnational jurisdiction intersects with the forest estate and its carbon stocks is key to understanding drivers and developing a successful REDD+ program. Whether the primary changes to forests is being caused by agricultural commodity production expanding into forestlands, the timber sector harvesting commercially valuable trees, semi-subsistence communities that are growing staple crops, or some combination of these, a jurisdictional REDD+ program needs to attend to the underlining needs that are driving these changes.

To tease out some of the complexity, drivers can be broken down into agents (ie, who is affecting a forest) and underlying causes (ie, why). For example, an overarching driver may be demand for beef where the agent is a farmer who clears a patch of forest for pasture and the underlying cause or reason why they are doing it is to generate income. The “why” component can be particularly complex and may have many layers. For example, an immigrant may deforest to plant crops to feed his/her family and

generate income, but they may have moved to the forest due to a lack of economic opportunities elsewhere in the country and accessed the forest through a new road. Drivers, agents and underlying causes will vary by location, and their location can influence where a jurisdictional program is located or where efforts are focused.

3.1.1 Relevance for level and location of a JNR program

To generate emission reductions and/or removals a jurisdictional program needs to be able to reduce emissions and/or increase carbon sequestration. The location, scale and nature of drivers, agents and underlying causes will therefore influence the level (ie, national vs subnational) and location of a jurisdictional program. Understanding which parts of the country are experiencing the highest rates of forest loss and the drivers and agents of deforestation should be a priority. For example, if deforestation is located in a particular region a national government may decide to implement a national system and focus its strategies, policies or measures in that region, or it may decide to start by implementing a subnational jurisdictional program only in that region. As another example, if countries have local and/or heterogeneous drivers that can be more easily addressed at the subnational level it may be more effective to start with a subnational program that is able to target specific drivers in specific locations. Conversely, if a country has homogeneous drivers that can be effectively addressed through national programs it may be more effective to develop a national program.

3.1.2 Relevance for choice of JNR scenario

All JNR scenarios can be applied to a diverse range of drivers and underlying causes at different scales and locations. Other factors discussed below are likely more influential in deciding between the JNR scenarios.

3.1.3 Relevance for other aspects of jurisdictional program design

Analysis of drivers, agents and underlying causes should produce information on what type of forest and land-use change is occurring in a jurisdiction. This will help inform the decision on scope of a REDD+ program – ie, whether it covers reducing deforestation only, or includes reducing degradation or forest enhancement activities. An analysis of drivers, agents and underlying causes may allow the relative contribution of each driver to be quantified or ranked against other drivers. If drivers differ across the jurisdiction, this information could be broken down geographically. This analysis is also the foundation for developing the strategies, policies or measures needed to reduce emissions or promote enhancements (see Section 3.2 below), which should be mapped against specific drivers, agents, or underlying causes they are expected to address. This should be done qualitatively (ie, to provide a theory of change) and quantitatively where possible (ie, to estimate expected results).

Dividing the drivers, agents, and underlying causes into commodity-related and subsistence-related will help application of the *JNR Non-Permanence Risk Tool* and *JNR Leakage Tool*.

3.1.4 How to obtain the information

Identifying the location of historical forest cover change at a coarse level can be quickly and cost effectively carried out using freely available satellite data. Some coarse satellite data has already been collected and processed, and made available online. For example the Global Forest Watch is able to generate forest cover change estimates for specific areas and provide alerts of any new deforestation (http://www.globalforestwatch.org). Further analysis that uses established procedures (such as participatory rural appraisals, household surveys, and commodity export/economic data such as agricultural census data) that identify and analyze drivers and agents can be used to understand the dynamics of forest loss, that are detected with remote sensing data.

There are numerous sources and tools for designing and implementing social surveys. A selection is included in Appendix I.

For areas where commodities are significant drivers of deforestation then commodity export, economic and production data may be evaluated to understand the dynamics of deforestation. Data may be gathered on:

- Producers in the areas and economics of producers (products, quantities, prices, supply chain linkages)
- Supply chain participants economics
- Export statistics
- Historical pricing trends
- Consumer demand profiles
- Sustainability, traceability and certification programs
- National and local policies impacting commodity production

This data should provide the basis to understanding the economic and legal drivers of commodity driven legal deforestation, and how the main actors need to be engaged to change policies and practices to reduce deforestation. It should also help apply the *JNR Leakage Tool*. However, the distinction between commodities that are produced through legal vs illegal deforestation may not always be clear, and it can be challenging for social surveys to capture illegal deforestation as most agents are unlikely to provide data on these activities.

3.2 EVALUATION OF REDD+ POLICIES, PROGRAMS AND MEASURES, AND THEIR POTENTIAL TO GENERATE EMISSION REDUCTIONS AND/OR REMOVALS

Forests are protected and restored – and emission reductions and/or removals generated – through the successful implementation of strategies, policies or other measures that address drivers and underlying causes of forest loss. For the purpose of this guidance, these strategies, policies or other measures are collectively referred to as “REDD+ interventions”.

REDD+ interventions can help align and reform domestic policies and finance to support the transition to broader low-emission rural development models that include steep reductions in deforestation and forest degradation along with improved rural livelihoods, job creation, improved services, increased market access and investment. REDD+ interventions may be carried out across the entire jurisdiction, or located in specific areas. For example, if local communities are unsustainably producing charcoal for their own consumption and to sell into neighboring urban markets, a number of options could be considered to reduce deforestation or degradation. These may include planting wood lots to produce sustainable charcoal, promoting more fuel efficient cooking stoves that use less charcoal, providing alternative sources of fuel for cooking, proving alternatives for purifying water, and/or alternative livelihoods to replace lost income from charcoal trade. Alternatively if enforcement of existing laws regarding forest clearing is an issue, improved monitoring and enforcement could be carried out across the entire jurisdiction. As another example, if deforestation is driven by production systems with low productivity, a REDD+ program could focus on creating restrictions on access to new forestland while supporting increases in yields on existing cleared land. The number of emission reductions and/or removals that may be generated by each possible intervention may also be estimated by understanding the contribution of each driver and estimating the impact each intervention could have on reducing that driver. See Appendix I for resources on jurisdiction level REDD+ planning.

Each jurisdiction will need to identify and prioritize the REDD+ interventions that will be promoted and included within the REDD+ program. The menu of potential REDD+ interventions can be evaluated, modified and prioritized based on the local context, including:

- The nature of drivers, agents, and underlying causes and potential to affect them.
- Expected results (including non-carbon benefits).
- Scale of the intervention.
- Capacity to undertake.
- Cost, revenue, and overall cost effectiveness.
- Political support.
- Stakeholder input and cultural circumstances.

3.2.1 Relevance for level and location of a JNR program

While a REDD+ plan or strategy developed under the UNFCCC should be national, understanding what strategies, policies or measures can be implemented where and at what scale can help guide whether a VCS jurisdictional program should be national or subnational. It can also help inform which subnational jurisdiction within a country may be the most appropriate location for a subnational jurisdictional program. Regions or jurisdictions with the greatest potential to successfully implement mitigation activities in areas that will result in highest numbers of emission reductions and/or removals are likely strong candidates for establishing a jurisdictional program. The size of the jurisdiction will also determine the complexity and time to implement, and the scale and potential revenues of emission reductions and/or removals. If a subnational program is chosen as the appropriate level, this can still be part of the overall national REDD+ plan or strategy developed in the context of the UNFCCC. It can also be part of a documentation developed for other bilateral or multilateral funding programs.

3.2.2 Relevance for choice of JNR scenario

All JNR scenarios can account for successful implementation of strategies, policies or measures to address drivers and underlying causes equally well. Other aspects of REDD+ implementation mentioned below may be a more important influence on the choice of JNR scenario than the type of REDD+ intervention *per se*. For example, political will, forest administration / governance, and tenure may all affect choice of REDD+ intervention along with selection of a JNR scenario. However, if one of the jurisdiction's strategies for implementation includes stimulating project level development, scenarios 1 and 2 may be more readily applicable, although project level approaches are still possible under scenario 3.

