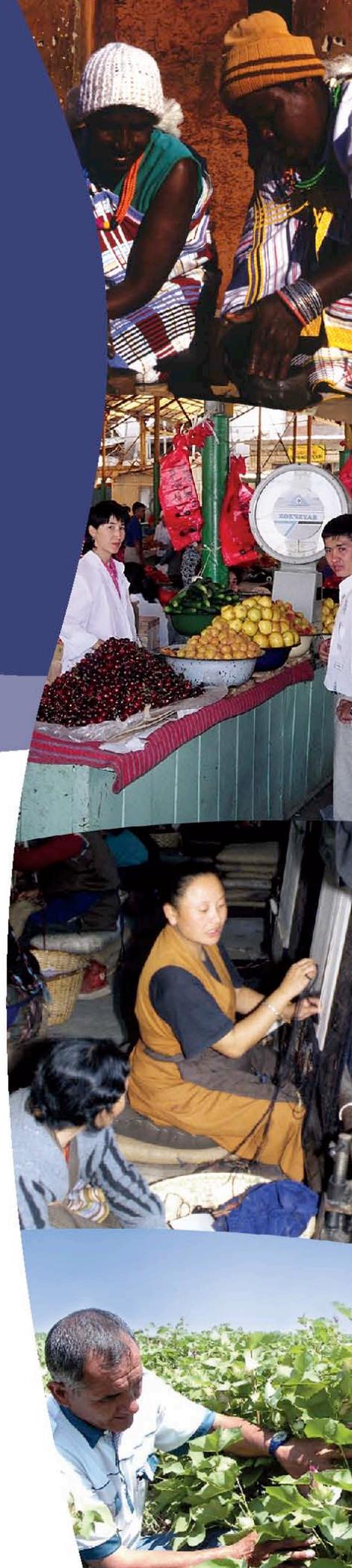


# FIELD Report No. 16: GUIDANCE AND BEST PRACTICES FOR REDD+ TRANSACTIONS

Produced in collaboration with the  
FIELD-Support LWA



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# FIELD Report No. 16

## Guidance and Best Practices for REDD+ Transactions

January 2013

### Lead Authors

**Kevin Brennan, Terra Global Capital**

**Leslie Durschinger, Terra Global Capital**

The report was developed with support from Terra Global Capital team members Terry Vogt and Mark Lambert.

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# Acronyms

ACR	American Carbon Registry
ARR	Afforestation, Reforestation and Revegetation
CAR	Climate Action Reserve
CCB	Climate Community and Biodiversity
CDM	Clean Development Mechanism
CP	Conditions Precedent
CSR	Corporate Social Responsibility
DCA	Development Credit Authority
ERPA	Emission Reductions Purchase Agreement
EU	European Union
FAO	US Food and Agriculture Organization
GHG	Greenhouse Gas
IETA	International Emissions Trading Association
IFM	Improved Forest Management
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
MIGA	Multilateral Investment Guarantee Agency
MOU	Memorandum of Understanding
MRV	Monitoring Reporting and Verification
NDA	Non-Disclosure Agreement
NGO	Non-Governmental Organization
NTPF	Non-Timber Forest Products
OPIC	Overseas Private Investment Corporation
PD	Project Document
QA	Quality Assurance
QC	Quality Control
REDD	Reducing Emissions from Deforestation and Forest Degradation
REL	Reference Emission Level
SPV	Special Purpose Vehicle
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit

# Preface

This paper, as developed by Terra Global Capital, is meant to serve as a readable guide for projects seeking guidance and best practices for REDD+ transactions, with a focus on private sources of REDD+ project financing.

“REDD” refers to the emissions reductions achieved from reducing deforestation or forest degradation in developing countries. Through REDD, emissions reductions through stored carbon are measured and certified as credits that can be sold on global carbon markets. “REDD+” expands that definition to include conservation, sustainable management of forests and enhancement of forest carbon stocks.<sup>1</sup>

While markets have successfully tied carbon finance to other sectors, securing private investment remains a key challenge for REDD+ project developers. In many cases, project developers lack familiarity with standards and expectations for commercial documents required by investors. This paper is intended to address that gap.

The paper has been funded by the U.S. Agency for International Development through the FIELD-Support Leader with Associates, managed by FHI 360.

## The Role of REDD+ in Carbon Finance

In 2011, the value of the global carbon market climbed to US\$176 billion, with a total of 10.3 billion tons of CO<sub>2</sub> traded.<sup>2</sup> Of the \$176 billion, \$23 billion was from compliance and voluntary offsets. The size of global voluntary carbon markets (which are exclusively offsets) in 2011 was \$569 million, of which 13% is indicated to be pre-compliance buyers and 23% from forestry.<sup>3</sup> Voluntary offsets are used by corporations and consumers to reduce emissions for their activities or products purchased. For example, individual air travelers may purchase carbon offsets to compensate for CO<sub>2</sub> emissions from their flights, or companies may purchase offsets to achieve corporate greenhouse gas (GHG) emissions targets.

According to UN-REDD, “Deforestation and forest degradation, through agricultural expansion, conversion to pastureland, infrastructure development, destructive logging, fires etc., account for nearly 20% of global greenhouse gas emissions, more than the entire global transportation sector and second only to the energy sector.”<sup>4</sup>

In response, REDD+ offers a mechanism for placing a market value on the carbon stored in forests, thereby providing an incentive for conservation in developing countries. Over the past decade, a small but growing voluntary and pre-compliance market for emission reductions from forest and land-use (including avoided deforestation, afforestation/reforestation, improved forest management and agricultural land management activities) has developed. The first REDD+ voluntary credits were issued in February 2011, and, the first forestry credits under the Kyoto Protocol were issued in April 2012. Although assets from land-use carbon projects have been excluded from most compliance markets to date, prospects appear to be improving for increased demand in the future, in light of new markets in Australia and California, among other factors.<sup>5</sup>

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<sup>1</sup> For further introduction, see UN-REDD Programme: <http://www.un-redd.org>.

<sup>2</sup> World Bank, “State and Trends of the Carbon Market 2012,” May 2012.

<sup>3</sup> Ecosystems Marketplace/Bloomberg, “State of the Voluntary Carbon Market 2012,” May 2012.

<sup>4</sup> UN-REDD website.

<sup>5</sup> World Bank, “State and Trends of the Carbon Market 2012,” May 2012.