3.2.3 Relevance for other aspects of jurisdictional program design

REDD+ initiatives will need to be developed with a number of other aspects of a jurisdictional program in mind, such as forest administration (Section 3.8).

Program design and strategy is one of the components of the *JNR Non-Permanence Risk Tool.* Having in place appropriate strategies, policies or measures to address drivers and underlying causes of commodity-driven and subsistence-driven deforestation (and degradation where relevant) should help reduce the non-permanence risk rating.

While not required under the *JNR Requirements*, a high level ex-ante estimate of the amount of emission reductions and/or removals the strategies, policies or measures may generate will help jurisdictional proponents better understand and prioritize these interventions. Any ex-ante emission reductions and/or removals estimates should be based on sound methods, using documented data, literature and analysis of the proposed interventions as well as the assessment of drivers, agents and underlying causes. The capacity of a jurisdiction along with any track record implementing similar programs should also be factored into the assessment. Ex-ante emission reductions and/or removals estimates are often projected annually, based on a realistic "ramp up" of activities, allowing for effectiveness of interventions in the early program years of less than 100%. Including an effectiveness of less than 100% is important – particularly for high risk, uncertain, or un-tested interventions, as over-estimating emission reductions and/or removals from the outset may have follow-on implications for the program's financial sustainability (see Section 3.3). Being conservative and realistic about which drivers and underlying causes can be addressed will reduce the risk of overestimating the number of emission reductions and/or removals that may be generated. Depending on the level of development of the jurisdictional program, the ex-ante emission reductions and/or removals estimates may be extremely detailed and based on carbon accounting methodologies and data collected specifically to support the estimated emission reductions and/or removals.

How many emission reductions and/or removals these interventions may generate can also be used to inform other aspects of program design such as estimating the cost effectiveness of a proposed program and financial planning (see Section 3.3).

3.2.4 How to obtain the information

See Appendix I for a list of resources on planning for REDD+ interventions.

3.3 FINANCIAL CONSIDERATIONS AND COST-EFFECTIVENESS OF GENERATING EMISSIONS REDUCTIONS AND/OR REMOVALS

Financial considerations include costs and revenue associated with developing, implementing, and managing a jurisdictional program along with ongoing costs of administering the program and performing the monitoring of emissions reduction and/or removals. There are certain costs that are incurred upfront, such as those associated with developing a jurisdictional baseline, creating, validating and registering a jurisdictional program description (JPD) with VCS as well as the costs of establishing an entity to govern and manage REDD+ funds that come from a variety of sources. Other upfront costs can include those incurred to establish the laws and policies needed to support REDD+, particularly when being implemented within a results-based framework. In addition, there are on-going implementation costs including those for carrying out strategies, policies or measures to address drivers and causes of deforestation (or degradation) along with safeguards and (where relevant) benefit sharing mechanisms as well as costs to monetize emission reductions. Management costs include administration costs of overseeing the jurisdictional program. Ongoing carbon accounting costs include monitoring and verification costs.

It should be noted that a JNR program has the potential to generate emission reductions and removals for different sources of demand. Some sources of demand will specifically seek VCUs, while others pay for performance but do not need a GHG credit in return. Where VCUs are issued, there are costs related to registration and issuance based on the number of VCUs issued. However, a program only needs to issue VCUs when they are needed (ie, where there is a buyer for a certain number of VCUs, they can be issued for only that number, up to the total verified quantity). VCS also offers discounts based on the number of VCUs issued at a time, as set out in the VCS Program Fee Schedule. Issuance costs are not relevant where a buyer/ entity paying for performance does not need VCUs.

The cost effectiveness of generating emission reductions and/or removals refers to the cost of successfully implementing REDD+ interventions to address drivers and underlying causes compared to the amount revenue and other benefits generated from reducing or removing emissions.

3.3.1 Relevance for level and location of a JNR program

A national program will likely cost more to develop, implement and manage than a subnational program, but a national program may have greater economies of scale. Understanding the cost and potential revenue (and overall cost-effectiveness) of a jurisdictional program will help guide whether a national or subnational program is the most appropriate starting point. It will also help inform where the most financially viable location for a subnational program may be. It can also help determine where to implement site specific REDD+ interventions. For example, if a national program to reduce deforestation is cost effective, a national level program may be warranted. However, if emissions can only reasonably

be reduced in a particular region and income from payment for performance is critical, it may be more cost effective to begin implementation only in that region.

The carbon stock of different forests within a country may also affect cost effectiveness and decisions on where to locate a subnational jurisdictional program or where to target strategies, policies or measures. High carbon stock/high deforestation areas are likely to produce greater emission reductions for a given set of mitigation activities where some areas with lower carbon stocks may struggle to reach break-even based on lower emission reductions. For example, with the same deforestation rate, if forests are severely degraded they will have a lower baseline than higher stocked forests and thus have lower emission reduction potential.

Revenue from payment for performance generation is not, however, the only benefit that needs to be considered. REDD+ interventions may generate other income streams which may outweigh the value of emission reductions and removals and need to be taken into consideration. The potential to generate performance payments or other benefits will need to be balanced by social and environmental factors that should also affect decisions on the location and level of a jurisdictional program. For example, REDD+ interventions in one region may be highly cost effective (in terms of VCU generation plus other revenue streams). These could be combined with other less cost effective areas to form a larger program that is still financially viable (ie, the highly cost effective areas could subsidize the less financially viable areas). This could be valuable when areas with low or marginal financial feasibility have other social or environmental benefits or where social equity or other considerations warrant this type of subsidy between regions.

3.3.2 Relevance for choice of JNR scenario

Cost effectiveness is driven by the emission reduction potential of the program, potential to generate other revenue streams and co-benefits and the program costs. These costs may vary between scenarios.

Scenario 1, which does not include jurisdiction level MRV or crediting, may be the least onerous to develop and manage and the least cost to develop. However, it will also not generate any emission reductions or removals at the jurisdictional level for non-project areas, thus if the jurisdiction wanted to recoup costs, the jurisdictional proponent would need to be a project proponent itself, or focus on donor-funded readiness activities or other forms of revenue or funding.

The cost of implementing scenario 2 or scenario 3 may be similar due to the need to establish a baseline and monitor across the entire jurisdiction. Depending on how the jurisdiction plans to fund the costs of the program, it may want to consider the impact the JNR scenario selection could have on private sector finance. There may be higher cost in scenario 2 to ensure that there is a mechanism (eg, a registry) to track and account for nested activities at different scales, but this scenario may also attract more private finance. Meanwhile, scenario 3 requires more of the jurisdiction in terms of implementing activities that generate emission reductions, that may in scenario 2 be undertaken by project proponents, leading to additional cost to the jurisdiction in scenario 3. While private investment is still very small for jurisdictional REDD+ programs, any investor will want to be able to assess the risk and return of its investment. In general, jurisdictional programs that have clear business plans that include details of REDD+ activities,

the responsible implementing partner and realistic estimates of emission reductions and/or removals are more likely to attract investors and buyers. They will also need to be able to have transparency and auditability on how funds will flow to support the activities that reduce emissions and repay any possible upfront investment.

Investors may also be willing to invest in activities that do not receive direct credits, but only if there is a clear revenue stream that can support their required finance returns. However, if their investment is tied to revenue from the sale of VCUs they would need to have legally enforceable contracts that govern how carbon revenue will flow to their investment including the control over decision making on VCU sales. Alternative sources of revenue – eg, from increased commodity production or certified sustainable timber – may help attract private investment, or act as an additional source of revenue for the jurisdictional program. Scenario 2 provides nested projects a structure where investors can easily assess investment risk. Jurisdictions seeking private investment under scenario 3 would need to clearly define the sources of revenue and uses of funds that support the investment and "ring fence" these activities so that they can engage with private sector and generate returns.

3.3.3 Relevance for other aspects of jurisdictional program design

Financial considerations are tied to a number of aspects of project design. For example, the scope of a baseline and jurisdictional program will influence cost as well as potential revenue from sale or payment for emission reductions and/or removals. The choice of strategies, policies or measures to address drivers and causes will affect cost as well as revenue – particularly where they generate alternative sources of revenue other than being paid for emissions performance. The internal allocation or benefit-sharing arrangements will also be an important part of the overall financial considerations. Finally funding risk is included in the *JNR Non-Permanence Risk Tool*, and demonstrating a financially sound jurisdictional program should reduce the non-permanence risk assessment.

In addition to overall financial considerations, the cost effectiveness of different REDD+ interventions can help guide the scope of a jurisdictional program – ie, whether it includes deforestation only, or also includes other REDD+ activities (eg, degradation/ forest management, or afforestation/ reforestation/ regeneration). For example some regions may face relatively high deforestation rates with significant degraded forest or non-forest areas which may be especially suitable for carbon stock enhancement, but the cost of generating removals in these areas may be too high for a jurisdictional program to be economically feasible.

3.3.4 How to obtain and use the information

The costs and benefits of each potential REDD+ intervention should be assessed. As interventions may have multiple revenue streams or other benefits to take into account, the cost/benefit assessment should include a broad assessment of costs and benefits of a proposed intervention rather than a pure estimation of the number of emission reductions and/or removals generated and unit production cost per tonne. For example, protecting a watershed may have additional hydrological benefits or downstream cost savings that need to be taken into account. Similarly a program to improve crop yields to reduce pressure on forests should have additional revenue or benefits from increased yields. Conversely

opportunity costs or other costs beyond implementation should also be taken into account so that net benefits can be accurately understood. Stress testing the cost/benefit analysis to understand the risks of the financial model can also help identify financial risks. Once identified, options to mitigate these risks can be developed. For example, if enhanced yield production is a significant revenue stream, this may be subject to commodity prices along with production risk due to drought. Crop insurance could then be explored to mitigate the production risk.

In addition to understanding the costs and benefits of individual REDD+ interventions, the costs of managing and overseeing the jurisdictional program need to be factored in.

While funding for REDD+ programs may be allocated top-down, it is recommended that a complete financial analysis is developed, which requires program cost and revenue estimates for all aspects of a jurisdictional program's development and ongoing implementation. This may be collected into a comprehensive implementation budget including cash flow projections complete with sensitivities on the main financial drivers.

It is important to understand both the cost of operating a jurisdictional program, regardless of whether one ton is verified, as well as the cost of generating each tonne of emission reductions. For this reason, making a clear distinction between costs of implementing the strategies, policies or measures to address drivers, and causes with costs of actually running the jurisdictional program infrastructure (ie, the operational elements) may be helpful.

Estimating the costs of generating VCUs can be complex depending on the number of planned interventions within the jurisdictional program and the number of stakeholders involved in implementation. These cost estimates may, however, be helpful when developing an implementation budget and any subsequent financial models that may be built to carry out analysis of financial viability, financial returns and safety margin.

Revenue projections are another component of the financial analysis. These may only include emission reduction revenue or may also include other revenue sources that can be used to support the JNR program costs. In the case of emission reduction revenue these should be based on the ex-ante estimates of what will be paid for emission reductions and removals and should be accounted for in the time period in which they will be generated.

As part of the financial analysis, identifying potential financial regulations affecting the distribution of revenues from, or taxes on, the sale of VCUs may be helpful. Subnational jurisdictional proponents should also determine if higher-level approval/no-objection is required to sell emission reductions and/or removals, and ensure that the mechanisms for management of revenues and funds distribution are understood and approved by national level authorities, if necessary. Similarly, if national governments intend to keep a portion of revenues, or require that revenues are used for a specific purpose, the amount needs to be clearly estimated and disclosed as it forms part of the *JNR Non-Permanence Risk Tool* assessment.

This section covers guidance on financial planning that can be used to demonstrate the financial viability of a REDD+ program, which impacts the risk of reversal and cost effectiveness. It also presumes that a jurisdiction would seek to sell emission reductions and/or removals, either as VCUs or payment for performance, and attract private investment capital and how the scenario selection and approach to financial planning can support these goals. But jurisdictions are advised to take a realistic and pragmatic view on the current state of demand, as well as evaluate how use of JNR can facilitate participation in other results-based programs as these both will have an impact on the financial viability of a REDD+ program.

See Appendix I for additional resources on estimating the cost effectiveness of generating VCUs.

3.4 DATA AVAILABILITY AND COST

A large amount of data is needed to design and implement a jurisdictional REDD+ program. This includes data used to identify drivers, agents and underlying causes, develop REDD+ interventions, calculate baselines, carry out ongoing monitoring and accounting including leakage assessments, demonstrate stakeholder consultation and adherence to safeguards, and design of any benefit sharing mechanisms. This includes remote sensing imagery to develop a baseline along with GIS and field data for biomass estimates for the forest and land classes. Social assessments may also be helpful for localized assessments of these components. Data will be needed for the initial program development and validation and portions of it will be required for ongoing monitoring. Additional data to demonstrate right of use will also be required to request issuance of VCUs, where desired.

3.4.1 Relevance for level and location of a JNR program

The availability and cost of adequate remote sensing and other data (eg, biomass estimates for forest and land-use types and GIS data) may be considered when deciding whether to implement a jurisdictional REDD+ program at a national or subnational level, or the location of a subnational program. The extent of GIS data that is available will indicate what level of spatial planning has been done in a country. For example, if GIS data on boundaries does not go below district levels, and the jurisdiction is planning mitigation activities where communes or village boundaries matter, this could affect the level and location of a jurisdictional program.

Where forests and drivers are more homogenous, the data cost of scaling up to larger jurisdictions may be less compared to areas with diverse forest types and variable drivers. In these cases larger areas may require more biomass estimates, estimation of emissions factors, or driver analysis along with greater costs associated with developing and implementing a more diverse set of REDD+ interventions to tackle a broader array of drivers. Data costs may also vary depending on the scope of jurisdictional program (ie, data costs may vary from deforestation to degradation or other activities). For example, monitoring deforestation at larger scales may see greater economies of scale than monitoring degradation at similar scales.

3.4.2 Relevance for choice of JNR scenario

Each scenario will need similar data for baseline development. Scenario 1, however, will not require data collection to design REDD+ interventions or for ongoing monitoring, reporting, and accounting for emission reductions and/or removals or to request issuance of VCUs.

3.4.3 Relevance for other aspects of jurisdictional program design

Data availability may influence decisions around scope of a jurisdictional program. For example, if data on degradation is very difficult or costly to obtain a jurisdiction may consider excluding it from its baseline and program, unless they are required to include it to access funds, such as the FCPF Carbon Fund (see the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs* for guidance on baseline development and alignment with FCPF). Data costs will also affect a jurisdictions financial planning (see Section 3.4).

3.4.4 How to obtain the information

Some of the required information may be available for free, but high resolution remote sensing data can also cost money to purchase and other costs may be associated with carrying out driver analysis or collecting data for other aspects of a program's design. Data may be found in existing government records or other publicly available information such as journal articles. Where boundary data is being sought, government sources should be used wherever possible. Jurisdictional proponents may wish to enquire with multiple providers of remote sensing imagery. However, locating and purchasing high resolution remote sensing data can be difficult, particularly in areas with persistent cloud cover or where complete archival imagery is not available.

Landsat data may also be useful for some purposes. Landsat data is free and suitable for a rapid assessment / development of rough baseline estimates, as are other data sets such as the Global Forest Change map and data from the Global Land Cover Facility. See Appendix I for links to these and other resources.

Non-LULC based historical activity data from other data sources, such as social surveys or government records, may also be used to estimate historical activity rates and/or GHG emission reductions and/or removals for REDD+ activities other than deforestation.

Existing REDD+ projects may also be a source of data which may be applicable elsewhere in the jurisdiction, or used to help compile larger scale data. For example project-specific biomass data may be applicable to similar forests elsewhere in the country, and remote sensing data may also be used to help develop larger scale maps. Depending on the methodology chosen, projects may also have extensive remote sensing data for areas outside their project boundaries.