### **The Link to Livelihoods**

The emerging market for carbon offsets that places a value on REDD+ activities brings new economic opportunities for poor households in developing countries to benefit from building their stock of “natural capital” through management of forests. Accessing the carbon market for land-use credits can create new income flows for the rural poor who maintain or increase their carbon stocks.

However, this transformative potential cannot be fully realized until issues of high transaction costs and how to create the short-term incentives for households and communities to address drivers of deforestation are resolved. Income from carbon takes time to mature, and future revenues are uncertain, yet communities are often asked to invest immediately in activities to reduce their use of the forest and to collect the monitoring data that are needed to build carbon assets. Often multiple layers of NGOs, governments, and other interested players come between the communities and the process of generating and selling carbon. Existing top-down approaches only add to the cost of carbon transactions and serve to undermine the incentives for wider participation. However, the sustainability of bottom-up approaches has not yet been fully proven. Although the intersection of community-based livelihoods and REDD+ is not a focal point of this paper, a future FIELD-Support publication will explore the state of the practice in this area.

# Introduction

This paper provides guidance on how REDD+ projects can prepare to approach private investors, to familiarize projects with the types of transactions that can be used to gain funding, and to provide support for ensuring they can negotiate investment terms from a position of strength.

The primary focal areas of this paper are i) tailoring Emission Reductions Purchase Agreements (“ERPAs”) for REDD+ project validation under Verified Carbon Standard (“VCS”) and Climate Community and Biodiversity (“CCB”) standards, and ii) ways to create and effectively structure financial mechanisms for REDD+ projects, with economic and political incentives that ensure long-term sustainability.

Important note on terminology used through the document:

- REDD+ initiatives being prepared for transacting are referred to as “projects.” In this document, that term is used to refer to projects created using today’s project-based carbon accounting, as well as “programs” that include projects nested within future jurisdictional accounting and crediting frameworks. Generally, the same principles will apply in the project characteristics, due diligence process and structures required for interaction with investors.
- Finance provided to a project through equity or ERPA pre-pay is referred to as investment funding, with the provider referred to as an equity investor or ERPA pre-pay investor.
- The entity responsible for the project and its control is referred to as the “project proponent,” defined by the Verified Carbon Standard (“VCS”) as “the individual or organization that has overall control and responsibility for the project, or an individual or organization that together with others, each of which is also a project proponent, has overall control or responsibility for the project.” Further, the project proponent must demonstrate “right of use” of the emission reductions generated by the project. There are a number of ways that project proponents may do so, but for REDD+ projects right of use will likely often be demonstrated by meeting the following definition: “a right of use arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or removals (where such right includes the right of use of such reductions or removals and the project proponent has not been divested of such right of use).”
- The project entity selling carbon credits will be referred to as the “seller,” and its legal structure as the “seller’s entity.” Often, a legal entity is set up on behalf of the seller, which handles the operations of the project and the management of the finances.

# Developing Investment Grade REDD+ Projects

REDD+ projects seeking private sector investment must be prepared to demonstrate:

- Commercial viability: Project revenue will cover project costs and provide returns for investors.
- The project's ability to achieve registration and deliver emission reductions on a predictable schedule. A project that can demonstrate such commercial viability, while also meeting risk/return requirements of a typical investor, can be referred to as being "investment grade." The ability to develop an investment grade project is most relevant for projects that seek upfront funding from an investor, but it may also be required by buyers who are making commitments to purchase future credits.

Investors typically vary in motivation for investing, experience in the REDD+ sector, return requirements, appetite for risk and process for gaining investment committee approval. However, all prospective investors will need to assess a project's risk and return in order to develop an investment proposal. The higher the level of commercial preparedness that a project can demonstrate to a prospective investor, the more likely the project will be to attract favorable investment terms. It is crucial that project proponents understand as much as possible about the motivations and appetite of the investor, including their investment criteria and the amount of funding available.

When a project begins discussions with potential investors, proponents should be prepared to demonstrate the commercial viability of the project under a number of key criteria, referred to as "investment readiness criteria." These requirements are listed below. See the summary box at the conclusion of each sub-section for recommendation as to the most important aspect(s) for a project to be considered investment grade under each criteria.

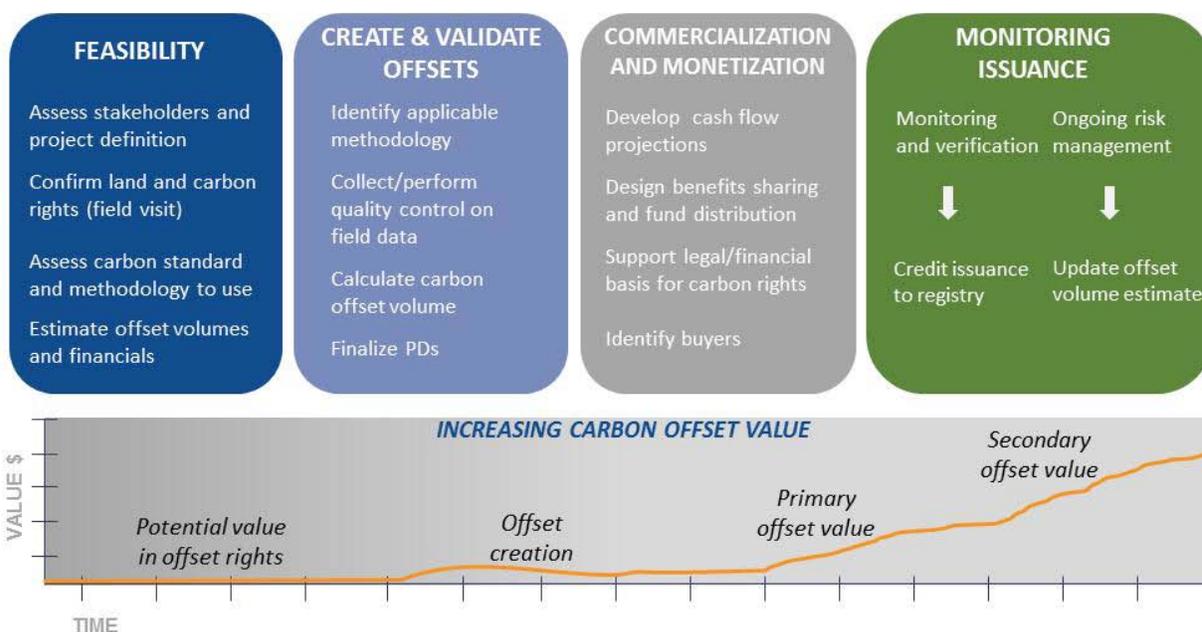
## Investment Grade Requirements: Developing Investment Readiness

- Stage of Carbon Asset Development
- Market Standards and Methodology
- Project Partners' Capacity and Sellers' Entity
- Project Plan Alignment with Emission Reductions and Livelihoods Improvements
- Land Tenure and Carbon Rights
- Financial Projections Over Project Life
- Community and Stakeholder Engagement
- Benefits Sharing and Funds Management

### *Stage of Carbon Asset Development*

Carbon project development is an intricate process with multiple stages, through which risk decreases as probability of successful registration increases. As risk is reduced over time, the project's ability to negotiate favorable price and investment terms increases.