3.5 TECHNICAL EXPERTISE AND CAPACITY

Sufficient technical expertise and capacity in the following areas is important to develop, implement, and manage a successful jurisdictional program:

i) **Baseline development.** Estimating historic emission reductions and/or removals involves collecting, processing and classifying remote sensing data, collecting and processing other activity data, identifying and accounting for significant historic natural disturbances, analysis of drivers, and biomass sampling. Estimating a future baseline scenario may include detailed modeling or justifying other adjustments (see the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*). This is not a frequently recurring task and therefore it may be better outsourced. When the baseline does need to be renewed, the JNR requirements will likely have been updated and so will most likely the technical staff of the jurisdictional government.

ii) **Monitoring and reporting (scenarios 2 and 3).** Monitoring and reporting requires ongoing data collection and analysis (land-use change analysis, social surveys, other data), identifying and accounting for significant natural disturbances, data processing, estimating uncertainty, and consistent reporting. It may also require estimating various forms of leakage, integration of monitoring data from nested projects or jurisdictional programs, amongst other complexities (see the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*).

iii) **Non-permanence risk assessment (scenarios 2 and 3)**. The jurisdictional proponent needs to understand and apply the *JNR Non-Permanence Risk Tool* and respond to questions on how it has been applied during validation and verification. This will require expertise in assessing political and governance risk, program design and strategy risk, carbon rights and use of carbon revenues risk, funding risk, and natural risk (see the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*).

iv) **Validation and verification (scenarios 2 and 3)**. Verification of reported emission reductions and/or removals through the *JNR Validation and Verification Process* requires expertise to respond to questions and comments from the VVB and Jurisdictional REDD+ expert panel. Documentation may also need to be revised.

3.5.1 Relevance for level and location of a JNR program

Different jurisdictions within a country may have different levels of capacity and expertise, which may help guide where to locate a subnational jurisdictional program. It is recommended that jurisdictions have an understanding of the capacity and expertise needed to develop and implement a jurisdictional program at the anticipated level and location, and ensure sufficient expertise and capacity exists or can be scaled up to meet the anticipated need.

3.5.2 Relevance for choice of JNR scenario

The different scenarios will place different demands on the technical expertise and capacity of jurisdictional proponents. Depending on the technical expertise and governance level within a jurisdiction this may help guide the choice of scenario. The key technical differences between the scenarios and corresponding technical and capacity needs include the following:

i) **Monitoring requirements.** Unlike scenarios 2 and 3, scenario 1 does not require ongoing jurisdiction-wide monitoring but should follow the *AFOLU Requirements* for project level monitoring. Additional expertise may be required under scenario 2 to support and reconcile the monitoring data at different levels required for nesting as this can create additional complexities (see the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs* for guidance on how to carry out the reconciliation). If an internal allocation or benefit sharing program is to be linked to site specific performance (eg, communities being rewarded based on performance) the jurisdictional monitoring will also need to be able to track local performance which may require additional capacity.

ii) **Accounting for leakage.** Accounting for leakage within a jurisdictional program is important when emission reductions and/or removals, or benefits are attributed to specific locations or actors within the jurisdiction. Scenario 1 does not require accounting of leakage at the jurisdictional scale – each project is responsible for accounting for leakage following the *AFOLU Requirements*. Scenario 2 gives the jurisdictional proponent flexibility to design leakage accounting rules for nested projects or programs. Under scenario 3 internal leakage is only relevant when internal allocation or benefit sharing is linked to performance (see the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs* for more detail). External leakage is relevant and applicable to scenarios 2 and 3.

iii) **Nested project/program registration.** Scenario 2 allows as many as three levels registering with the VCS – highest level (often national), lower jurisdictional level (state or municipal) and project level. Before a lower-level jurisdictional program or project is registered, it must first be reviewed and approved or receive no-objection by the higher (or highest) level jurisdictional proponent. This review and approval process will need to be developed and put into practice, which may require experts to review technical documentation and make a decision to approve or not approve within a timely manner. Scenario 3 provides for issuance of VCUs from a VCS registry to the highest level jurisdiction only. However, similar rules as required under scenario 2 may also be developed for scenario 3 if warranted by the jurisdictional program's design (eg, if the jurisdictional program allows for nested projects that received credits or benefits from the jurisdictional proponent rather than VCS registry).

iv) **Benefit sharing and/or internal allocation design and administration**. A benefit-sharing and/or internal allocation program is not necessary under scenario 1, but is strongly encouraged to be developed as part of the program under scenario 2 for non-project areas, and should be prepared under scenario 3. If there is insufficient capacity and expertise to develop and manage a benefit-sharing and/or internal allocation program credibly and transparently, scenario 1 or 2 may be more appropriate than scenario 3.

Jurisdictions lacking the required capacity to carry out these activities for scenario 2 or 3 may wish to develop a jurisdictional baseline under scenario 1 and transition to scenario 2 or 3 once sufficient capacity is developed.

3.5.3 How to obtain the information

Government departments may have technical capacity and expertise relevant to many aspects needed for a jurisdictional program (eg, forestry departments may have experience collecting forest data and working with forest-dependent stakeholders), whereas other ministries may need to be engaged to design and implement cross-sector policies or measures to address drivers and underlying causes. Additional expertise and capacity may also be found outside the government, including in academia, civil society, and the private sector. Specific attention should be paid to anyone involved in existing REDD+ projects or programs within the jurisdiction. JNR proponents should note that the *JNR Requirements* allows for subnational JNR programs to receive implementation support from the higher-level jurisdictions.

3.6 OPERATIONAL CONSIDERATIONS

Operational considerations refer to what is required to manage the operation of a jurisdictional REDD+ program. These will vary depending on the level at which it operates, the scenario chosen, and the strategies, policies or measures chosen to address drivers and underlying causes. Some of the operational aspects that may be important include:

- A legal mandate for the relevant entity(s) to manage and carry out the jurisdictional program and its various components, if required.
- Arrangements between relevant government agencies or institutions involved in the jurisdictional program.
- Arrangements with third parties involved in any aspect of the design, implementation, or ongoing monitoring of the jurisdictional program.
- Management and oversight of any intra-governmental and third party arrangements.
- Management and oversight of the jurisdictional program including the strategies, policies or measures chosen to address drivers and underlying causes, monitoring and reporting, approval/no-objection of nested projects or jurisdictional programs, program budget and finances, any benefit-sharing or internal allocation program, and verification and validation procedures to allow VCUs to be issued. Good coordination amongst agencies involved in a jurisdictional program will help with overall management and oversight of a jurisdictional program. It should be noted that management and oversight is distinct from implementation of activities.

3.6.1 Relevance for level and location of a JNR program

As with technical expertise and capacity operational needs may differ for a national and subnational program, with greater operational capacity expected to be needed for national level programs. Different jurisdictions within a country may also have different levels of operational capacity and expertise, which may help guide where to locate a subnational jurisdictional program. It is recommended to have an understanding of what is required to successfully manage and oversee a jurisdictional program at the anticipated level and location, and ensure sufficient expertise and capacity exists or can be scaled up to meet the anticipated need.

3.6.2 Relevance for choice of JNR scenario

Scenario 1 has the least onerous operational demands on a jurisdictional proponent because most of the operational aspects are left to nested projects or nested programs.

The operational demands of scenario 2 and scenario 3 will depend on the design of the jurisdictional program. Scenario 2 may have greater operational demands associated with managing internal leakage accounting and approval/no-objection of nested projects or programs. Scenario 3 on the other hand may have greater operational demands associated with the management of the benefit sharing or internal allocation program and the strategies, policies or measures chosen to address drivers and underlying causes.

3.6.3 Relevance for other aspects of jurisdictional program design

The operational requirements are linked to the overall design of the jurisdictional program. When developing a jurisdictional program it may be helpful to consider the operational aspects of implementation to ensure that the program is operationally feasible.