The following table shows the characteristics of different stages of carbon asset development over time and the key criteria needed for each stage:



**Figure 1. Stages of Carbon Asset Development**

### Investment Grade Requirement – Stage of Carbon Asset Development

Investors will require projects to have completed a full feasibility study that confirms key aspects of the project definition, stakeholders and potential for carbon asset development (all explored in further detail below).

The value line at the bottom of Figure 1 illustrates how the value of carbon offset appreciates with project development. It also shows how, once the project has reached the issuance stage, the secondary offset value will increase further with sound on-going implementation and delivery in line with estimates.

## Market Standards and Methodology

### Carbon Accounting Standards

Emissions reductions are measured using independent carbon accounting market standards with third party independent validation to ensure the robust, accurate, and transparent measurement of real and additional emission reductions. In the forest and land-use carbon sector, three main standards have emerged for voluntary offsets and pre-compliance offsets:

- Verified Carbon Standard (“VCS”);
- Climate Action Reserve (“CAR”) (note that this standard applies to the US only);
- American Carbon Registry (“ACR”).

Other available standards, listed within Figure 2 below, are either regionally or compliance-specific, or risk being perceived as lesser to those listed above. In compliance markets, forest carbon accounting standards have not yet been defined, except for Afforestation/Reforestation methodologies permitted

under the UN's Clean Development Mechanism (CDM). The VCS defines three different forest carbon project types:<sup>6</sup>

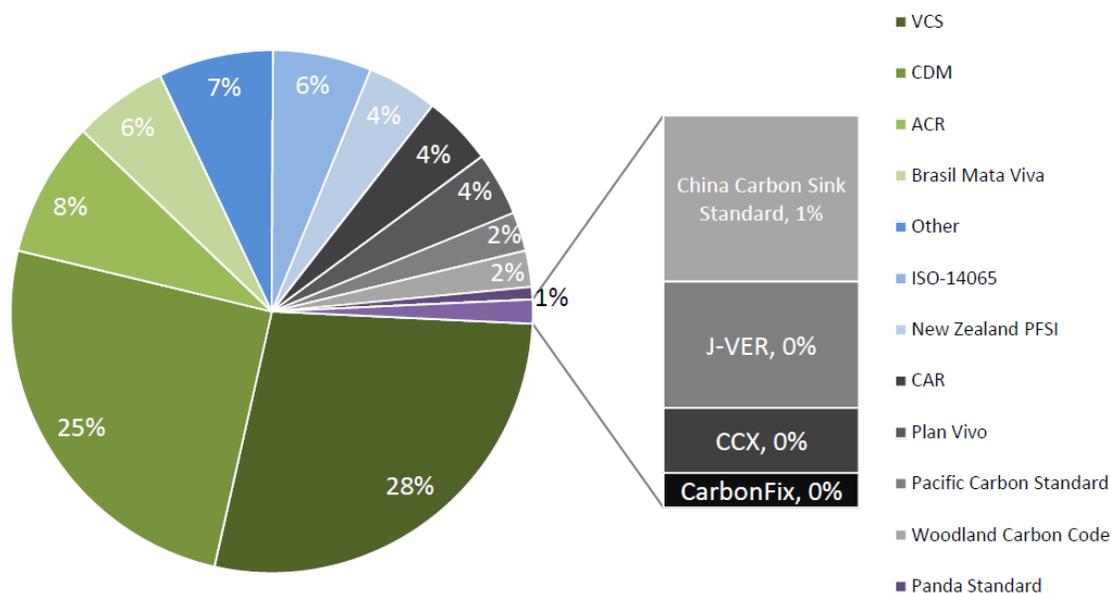
- **Afforestation, Reforestation and Revegetation (“ARR”)**: Eligible ARR activities are those that increase carbon sequestration and/or reduce GHG emissions by establishing, increasing or restoring vegetative cover (forest or non-forest) through the planting, sowing or human-assisted natural regeneration of woody vegetation. Eligible ARR projects may include timber harvesting in their management plan. The project area shall not be cleared of native ecosystems within the 10 year period prior to the project start date.
- **Improved Forest Management (“IFM”)**: Eligible IFM activities are those that increase carbon sequestration and/or reduce GHG emissions on forest lands managed for wood products such as sawtimber, pulpwood and fuelwood by increasing biomass carbon stocks through improving forest management practices. The baseline and project scenarios for the project area shall qualify as forests remaining as forests, such as set out in the Intergovernmental Panel on Climate Change (“IPCC”) 2006 Guidelines on National Greenhouse Gas Inventories, and the project area shall be designated, sanctioned or approved for wood product management by a national or local regulatory body (e.g. as logging concessions or plantations);
- **Reduced Emissions from Deforestation and Degradation (“REDD”)**: Eligible REDD activities are those that reduce net greenhouse gas emissions by reducing deforestation and/or degradation of forests. Deforestation is the direct, human-induced conversion of forest land to non-forest land. Degradation is the persistent reduction of canopy cover and/or carbon stocks in a forest due to human activities such as animal grazing, fuelwood extraction, timber removal or other such activities, but which does not result in the conversion of forest to non-forest land (which would be classified as deforestation), and qualifies as *forests remaining as forests*, such as set out under the “IPCC 2003 Good Practice Guidance.” The project area shall meet an internationally accepted definition of forest, such as those based on United Framework Convention on Climate Change (“UNFCCC”) host-country thresholds or U.S. Food and Agriculture Organization (“FAO”) definitions, and shall qualify as forest for a minimum of 10 years before the project start date. The definition of forest may include mature forests, secondary forests, and degraded forests. Under the VCS, secondary forests are considered to be forests that have been cleared and have recovered naturally and that are at least 10 years old and meet the lower bound of the forest threshold parameters at the start of the project. Forested wetlands, such as flood plain forests, peatland forests and mangrove forests, are also eligible provided they meet the forest definition requirements mentioned above.

Across these standards, most investors and project developers have over the past three years come to recognize the VCS as the standard that creates the highest quality credits. This has been in part a result of increased investor confidence in the VCS's approach to accounting for the risk of non-permanence in a REDD+ project.<sup>7</sup> The chart in Figure 2 below shows market share by type of standard for forest and land-use carbon projects. VCS is most favored, by a considerable margin when compared to all other non-compliance standards (i.e. excluding the CDM).

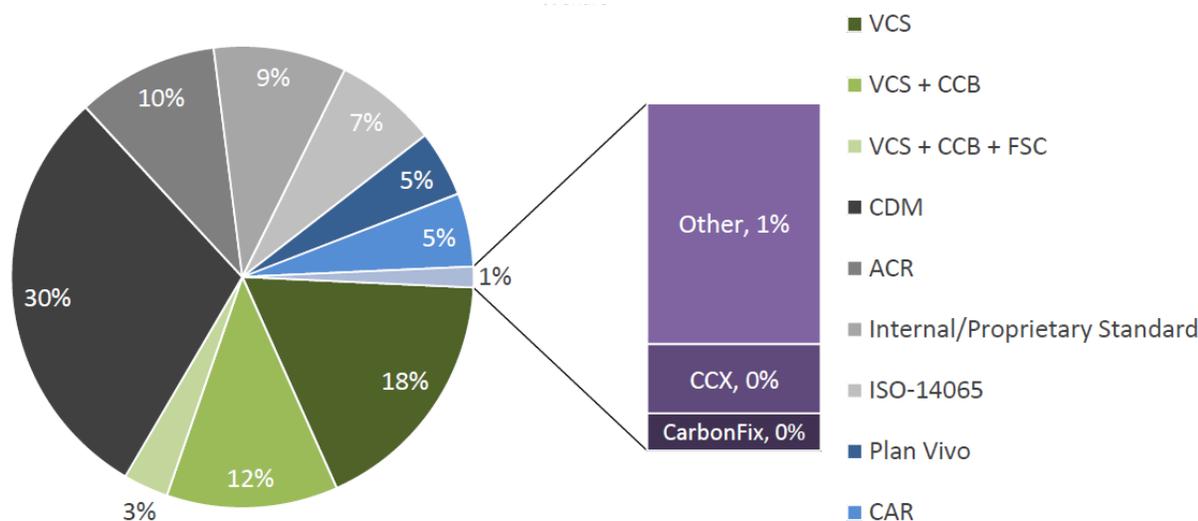
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<sup>6</sup> VCS (2012) Agriculture, Forestry and Other Land Use (AFOLU) Requirements. Accessed at [http://v-c-s.org/sites/v-c-s.org/files/AFOLU%20Requirements%20v3.3\\_0.pdf](http://v-c-s.org/sites/v-c-s.org/files/AFOLU%20Requirements%20v3.3_0.pdf)

<sup>7</sup> Non-permanence refers to removal of emissions reductions achieved because of forest area being destroyed by disease, human destruction or natural disaster.



**Figure 2. Market Share for Domestic and International Standards, State of the Forest Carbon Market 2012 (p.v)**



Source: Ecosystem Marketplace. Note: Based on 618 observations.

**Figure 3. Market Share for Independent plus Major Co-Benefits Standards, State of the Forest Carbon Market 2012 (p.30)**

By relying on VCS standards, investors can ensure that the credits in which they are investing meet the highest environmental standards. While it is possible that some investors would accept other carbon accounting standards, the use of standards other than the VCS is likely to limit a project’s attractiveness and investor universe.

### Community and Biodiversity Standards

The activities of REDD+ projects have the opportunity to positively impact communities, biodiversity and the ecosystem of the project area. These benefits are achieved at the same time as emissions reductions and so are referred to as “co-benefits.” Well-designed REDD+ projects have the opportunity

to ensure the result of numerous co-benefits to optimize sustainable development achieved through the project. Standards have emerged to assess co-benefits, typically used alongside the emissions reduction standard.

The Climate Community and Biodiversity standard (CCB) is a third party-validated standard that—when combined with strong carbon accounting standards such as the VCS—provides several environmental safeguards and generates social benefits.

Under the CCB, project proponents must show that a project results in net benefits to communities involved in the project. Metrics include: income, employment generation, health, market access, access to schools, food security and education. Additionally, a demonstration that no High Conservation Value areas will be negatively affected is required under the standard. This means that no areas fundamental to the community sources of food, fuel, buildings and cultural identity will be harmed by the project. Biodiversity impacts are as important as community impacts under the CCB. The standard necessitates a net positive effect on biodiversity in the project zone and during the project's lifetime. The CCB standard has an option for a “gold level” certification, which recognizes projects with superior results in climate change adaption, community benefit and/or biodiversity benefits.

There is now a mechanism to tag VCS credits with other certifications, including the CCB. When verified together, the resulting Verified Carbon Units (VCUs) issued under the VCS will be “tagged” with the CCB certification, meaning that the project generating the VCUs has also met the requirements under the CCB. Most investors value the linked credits, as this dual validation demonstrates the social and environmental benefits of the emission reduction. They also value the risk-reducing benefits of CCB validated and verified project because it means validation and verification, which ensures communities have been properly engaged and livelihoods are being enhanced by the project.

### **Emerging Jurisdictional Accounting Standards**

Guidelines are emerging from the VCS and other programs on how to perform carbon accounting for forest and land-use emission reductions on a jurisdictional scale, both with and without “nesting.”<sup>8</sup> A simple explanation for this trend is that market participants and governments expect countries to adopt uniform carbon accounting standards that “nest” or embed individual carbon projects within national or sub-national political jurisdictions (i.e. states or provinces).