3.6.4 How to obtain and use the information

The operational aspects of a jurisdictional program will need to be developed along with its other aspects. Documentation could lay out who is responsible for each specific element of the REDD+ program's management and implementation along with regular reporting to help monitor and manage progress. This may include management and oversight of:

- Any intra-governmental and third party arrangements.
- The strategies, policies or measures chosen to address drivers and underlying causes.
- Monitoring and reporting.
- Approval/no-objection of nested projects or programs.
- Program budget and finances.
- Any benefit sharing or internal allocation program.
- Validation and verification procedures.

Jurisdictional proponents may also consider developing a management information system to help manage some of the operational aspects of their program.

3.7 SOCIAL AND ENVIRONMENTAL CONSIDERATIONS

Social considerations may include respect for lands, territories and resources, equitable benefit sharing, long-term livelihood security and well-being of indigenous peoples and local communities, inclusive governance and full and effective participation of well-identified rights holders and other stakeholders. Environmental considerations may include issues or objectives such as enhancement and maintenance of biodiversity and ecosystem services. JNR requires compliance with all UNFCCC decisions on

safeguards for REDD+; key to those are decisions codified in the Cancun Agreements and Durban Outcomes, as highlighted in Box 1, below.

Box 1: Safeguards and Safeguard Information Systems under the UNFCCC Cancun Agreements and Durban Outcomes

Safeguards and Safeguard Information Systems under the UNFCCC Cancun Agreements and Durban Outcomes

The safeguards in the Cancun Agreements address the following issues:

- Consistency with objectives of national forest programmes and relevant international conventions and agreements;
- Transparent and effective national forest governance structures;
- Respect for the knowledge and rights of indigenous peoples and members of local communities;
- The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities;
- Conservation of natural forests and biological diversity and enhancement of other social and environmental benefits;
- Actions to address the risks of reversals;
- Actions to reduce the displacement of emissions.

Safeguard information systems (SIS)

Decision 12/CP.17 of the UNFCCC Durban Outcome states that an SIS should provide information on how all Cancun safeguards are addressed and respected. SIS should be country-driven, implemented at a national level, and built on existing systems, as appropriate. It was also agreed that reporting of summary information on how safeguards are being addressed and respected would take place periodically in national communications to the UNFCCC. Parties to the UNFCCC further agreed that as SIS are developed, relevant international obligations and agreements should be recognized and gender considerations respected.

Source: Peskett, Leo, and Kimberly Todd. UN-REDD Programme Policy Brief: Putting REDD+ Safeguards and Safeguard Information Systems Into Practice. *http://www.unredd.net/index.php?option=com_docman&task=doc_download&gid=9167&Itemid=53*

Jurisdictions may choose to use third party frameworks such as the REDD+ Social and Environmental Standards (REDD+ SES) (see Appendix 1), to guide decisions and options for meeting the UNFCCC safeguards requirements.

3.7.1 Relevance for level and location of a JNR program

Social and environmental factors are crucial to the benefits and success of a jurisdictional program, and must be considered when determining the level(s) and location(s) where a jurisdictional program may be implemented.

The willingness and capacity of communities or other local stakeholders in a region to participate in REDD+ is important, particularly if these stakeholders will have a role in the implementation of emissions reductions and/or removals generating activities or may be impacted by the program. Conversely, the areas where local stakeholders may be opposed to REDD+, and/or where civil or political unrest exists may be less suitable until these risks can be managed and communities can be effectively engaged. In addition to willingness and capacity to participate, cultural significance, the potential for poverty reduction and other social benefits must also be taken into account when prioritizing a location.

Consideration should be given to the capacity needed to coordinate stakeholder interactions (eg, consultations, and grievance and redress processes) and which organization(s) is appropriate to coordinate and/or directly engage with various stakeholders. The level of effort here will differ with the level of the program, as will the technical expertise required, though the latter will vary to a lesser degree.

Environmental factors will also help prioritize the location of a jurisdictional program. For example, a jurisdiction with high biodiversity value or important watersheds may be prioritized as either the location of a subnational jurisdictional program or location of specific strategies, policies or measures chosen to address drivers and underlying causes. Alternatively, the potential to carry out enhancement activities on degraded lands that may generate a number of environmental co-benefits could be another priority that is taken into consideration when deciding on the level and location of a jurisdictional program.

3.7.2 Relevance for choice of JNR scenario

All of the scenarios require stakeholder consultation and adherence to UNFCCC safeguard decisions during their development. Some stakeholders (eg, project developers, existing subnational jurisdictional programs, or those with forest tenure) may have strong views on the choice of scenario, whereas choice of scenario may be less of a priority for other stakeholders. Benefit sharing arrangements, which could differ between scenarios, are of interest to all stakeholders. Engagement of stakeholders that will be impacted by the program and that is done before design is complete should clearly articulate the differences between the different scenarios, including any impacts on rights to receive VCUs and any benefit-sharing or internal allocation program differences.

Scenario 1 on its own does not lend itself to targeting specific areas with particular social or environmental importance in the jurisdiction, however, stakeholders should be engaged in the jurisdictional baseline development process and encouraged to identify social and environmental

considerations. Ancillary rules or regulations would need to be developed within the jurisdiction to achieve specific social or environmental objectives. Even in this scenario, transparency should be safeguarded.

The design of programs under scenario 2 could ensure that safeguards are met and that specific social or environmental objectives are achieved in a number of ways. These may include, among others:

- The criteria used to approve nested projects or jurisdictional programs could be used to ensure that safeguards are met and exceeded through privileging certain activities over others. For example, project approval criteria may restrict projects to certain areas within a jurisdiction or require certain activities (eg, biodiversity conservation or poverty alleviation) to be carried out in order to be approved. This could help to avoid projects or programs being approved in areas where there is poor forest governance or where there are conflicting claims on the land.
- The design of additional strategies, policies or programs developed within the jurisdiction to address drivers and underlying causes. For example, riparian buffers could be expanded and catchment areas protected to reduce deforestation and expand forest cover close to watercourses and protect the watershed.
- The use of revenue generated from the jurisdictional program could be used to safeguard natural forests and biological diversity and enhance other social and environmental benefits. For example, a portion of the revenue generated by the jurisdictional proponent could be channeled towards poverty alleviation or other social programs in non-forest areas. Any decision on re-direction of funds should be made with full transparency and the participation of all stakeholders in view of the overall program's budget along with any impacts this may have on the buffer determination if the re-directed funds are not related to REDD+ (see Non-Permanence Risk and Natural Disturbances, in the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*).

Scenario 3 could aim to ensure that safeguards are met and to achieve specific social or environmental objectives in a number of ways, including the design of strategies, policies or programs and the use of revenue generated from the jurisdictional program discussed above for scenario 2.

3.7.3 Relevance for other aspects of jurisdictional program design

As noted above, stakeholder consultation is required in a number of aspects of the design of a jurisdictional program, including baseline development and development of a benefit-sharing or internal allocation program. For example, effective identification of rights holders to lands, territories and resources (REDD+ SES Principle 1) could have impacts beyond right of use to the design of the benefit-sharing system. Social and environmental considerations may also affect the choice and design of strategies, policies or programs used to engage agents and address drivers and underlying causes.

3.7.4 How to obtain the information

Information on social and environmental issues within a jurisdiction may be held by relevant government agencies, civil society, or academia. It might also be collected by the jurisdictional proponent or

implementation partners (eg, through surveys to check if the proposed JNR program or the REDD+ strategy(s) are acceptable to the communities and other stakeholders).

3.8 DECENTRALIZATION AND FOREST ADMINISTRATION

The degree to which decisions on forest management have been decentralized will be relevant to a number of key factors for JNR programs. The main indicators of decentralization include devolving power, authority, or decision making control to subnational levels (eg, state, province, or other subnational administrative jurisdictions). Decentralization can include forest administration, fiscal, and/or political decision making more broadly. Fiscal decentralization refers to budget control and autonomy. The degree of political decentralization will influence a jurisdictional government's ability to set policy and law and enforce them. Political centralization or decentralization of land-use policy and governance may be particularly relevant for jurisdictional REDD+ programs.

Forest administration refers to decision making authority over forests, regardless of whether this authority is held within the forest ministry or other branches of government.