Given that emerging compliance programs, such as the UNFCCC and California, have adopted REDD+ approaches that will operate at a jurisdictional rather than project scale, investors recognize the importance of a project being able to demonstrate how it can transition into the national or sub-national (state or province) REDD+ program within the host country. Ideally, how a project would fit into or nest within a larger jurisdictional REDD+ program would be defined by the program rules.<sup>9</sup> These rules will be set by the REDD+ host government and/or by the compliance program into which the REDD+ offsets would be accepted. However, the detail of these program rules is still largely undefined, and currently there are no fully defined and functioning jurisdictional accounting standards. Nevertheless, investors are likely to evaluate the ability of a project to move into a future jurisdictional program because returns could be impacted significantly. This would be the case if, for example, the host country implements a REDD+ jurisdictional program that forces the project to adopt a jurisdictional baseline which is different from the baseline validated by the project. Another example is if when a new jurisdictional REDD+ program is implemented the rules prescribe that credits generated by the project

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<sup>8</sup> See the draft Jurisdictional and Nested REDD+ (JNR) Requirements available at <http://v-c-s.org/sites/v-c-s.org/files/Jurisdictional%20and%20Nested%20REDD%2B%20Requirements%2C%20v3.0.pdf>

<sup>9</sup> See California Legislation AB 32 (95993) at <http://www.arb.ca.gov/regact/2010/capandtrade10/finalfro.pdf#page=152>

are no longer owned by the project but instead by a centralized and government-controlled “benefits sharing” arrangement.

Assessing the risk of a project’s carbon asset loss resulting from establishment of a jurisdictional REDD+ program cannot be done easily, but investors will evaluate:

- the level of involvement the host country has in the World Bank Forest Carbon Partnership Fund and UN-REDD;
- the state of development of reference emission levels (REL) and monitoring reporting and verification (MRV) processes within the country/jurisdiction;
- the government position regarding carbon rights and mechanics of offset issuance;
- the project’s agreements with governments and any terms for grandfathering.

Often, imperfect information makes it difficult for investors to clearly assess this risk, and therefore it is beneficial for proponents to be prepared to provide necessary information to support the investor’s assessment. A project can demonstrate certain qualities to investors related to its ability to move into jurisdictional accounting. These include:

- clauses in the government approval documents that support grandfathering of the project into the jurisdictional REDD+ program;
- using a baseline that covers an entire state or province;
- incorporating elements of the VCS jurisdictional technical guidance in the carbon accounting.

All of the above will reduce the risk that credits generated by the project will be jeopardized if the project is brought under a jurisdictional REDD+ program.

### **Methodology Selection**

To use a VCS methodology, projects must demonstrate that they meet the applicability criteria defined in that methodology. Thus—beyond the project type—the choice of methodology will depend primarily on the ability of a project to meet that methodology’s criteria. As the market continues to develop, projects will have a choice among multiple methodologies when developing project documents. Investors generally will not prescribe the methodology that a project should use, but as the market matures, they will look for projects that are using methodologies that have already demonstrated robust carbon accounting procedures because this “track record” will assure investors as to the variability of emission reductions verified.

### **Project Partners’ Capacity and Sellers’ Entity**

Whether or not an investor will engage in a REDD+ transaction depends on an evaluation of the risks that the project will deliver in accordance with the terms of the investment contract. Private sector investors will favor engaging with clearly defined project developers and project proponents that offer clearly defined projects as investment opportunities. Investors will also evaluate the capacity of the project proponent, key implementing partners, and the carbon developer in determining capacity to deliver.

Under the VCS, the project proponent is the entity with the “right of use” of the emission reductions generated by the project.<sup>10</sup> There are a number of ways that project proponents may demonstrate right of use, but for REDD+ projects right of use will likely often be demonstrated by meeting the following VCS definition: “a right of use arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or

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<sup>10</sup> Defined by the VCS as being the body that establishes and operates a project.

removals (where such right includes the right of use of such reductions or removals and the project proponent has not been divested of such right of use).”

### **Investment Grade Requirement – Market Standard**

Over the last 3 years, investors have recognized the VCS as the standard that will create the highest quality forest and land-use credits. With the ability to link VCS and CCB credits, most investors will look for dual VCS/CCB certification as this demonstrates social and environmental benefits of the project and reduces overall risk by ensuring proper community consultation and livelihood development.

Projects should prepare information regarding the country’s or the sub-national jurisdiction’s level of readiness to implement jurisdictional accounting. Projects should also include clauses in their agreements with the government that ensure the grandfathering of the project into any future jurisdictional REDD+ programs.

While project proponents must demonstrate to investors that they have right of use to emission reductions, they may not be the main entity responsible for actual implementation of project activities. If the proponent is not the main implementation entity, then the investor will look to the capacity of the project partners responsible for implementation. What will matter is that the project team, in total, has the capacity to manage the implementation of the project and the delivery of verified emission reductions.

Investors always undertake due diligence on investment projects (covered in greater detail in the Preliminary Project and Investor Evaluation section, below) and will look into the role of each project partner to assess:

- the organization(s) that will manage the implementation of activities that produce the reduction in emissions, and whether they have a proven track record;
- the organization managing the carbon development process including field data QA/QC, carbon calculations, project documents, management of the validation and verification process, and their track record for working with market standards;
- the organization managing the financial aspects of the project ensuring that carbon revenue and funding gets to the implementing organizations and is distributed in accordance with benefits sharing agreements;
- other partners involved and the activities they support.

Once the investor understands the ability of project partners to deliver, investors will want to see that there are clear roles and responsibilities defined between partners within a detailed work plan that clearly defines which entity is responsible for delivering what activity. The budget allocation to each partner will need to be aligned with each of the activities they will deliver and investors will want to see that legal contracts and/or service agreements are in place that hold project partners accountable for their detailed activities. This means that agreements between partners should include annexes with detailed project plans and budgets.

## Investment Grade Requirement – Project Partners’ Capacity and Seller’s Entity

For projects to demonstrate they have a capable team, they will need to detail the activities that each partner will deliver and demonstrate that they have the capacity to meet these requirements. There must also be legally binding agreements covering detailed activities and budgets, holding each partner responsible. The project proponents must be able to produce evidence of their “right of use,” or the ability to secure it early in the project cycle.

While project proponents must demonstrate to investors that they have right of use to emission reductions, it is possible they may not be the main entity responsible for actual implementation of project activities. If the project proponent is not the main implementation entity, then the investor will look to the capacity of the project partners responsible for implementation. What will matter is that the project team, in total, has the capacity to manage the implementation of the project and the delivery of verified emission reductions.

### *Project Plan Alignment with Emission Reductions and Livelihoods Improvements*

Central to an investor’s risk assessment of a project is that project’s ability to demonstrate that the activities included in the project plan will actually produce the emission reductions that are planned. Many projects lack the required level of detail in the project plan or fail to align the planned activities with those required to produce emission reductions.