3.8.1 Relevance for level and location of a JNR program

The degree to which a country is or is not decentralized may be important when deciding on which level to develop a jurisdictional REDD+ program. For example, if forest administration is centralized and therefore concentrated in a national entity, this may create challenges to implementing a subnational jurisdictional program without participation and support from the national entity. Conversely, if a country is highly decentralized, establishing a national jurisdictional program may be more challenging if some of the subnational forest administrators or politicians do not support forest conservation. In both examples the key consideration is whether or not there is sufficient power, authority, or decision-making control to successfully implement a jurisdictional REDD+ program at a particular level.

The degree of centralization or decentralization and forest administration is also relevant when deciding whether a jurisdictional boundary should be based on an ecoregion or administrative unit. For example, if a boundary follows an ecoregion that covers a number of different agencies each responsible for forest administration, close coordination and cooperation between those administering the forest will be important.

3.8.2 Relevance for choice of JNR scenario

The degree of decentralization will affect the choice of scenario differently depending on the level at which the jurisdictional program is being implemented. For example, in a highly decentralized country scenario 2 or 3 may be well suited to a subnational region that has a high degree of control over its forest estate, but could create complexities if implemented at the national level without the buy-in of important subnational jurisdictions. In this example it may be easier to apply scenario 1 nationally to promote a nationally consistent baseline and leave choice of lower-level scenarios to the subnational level. Alternatively, a highly centralized government may find national implementation of scenario 2 or 3 is

easier to implement, given that decisions on forest management are held primarily by national government.

As noted above, a key consideration in deciding the appropriate scenario and level is whether or not there is sufficient power, authority, or decision making control to successfully implement a particular scenario at a given level.

3.8.3 Relevance for other aspects of jurisdictional program design

The degree of decentralization may affect the choice and design of strategies, policies or programs used to address drivers and underlying causes. For example, a national strategy may be ineffectual if decision making authority on that subject matter rests at the local level.

Decentralization and forest administration may also influence a national level government's choice program boundary (see the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*.).

3.8.4 How to obtain the information

National and subnational legislation and regulations should indicate the degree of decentralization in a given country. Government officials, lawyers, civil society and academics working on these aspects of administrative law and policy should also be able to provide advice.

3.9 LOWER-LEVEL JNR PROGRAMS AND AFOLU PROJECTS

When a jurisdictional REDD+ program is developed there may already be lower-level jurisdictional REDD+ programs or AFOLU projects registered with VCS. The existence of jurisdictional programs and/or projects should be taken into consideration when designing a new jurisdictional program as the design of the higher-level program will impact the lower-level activities. Similarly if a jurisdictional program wants to promote nested jurisdictional programs or projects this should be considered from the start. Guidance on how the grandparenting rules are applied is found in in the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*.

3.9.1 Relevance for level and location of a JNR program

The *JNR Requirements* allow up to three levels of nesting – two jurisdictional levels and one project level. The jurisdictional levels may be national and subnational, although it is also possible to have multiple nested subnational programs. The presence of lower-level jurisdictional programs should be taken into account when deciding the next highest level of a jurisdictional program. This may include the possibility and implications of a higher-level jurisdictional program being developed. For example, if an existing subnational jurisdictional program (program A) is grandparented into a higher-level subnational jurisdictional program (program B) it may be possible for this arrangement to be superseded by an even higher national level program. If the national level program choses either scenario 1 or 2 the national program proponent will also need to decide the appropriate level for a subnational jurisdiction. This may be either the level of program A or program B (or another level), and any jurisdictional programs that do

not match this rule will need to be restructured (ie, absorbed into a higher-level program or broken up into two or more smaller programs) or discontinued.

3.9.2 Relevance for choice of JNR scenario

The choice of scenario can have a significant impact on lower-level programs or projects. For existing jurisdictional programs and projects these impacts include their adoption of the higher-level baselines (all scenarios), new rules for accounting for leakage (scenario 2), potential loss of right to receive VCUs directly from a VCS registry (scenario 3), application of new benefit- sharing or internal allocation programs (scenario 3), potentially new timing for receipt of benefits or allocated VCUs (scenario 3) amongst others. All of these changes may impact lower-level jurisdictional proponents' and project proponents' implementation, emission reductions and the financial profile of their program or project, particularly with respect to funders / buyers and internal management / benefit sharing with local stakeholders (see Section 3.3). See guidance on benefit-sharing in the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*.

If a jurisdictional proponent wants to promote the development of new nested programs or projects the choice of scenario may be important. If a jurisdictional proponent wants to allow direct crediting of VCUs to nested activities scenario 1 or 2 is most appropriate. Projects could potentially still receive VCUs under scenario 3, though this would require additional work by the jurisdiction to manage its own internal allocation approach re-allocating VCUs to these programs or projects.

Where multiple existing projects are present or where the carbon rights are tied to land tenure, a nested approach (scenario 2) may be appropriate. Jurisdictions choosing scenario 2 should develop clear guidance on any fees, revenue or credits that projects are required to provide to the jurisdiction, as this may also affect financial viability of projects.

In the case where a jurisdiction with existing projects chooses to adopt a JNR scenario 3 (with crediting only to the jurisdiction) the higher-level proponents should work closely with the lower-level proponents to manage the transition, as this may have material consequences for any long term VCU sale and purchase contracts the lower-level activity has entered into. Arrangements may need to be made via an internal allocation mechanism or another approach, where appropriate. The establishment of adequate safeguards to protect local beneficiaries after the transition may also be considered.

3.9.3 Relevance for other aspects of jurisdictional program design

Lower-level jurisdictional proponents and project proponents should be consulted when designing a new jurisdictional program. The lower-level programs and projects may be an important source of information and knowledge that could help with the design of the new jurisdictional program, including information needed to develop the baseline, insight on drivers, agents and underlying causes, which strategies, policies or measures have been effective, design of internal allocation or benefit-sharing mechanisms, among others.

3.9.4 How to obtain the information

Existing VCS jurisdictional programs and VCS projects will be registered (or listed in the pipeline) in a VCS registry. Some early stage projects may not yet be listed and other approaches may be needed to identify them. Some jurisdictions are considering requirements for projects to register with the state – providing a process to ensure all projects can be identified. Projects developed under other standards may be registered in other standard's registries.

3.10 DEMONSTRATING RIGHT OF USE

A jurisdiction needs to demonstrate right of use over the activities that reduce emissions or increase sequestration, and for which they will seek issuance of VCUs. The VCS documents *Program Definitions* and *VCS Standard* provide further detail on the definition of right of use and how it can be demonstrated.

3.10.1 Relevance for level and location of a JNR program and choice of JNR scenario

If a jurisdictional proponent is not interested in receiving VCUs then right of use requirements do not need to be met and scenario 1 or 2 may be the most appropriate.

If a jurisdictional proponent is interested in receiving VCUs the ability for the jurisdiction to demonstrate right of use is important and may influence the level, location and choice of scenario. Scenario 1 does not generate emission reductions and/or removals (and thus no VCUs), and is therefore not relevant, in this case.

In scenario 2, nested projects and jurisdictional programs are directly credited and responsible for demonstrating right of use in respect of emission reductions and/or removals generated and for which they seek to issue VCUs. Under scenario 2, jurisdictional proponents would only be required to demonstrate right of use for emission reductions and/or removals generated outside of (in addition to) projects. The ease or difficulty of doing so may help guide the level and location of a jurisdictional program. In many cases, right of use will be established through the implementation of laws, policies or regulations that establish the jurisdiction's right to VCUs, and this need not be spatially explicit. However, where scenario 2 is chosen, such laws, policies or regulations should also clarify when and how nested jurisdictions or projects have the right to claim emission reductions and/or removals (and therefore have right to the VCUs).