Investors will look to see that there is a long-term plan (covering the crediting period or longevity period) detailing each of the activities being implemented. The design of the project will be evaluated to ensure that the emission reductions can be generated and that project implementation risk has been minimized.<sup>11</sup> For REDD+ projects, it is imperative to be able to demonstrate a detailed understanding of the drivers, agents, and underlying causes of deforestation and how each is addressed through the planned activities. In addition, the project plan should also show how communities in and around the project area are or will be engaged, and how livelihood-specific activities will be implemented. In cases where the drivers of deforestation are driven by livelihood needs, project activities must demonstrate how alternative livelihoods will be developed to ensure the drivers can be successfully reduced and agents of deforestation improve their livelihoods.

Project plans should have each activity detailed year by year, with the responsible project partner identified. Plans must also articulate the quantitative metrics for implementation, which for REDD+ activities include:

- number of sign posts or boundary markers installed;
- hectares of fire breaks to be established;
- hectares of assigned natural regeneration to be undertaken;
- number of grants provided to communities for conservation agriculture.

An excerpt from a REDD+ project plan is presented in Appendix A – Excerpt from a REDD+ Project Plan.

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<sup>11</sup> Crediting period is the number of years a project will register to produce emission reductions (20 – 100 years under VCS, with 30 years a typical time period used) and longevity is “the number of years that project activities will be maintained, which may be longer than the project crediting period where projects can demonstrate that activities that maintain carbon stocks on which GHG credits have previously been issued will continue beyond the project crediting period.”

## Investment Grade Requirement – Alignment of Project Plan with Emission Reductions and Livelihoods

A detailed project plan must be developed for at least the project's crediting period. The plan should use quantitative metrics to detail all actions that will be undertaken to generate emission reductions and support communities. For mosaic REDD+ Projects, these plans generally have 200-400 line items with all the program details and metrics for implementation targets.

### *Land Tenure and Carbon Rights*

Understanding the relevant legal and land tenure framework of the host country is the only way that investors can confirm that project proponents have rights to develop a project and that the benefit sharing arrangements are aligned with natural resource tenure. It is also the basis for determining carbon ownership and how the carbon rights will be secured. Many investors, however, are inexperienced with the legal and tenure frameworks of the developing countries that often host REDD+ projects, and thus will need education and supporting documentation on these topics. Demonstrating land tenure may also be difficult because securing land tenure may be a key project activity; thus, it may not be completed at the time investment is needed.

For projects to demonstrate who has land tenure, they should produce a clear and detailed report on the land ownership and land/natural resource tenure of the project, with references to the supporting local laws. This would include producing the country-specific documents that demonstrate the land tenure. The analysis should demonstrate who owns the land, who has rights to live on the land and who has rights to use the natural resources and under what conditions. It should also detail any contractual agreements that are in place to transfer rights for either management of land, development of carbon or carbon rights. Any legal processes related to establishing a carbon project in the host country should also be included.

With respect to carbon ownership, the UN's *Bringing Forest Carbon Projects to Market* report clearly re-enforces the importance of securing carbon rights: "First, only the owner or owners of these credits may legitimately sell them and thereby receive the resulting income directly. Ownership of the credits and how they are distributed between project contributors will guarantee the fairness and long-term viability of the project."<sup>12</sup>

Since very few REDD+ host countries have clear legislation specifying who owns carbon for each of the relevant land tenure systems in the country, a "belt and suspenders" approach should be used to secure carbon rights. This approach is meant to identify any potential actor who could have a claim on carbon and then, through contractual agreements, assign ownership (or long-term usage rights) to the seller's entity.

The seller's entity is the legal entity that will execute the investment agreements on behalf of the project, in addition to being assigned legal ownership of the carbon, and it will often support the aggregation of multiple smaller project proponents into one. The legal form of the entity will vary depending on the country, land tenure, project proponent and other factors. It can also be the government (national or local), or another entity established in the host country or internationally. The entity can be established under any allowable form in the jurisdiction, whether non-profit, for-profit, or trust. Contracts should be put in place to ensure that all potential rights holders agree that carbon rights are legally granted to a seller's entity approved by the project proponent and all other participants. The

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<sup>12</sup> UNEP/ONFI International (2010). *Bringing Forest Carbon Projects to the Market*. UNEP/ONFI International.

agreements will ensure that all parties agree to support the project and will not attempt to sell any credits from the project area, except through the seller's entity.

Given that the land tenure framework in many developing countries is such that much of the land eligible for REDD+ is actually owned by the government, this belt and suspenders approach will likely require that the government provide written consent or approval for a REDD+ project. For projects where the communities have tenure, the approach requires agreements to be put in place with the community groups. For community-based projects, there can often be a lack capacity to develop the commercial aspects needed by the project for a transaction including:

- securing contractual agreements;
- setting-up the seller's entity;
- managing the seller's entity;
- negotiating the transaction terms.

Projects are well served by bringing in technical advisors who can help in implementing these commercial elements. In the case of managing the seller's entity, it is often advised that for a period of time the management of the seller's entity is supported by technical advisors until such time as the project proponent has the capacity to manage it.

### **Investment Grade Requirement – Land Tenure and Carbon Rights**

Land ownership and land and natural resource tenure must be documented and clearly referenced with local supporting laws. In addition, all potential carbon rights holders and the government must provide a written agreement of their consent to the development of the project and assignment of the carbon rights to the seller's entity.

### ***Financial Projections over the Project Life***

Developing detailed financial projections for the life of a project is imperative to ensure that the investment transaction will support the long-term financial sustainability of the project and provide a “fair” risk-adjusted return between the project proponent and the investor. There are three major components needed to create financial projections:

- revenue estimates;
- project implementation costs;
- carbon development costs.

Without robust financials, it is impossible for project proponents to understand whether the financial resources on offer from private investors or other sources (e.g. donors) will support the costs of implementing the project plan over time and under various cost and revenue scenarios.

In addition, one essential component of benefit sharing arrangements is the division of a project's net income among project stakeholders with carbon rights.<sup>13</sup> Without developing cash flow and net income statements, it is impossible to negotiate or evaluate benefits sharing arrangements of the project.

Financial projections will allow for an analysis of important financial metrics that will be used by both the project and investors to negotiate the investment transaction. These metrics include internal rate of

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<sup>13</sup> Net income refers to the revenue of the project less the costs to implement the project and the costs to support the carbon validation and on-going verification.

return (IRR), cash flow, net income and net present value. Financial projections will also allow for the development of a set of scenarios around the main financial assumptions. Finally, financial projections will determine whether a project is commercially viable.

### **Commercial Viability and Financial Metrics**

The commercial viability of a project refers to whether a project can be financially sustainable (i.e. generate revenue that exceeds costs) over its life, and thereby generate a return for rights holders and project investors.

Specifically in the case of REDD+ projects as compared to other emission reduction project types, carbon revenue is often the only source of commercial revenue. Therefore, the sale value of carbon credits must be high enough to cover the costs of operating the project (including financing costs), generating carbon credits, and generating sufficient net income to compensate investors. High upfront costs of initial project implementation and development of carbon credits, in addition to the possible delays in validation and verification, will expose early-stage investors to risk and reduce the universe of prospective investors. As such, in the absence of donor funding sources for the project, the investor's exposure may be too high or returns too low to attract private capital.

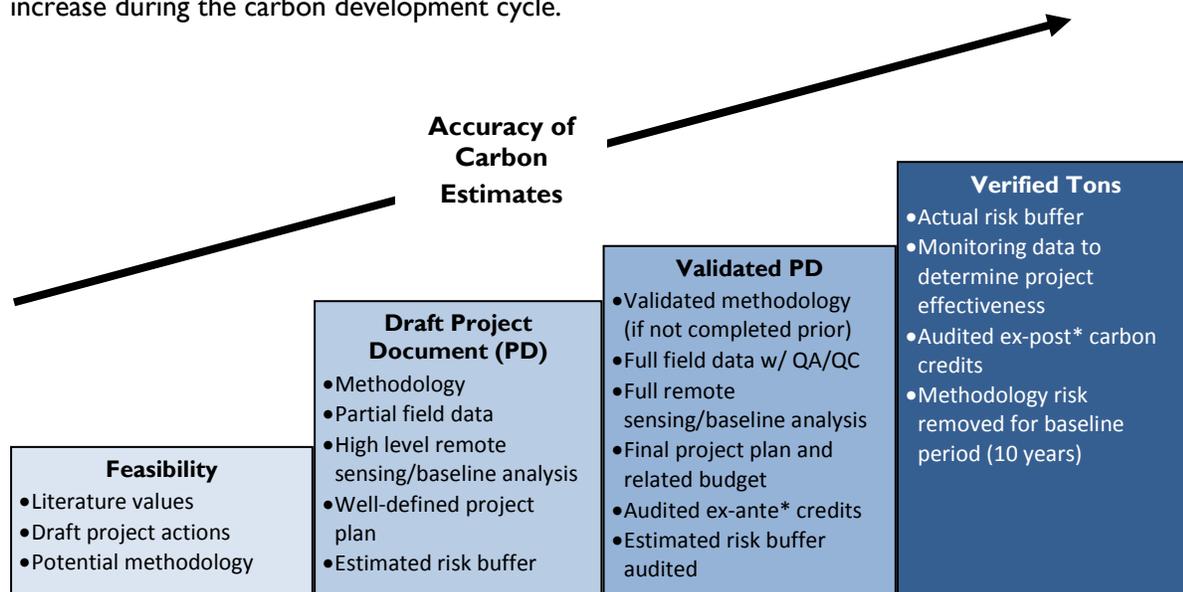
There are a number of financial metrics that should be evaluated by both the project and the investor. The most common financial metric evaluated by an investor is IRR. For REDD+ projects, the IRR is generally calculated based on annual cash flows, and it will allow an investor to determine the return they will make on their investment. The IRR does not reflect the risk of a particular project, thus it is hard to compare two projects based on IRR alone. The breakeven year (i.e. the year in which the project cumulatively earns enough income to cover the operating costs) is another metric that investors will evaluate. For some transaction structures, the investor will also look at the total dollar value at risk, which includes any upfront investments and any commitment to buy future carbon credits at a pre-agreed price. While investors' return targets will vary, they typically look for IRRs above 20% and breakeven in the 2-4 year range for REDD+ projects. Those targets can be expected to change over time as the sector's risk profile changes.

From the perspective of the project, the most important financial metrics are annual and cumulative projected cash flow. Positive values will indicate that the project is financially sustainable with positive net present value of project net income over the life of the project. The cumulative value of the net income allows a project to determine the size of the long-term financial value that is created for rights holders.

### **Revenue Projections**

Revenue projections are created based on the estimated number of carbon credits generated from a project and any other commercial revenue streams (for example coffee, cocoa, shea butter, or timber) that will accrue to the project proponent and can be included as part of the investment return. Carbon estimates need to cover the entire crediting period of the project (typically, between 20 and 100 years for VCS forest carbon projects). Generally, projects will not have validated estimates of carbon volumes from project implementation at the time that they are seeking investors. Still, a project will need to produce reliable and detailed carbon estimates that show all assumptions and sources of data referenced. If a credible carbon feasibility study has been prepared by the project, carbon estimates from this document would likely be satisfactory for investment purposes. Experience shows that project proponents often have carbon estimates that are far too aggressive or are prepared using assumptions that do not match the actual conditions of the projects. The accuracy of carbon estimates will clearly increase over time as more projects are developed, but it is important at each stage of project development to be conservative in estimates, to clearly document assumptions, and, where possible, to

present a range of potential scenarios. The table below shows how accuracy of carbon estimates will increase during the carbon development cycle.



\*“ex-ante” refers to pre-implementation estimate of carbon volume, “ex-post” refers to actual emissions reductions achieved during implementation, and verified.

Carbon estimates for VCS projects should include deductions for the credits that are required to be deposited to the VCS buffer pool. The VCS risk buffer supports the permanence of all forest and land-use carbon projects verified under the VCS. It also provides protection against any losses of issued VCUs by requiring all projects to deposit a percentage of VCUs generated into a pool managed by the VCS. Those credits are not available for sale by the project, and ensure that once VCUs have been issued they cannot be destroyed, making them “permanent” to the project, investor/buyer and the environment. What this means is that once VCUs are issued, they cannot be taken away if a fire later destroys the forest and thus the project will not be liable to replace the emissions released due to the fire. The VCS has developed a non-permanence tool to calculate the tons of carbon that a project is required to place in the VCS buffer pool based on its risk rating.<sup>14</sup> The risk rating is validated along with the project and reviewed/verified upon each subsequent project verification event. Thus, at each verification event, there is a re-evaluation of the tons required for the buffer pool using the verified risk rating. At the end of crediting period, credits remaining in the buffer pool are not returned to the project.