If there are existing REDD+ projects or subnational jurisdictional programs that have already established right of use, there should be an evaluation of how the new jurisdictional proponent can demonstrate right of use in registered subnational jurisdiction or project areas after the grandparenting period expires. Jurisdictional proponents may, for example, include right of use provisions in the benefit-sharing or internal allocation program they develop. Such provisions may include a recognition that the new highest level jurisdictional proponent is able to claim right of use, provided that a portion of the VCUs or other benefits are transferred to the lower-level jurisdictional proponent or project proponent. For example, Indonesia's Ecosystem Restoration Concession structure allows for the purchase of concessions granting carbon rights to Ecosystem Restoration Concession holders and existing projects.

3.10.2 Relevance for other aspects of jurisdictional program design

Right of use may be important when designing benefit-sharing or internal allocation programs in scenario 2 and 3, particularly if there are existing rights holders and potential for conflicting claims on right of use. Where laws are not fully developed and adopted, there may be the ability for more than one entity to claim right of use. This means that a jurisdictional proponent should ensure that there is written documentation on how right of use is substantiated for VCU issuance under the program. Conflicts between different groups claiming right of use and right to VCUs should be avoided or addressed transparently and fairly if they arise. This could be achieved through stakeholder consultation combined with clear government policy on ownership of carbon credits, and/or legally enforceable agreements between the local rights holders and the government dealing with rights. Such agreements could transfer the right to the jurisdictional program proponent give the proponent the right to sell the credits on behalf of the rights holder, with appropriate measures for ensuring just compensation.

The VCS does not allow issuance of VCUs corresponding to emission reductions and/or removals for which right of use is not demonstrated.

3.10.3 How to obtain the information

Jurisdictional proponents must be able to provide documentary evidence establishing right of use. The *VCS Standard* defines seven paths that a jurisdiction may take to demonstrate right of use.

Local and, in some cases, international lawyers should be consulted to assist evidencing right of use.

4 | TRANSITIONING BETWEEN SCENARIOS

Transitions between scenarios may take place voluntarily (eg, a jurisdiction may transition from scenario 1 to scenario 2 on its own accord), or they may be imposed by the actions of a higher-level program. This would occur when a higher-level program is registered with, or transitions to, a scenario that does not recognize the lower-level program (eg, a subnational program is registered and a national jurisdiction is later registered under scenario 3). Note that the scenarios were not necessarily designed for sequential progression from one to three– transitioning backwards or forwards between any of the scenarios is possible, depending on the unique situation in the jurisdiction.

The grandparenting rules apply *mutatis mutandis* to transitioning between scenarios – ie, if a jurisdiction transitions from scenario 1 to 3, registered projects would be grandparented following the grandparenting rules. See guidance on grandparenting in in the companion to this guide, *Technical Guidance for Jurisdictional and Nested REDD+ Programs*.

4.1 TRANSITIONING FROM SCENARIO 1 TO SCENARIO 2

Transitioning from scenario 1 to scenario 2 may take place as capacity or political willingness and public support to implement a more comprehensive jurisdictional REDD+ program changes over time. When moving from scenario 1 to scenario 2 the jurisdictional proponents will need to complete the documentation required for scenario 2, including the additional components not required under scenario 1. These include a jurisdictional program document (JPD) that will need to be validated. The baseline information from the existing jurisdictional baseline description (JBD) may be carried over to the JPD provided there are no changes to the baseline. The baseline would otherwise need to be updated, documented in the JPD and re-validated.

Implications for Lower-level Programs and/or Projects: Lower-level registered programs and/or projects will still be able to maintain their registration and ability to receive VCUs. They will however, need to work with the higher-level program to reconcile their monitoring data, and follow the other requirements set out by the higher-level program such as for leakage accounting. They will also need to prepare to adopt the jurisdictional baseline once the grandparenting period expires.

4.2 TRANSITIONING FROM SCENARIO 1 OR 2 TO SCENARIO 3

Transitioning from scenario 1 to scenario 3 may take place as capacity, or political willingness and public support to implement a more comprehensive jurisdictional REDD+ program, changes over time. When moving from scenario 1 to scenario 3 the JPD will need to be completed and validated. The baseline information from the existing JBD may be used in the JPD provided there are no changes to the baseline. The baseline would otherwise need to be updated, documented in the JPD and re-validated.

Moving from scenario 2 to scenario 3 is not recommended where existing projects or nested jurisdictional programs exist and would be significantly affected by being no longer eligible to receive direct crediting under scenario 3. Where transitioning from scenario 2 to 3, any benefit-sharing or internal allocation

program developed for scenario 2 may need to be revised and to take into consideration the lower level jurisdictions and projects inability to receive VCUs directly. The new JPD will need to be validated, though existing information from the original JPD may be carried over where it is still relevant.

Implications for Lower Level Programs and/or Projects: The transition to scenario 3 has greater implications for existing subnational jurisdictions or projects as they will no longer be able to directly receive VCUs and are considered “inactive” registered activities. Ideally, jurisdictions that wish to develop scenario 3 should start at scenario 3 rather than transitioning to it from scenario 2.

Jurisdictions envisioning a transition from scenario 1 or scenario 2 to scenario 3 should therefore make this intention clear as early as possible and work with the registered lower level program and projects to ensure the transition process and requirements are well understood by all stakeholders. This includes how right of use (including any necessary/relevant changes in carbon rights legislation and any potential conflicting claims) and benefit-sharing or internal allocation program design will be addressed, which subnational jurisdictional proponents and project proponents should be consulted in the design of. This should include participating in decisions on the form the benefits or incentives will take. For example, a jurisdiction transitioning to scenario 3 contains a pre-registered project that is one year away from updating its baseline (and therefore one year from the expiration of its grandparenting period). The project has already pre-sold credits or secured investment for a period of more than one year. In order for the project to fulfill its obligations to the buyer or investor under scenario 3, clear provisions for a transfer of VCUs from the jurisdiction to the project or other provisions to address this contractual obligation may be needed in the benefit- sharing or internal allocation arrangements developed by the jurisdiction.

4.3 TRANSITIONING FROM SCENARIO 3 TO SCENARIO 2

A jurisdiction may transition from scenario 3 to 2 to allow crediting directly to lower-level jurisdictions and/or projects or to further promote nested projects or jurisdictional programs. When moving from scenario 3 to scenario 2 a new JPD will need to be completed and validated, though existing information from the original JPD may be carried over where it is still relevant. New areas that will need to be completed include sections dealing with approval/no-objection and procedures for nested projects and programs, leakage, and monitoring data reconciliation. The benefit sharing mechanism may also need to be updated.

Implications for Lower Level Programs and/or Projects: If a national jurisdictional program moves from scenario 3 to scenario 2 subnational jurisdictions will have the opportunity to manage their own program and receive VCUs directly from a VCS registry. This will also require that the subnational jurisdictions manage all JNR program requirements, validate their JPD and submit on-going monitoring results. If a lower level jurisdiction or project was not receiving VCUs under the higher-level jurisdiction’s program, the lower level will likely need to start generating income from the issuance and sale of VCUs under its own subnational program or project.

5 | SELECTION OF RESPONSIBLE ENTITIES

There are four main types of entities who may be involved in the development of a jurisdictional program:

1. Jurisdictional proponent(s)
2. Jurisdictional approval authority
3. Authorized representative
4. Implementing partner(s)

All four of these are defined in the VCS *Program Definitions*.

In many cases, there will be more than one jurisdictional proponent, depending on how the jurisdictional program is managed and operated. It is recommended that the agency(s) acting as jurisdictional proponent has the technical expertise and capacity to carry out their required roles and responsibilities. This includes deciding which JNR scenario to follow, developing and periodically updating a jurisdictional baseline (all scenarios), deciding on rules and procedures for approving lower-level jurisdictions and projects (scenario 2), developing internal leakage accounting rules (scenario 2), developing a benefit sharing or internal allocation plan (scenario 2 and 3), carrying out monitoring and completing reporting requirements (scenario 2 and 3), requesting issuance of jurisdictional VCUs (scenario 2 and 3), selling VCUs (scenario 2 and 3), and managing the financial, legal and operational aspects of the jurisdictional program (scenario 2 and 3). Guidance on what is required to undertake each of these steps (except for selling VCUs) is contained elsewhere in this guidance document. The *JNR Requirements* are flexible on who can act as a jurisdictional proponent, allowing any organization or collection of organizations to fulfill the role of jurisdictional proponent where authorized as such by the jurisdictional government.

The *JNR Requirements* do not specify which ministry or agency within the government can act as a jurisdictional approval authority as this will likely differ between countries. It is expected that the jurisdictional approval authority should either have a legal mandate to perform this role (eg, a regulation or decree that nominates a particular government agency) or otherwise have legislated control or authority over relevant aspects of the jurisdiction covered by a jurisdictional baseline (including control over forest and environmental management). The JPD must document that the chosen proponent has such authority.

Implementing partners are any other organization or entity that is involved in the implementation of a jurisdictional program. For example, a government agency that is a jurisdictional proponent may choose to outsource some of the implementation in discrete areas to civil society or private sector organizations, or outsource some of the data processing needed for monitoring. Each of these could be considered implementing partners.

APPENDIX I: LIST OF RESOURCES

A.1 GENERAL

The Knowledge and Skills Needed To Engage In REDD+; A Competencies Framework

The REDD+ competencies framework is designed to be broad in scope, addressing ten thematic areas related to REDD+. The ten themes are: The Science of Climate Change and the Role of Forests; REDD+ Policies Under the UNFCCC; The Scale of REDD+: National and Sub-national Systems (Jurisdiction and Projects) and Nested Approaches to REDD+; REDD+ Readiness; Stakeholder Engagement; Elements and Perspectives on Free, Prior and Informed Consent (FPIC) Currently Discussed in the Context of REDD+; REDD+ Social and Environmental Safeguards; Measurement, Reporting and Verification (MRV); Jurisdictional Reference Levels; REDD+ Funding and Finance.

For each of these themes, it includes an overview of important knowledge, including the policy context, key terms, and key skills that are needed for more detailed engagement on that topic. This document is designed to be a broad reference and not a detailed manual on any of the themes. A list of references of specialized resources is provided for each theme.

Available at: http://theredddesk.org and http://www.iucn.org/

Re-Framing REDD+

This Earth Innovation Institute publication discusses jurisdictional REDD+ as a policy framework for low-emission rural development.

Available at: http://earthinnovation.org/wp-content/uploads/2013/09/reframing-redd.pdf

USAID LEAF Program Resources and Publications

The LEAF website includes a variety of resources (by topic, type or country) and tools related to technical capacity building focused on REDD+ and policy and market incentives for improved forest management and land-use planning.

Available at: http://www.leafasia.org/resources_tools

A.2 RIGHT OF USE / CARBON RIGHTS

The Little Book of Legal Frameworks for REDD+

Produced by Global Canopy Programme, this book highlights some of the steps that countries have taken through their legal framework to implement or prepare for implementation of REDD+, including addressing carbon rights.

Available at: http://www.globalcanopy.org/sites/default/files/LittleBookofLegalFrameworksforREDD+.pdf

Status of Forest Carbon Rights and Implications for Communities, the Carbon Trade, and REDD+ Investments

This brief by the Rights and Resources Initiative presents findings from a preliminary assessment of the status of communities' rights to carbon in 23 low and middle income countries, and examines the status of existing legal frameworks regarding indigenous peoples' and local communities' rights to trade forest carbon.

Available at: http://www.rightsandresources.org/documents/files/doc_6594.pdf

A.3 SOCIAL AND ENVIRONMENTAL

REDD+ Social and Environmental Standards (REDD+ SES)

The REDD+ SES provides a mechanism for country-led, multi-stakeholder assessment of REDD+ program design, implementation and outcomes to enable countries to show how internationally- and nationally-defined safeguards are being addressed and respected.

Available at: http://www.redd-standards.org

Guidelines on Stakeholder Engagement in REDD+ Readiness with a Focus on the Participation of Indigenous Peoples and Other Forest – Dependent Communities

Guidelines on stakeholder engagement developed by the Forest Carbon Partnership Facility and UN-REDD.

Available at: https://www.forestcarbonpartnership.org and http://www.un-redd.org

UN-REDD Programme Guidelines on Free, Prior and Informed Consent (FPIC)

The Guidelines outline a normative, policy and operational framework for seeking and obtaining FPIC in the context of REDD+.

Available at:

http://www.unredd.net/index.php?option=com_docman&task=cat_view&gid=2648&Itemid=53

A.4 SURVEYS

Tools and Resources to Assist with Use of CCB Standard (with particular focus on the Community Section)

Available at:
https://s3.amazonaws.com/CCBA/Tools/CCB_Standards_Tools%26Resources_December_2013+(1).pdf

Verified Carbon Standard methodologies

Methodologies that cover mosaic and frontier deforestation (VM0006, VM0007, VM0015) as well as projects that have deployed these methodologies.

Available at: http://www.v-c-s.org/methodologies and http://www.vcsprojectdatabase.org/

Rapid Rural Appraisal, Participatory Rural Appraisal and Aquaculture (Chapter 3)

Available at: http://www.fao.org/docrep/006/w2352e/W2352E03.htm#ch3

Participatory Subnational Planning for REDD+ and other Land Use Programmes: Methodology and Step-by-Step Guidance

Available at: http://www.fao.org/docrep/006/w2352e/W2352E03.htm#ch3

A.5 BASELINES

IPCC GPG LULUCF

Chapter 2 provides three approaches for representing land area that may be used to estimate the activity data required to determine historical GHG emissions reductions and/or removals.

Available at:

http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf_files/Chp2/Chp2_Land_Areas.pdf

The GOFC-GOLD Sourcebook

Section 2.2 provides detailed steps on how to estimate historical GHG emissions reductions and/or removals using remote sensing imagery.

Available at: http://www.gofcgold.wur.nl/redd/sourcebook/GOFC-GOLD_Sourcebook.pdf

Project Developer's Guidebook to VCS REDD Methodologies, Version 2.0, February 2013

This contains a detailed analysis and discussion of project-level baseline methodologies, some of which could be drawn from when developing jurisdictional baselines.

Available at:

http://www.conservation.org/global/carbon_fund/Documents/Guidebook_VCS_REDD_methodologies_lowres.pdf

Decision Support Tool for Developing Reference Levels for REDD+

A 2012 tool from Winrock International that helps to decision-making regarding the construction of RELs/RLs based on the scope, scale, forest definition and particular national circumstances.

Available at:

http://www.leafasia.org/library/decision-support-tool-developing-reference-levels-redd

A.6 REMOTE SENSING DATA

Global Land Cover Facility (GLCF)

The GLCF develops and distributes free remotely sensed satellite data and products that explain land cover from the local to global scales.

Available at: http://landcover.org/data/helpme.shtml

Global Forest Change

Published by M.C. Hansen et al. (University of Maryland), these high-resolution maps were created by Earth observation satellite data depicting global forest loss and gain between 2000 and 2012 at a spatial resolution of 30 meters. Available at: http://earthenginepartners.appspot.com/science-2013-global-forest

A.7 MONITORING AND REPORTING

REDD+ Manual for Measuring, Reporting and Verification (MRV)

This manual offers a general review of data, models, techniques, and methods for accounting that should or could form part of a REDD+ MRV program at the national or subnational level, or at the level of projects.

Available at: http://www.fcmcglobal.org/mrvmanual.html

Resources for community monitoring

- The Dutch Development Cooperation financed a study and a capacity building program entitled "*Kyoto: Think Global, Act Local*". Among other things, the program explores the possibilities and potential for community forest management in exisiting natural forests. Its webpage includes a wide variety of publications, reports and books on community monitoring. Visit: http://www.communitycarbonforestry.org/CFM%20CFF%20CF.html
- *Open Data Kit* is a series of free tools and open code that helps organizations elaborate, present and manage solutions for mobile data gathering such as: i) elaboration of formulas for data gathering or surveys, ii) data gathering from a mobile phone and sending to a server, iii) adding gathered data to a server and extracting it in a useful form. Visit: http://opendatakit.org/
- *Crowd Map* is an open code framework that supports monitoring through use of simple text messages from a cell phone. Visit: https://crowdmap.com