The risk tool can be used as early as the feasibility phase to estimate the VCS risk rating and buffer. Applying it early in the process will provide an estimate of the tons that should be deducted from the gross credits, and will also ensure the development of all the risk buffer information that is needed for validation. One of the elements required for the risk buffer is the project’s breakeven year and the percentage of required funding to be secured. Only through the creation of detailed financial projections over the life of the project crediting period can this risk buffer requirement be assessed.

Carbon revenue estimates should be based on a project’s net sellable tons: the tons available at each verification period after removal of the risk buffer tons and any other contracted payment in tons provided to other parties. The timing of revenue from the sale of net sellable tons will be a function of when verifications are expected to take place, which may differ from calendar year “vintages.” For

<sup>14</sup> See the VCS Non-Permanence Risk Tool at <http://v-c-s.org/sites/v-c-s.org/files/AFOLU%20Non-Permanence%20Risk%20Tool%2C%20v3.1.pdf>

example, a project may have a start date of January 2011, but only complete its first verification in January 2013. Tons delivered in 2013 will then include tons from 2011 and 2012 vintages. Carbon estimates must therefore take into account the verification frequency as specified in the project document. This will determine the years in which verified tons will be available following the first verification.

Once the correct flow of net sellable tons is created for each year, a price must be applied to the each delivery in order to forecast revenue. The financial model should be structured to run various price assumptions for the evaluation of different scenarios of cash flow and return.

### **Project Implementation Costs**

The implementation costs for a project over its entire crediting period must be generated to create financial projections. These costs should be based on the detailed project implementation work plan and developed into an “activity-based” budget (see the Project Plan Alignment with Emission Reductions and Livelihoods Improvements section above). This budget will define the costs for each of the activities and quantitative metrics in the project plan, and it assigns the implementing partner that will manage delivery of activities. One of the critical success factors for implementing, validating and producing predictable emission reductions from REDD+ projects is the alignment between project design, the budget and the Project Document (“PD”).

Project budgets should provide detail for each year of the project implementation period, with special attention paid to ensuring that project activity phases have adequate budget to support the on-going sustainability of the project and generation of emission reductions. Special attention will be paid by the investor to any benefits sharing payments that do not come out of the *net* income of the project, for example payments made as a percentage of *gross* revenue, since that could indicate that payments are being made to parties without aligning their support to the overall profitability (*net* income) of the project.

### **Carbon Development Costs**

Carbon development costs include all costs associated with developing and maintaining the carbon over the crediting period of the project, including:

- technical support for carbon development and other assessments such as biodiversity and local resources for supporting the carbon development;
- collecting the required field data to support the development of the project document;
- ongoing monitoring required for verification and issuance.

There will be other costs associated with third party validation/verification, market standards fees, registry fees, legal costs, travel, remote sensing data, brokerage, and carbon-related government fees/permits/taxes.

Special attention should be paid to costs that may be double-counted in both the carbon development budget and project budget. These may include costs for the collection of field data and local support for carbon development. Some carbon-related costs, such as fees to market standards and registration, are dependent on the timing of validation and verification and the number of tons issued by the project. The financial model should take into account costs that are variable based on tons, such that when varying scenarios are developed, costs are correctly estimated as a function of verification dates and tons delivered.

### **Incorporating Donor Funds**

Many projects have secured donor funds that will pay for portions of the initial design and development. These funds need to be explicitly accounted for when developing financial projections, as they will reduce the investor funding needed for the project. In practice, it is best to budget for all costs including the costs that are covered by donor funds, and add donor funds as an alternative income stream to be included as part of the cash flow. This also allows for the financial model to capture the full set of activities required for implementation, and to take into account the timing of the donor funds and their impact on cash flow.

### **Example Set of Financials**

Once revenues, implementation costs, carbon development costs and available donor funds are projected annually across the crediting period, cash flow and net income (i.e. profit)<sup>15</sup> forecasts can be prepared (per period and cumulative) allowing calculation of IRR, breakeven year and sensitivities. This will allow the project to determine the funding requirement to achieve sustainable cash flow to the project's breakeven year. This exercise must be completed prior to seeking investor capital in order to make the financial case to the investor for the funding amount sought, and to support the negotiation of investment terms from a position of full information. The accuracy of financial projections will increase as the project moves through its development. Project proponents should not share full financial projections with the investor before the headline investment terms are agreed in a term sheet as this weakens the project's negotiating position. These can be provided during the due diligence stage, completion of which is usually a necessary condition for an ERPA to be in effect.

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<sup>15</sup> Cash flow and net income are often used interchangeably for REDD+ projects, but will differ as a function of verification timing and for projects where there are significant capital expenditures that will incur depreciation charges.

“V” indicates years in which emissions reductions are verified by a third-party auditor, thereby creating the carbon asset available for sale. Credits are net of set-aside VCS risk buffer, and as negotiated to government/carbon asset developer.

In this example, the investor’s 2012 upfront “pre-payment” for \$4.0m for 666,667 senior credits is repaid through the first issuance of credits in 2013/year 2, and strong profit is generated through the on-sale “spread”

In this example, the Project’s cash flow is solely from the sale of carbon credits generated: \$4 million for pre-payment of the first 666,667 credits and payment on delivery for the subsequent credits, as issued every two years.

In this example, Net Income is shared with the government.

Project and Investor Cashflow Summary										
	2012	2013	2014	2015	2016	2017	2018	2019		
PROJECT	1 Yr	2 Yr	3 Yr	4 Yr	5 Yr	6 Yr	7 Yr	8 Yr	PROJECT LIFE	
Verification Years	-	V	-	V	-	V	-	V	0	
Net Tons Generated	956,974	974,780	992,376	1,009,762	1,026,947	1,043,946	1,060,780	1,077,478	36,249,105	
Net Tons - Verified and Available for Sale	-	1,931,754	-	2,002,137	-	2,070,893	-	2,138,258	36,249,105	
<b>OPENING CASH BALANCE</b>	\$0	\$67,085	\$3,627,563	\$304,188	\$7,623,803	\$4,309,207	\$13,130,014	\$11,037,858	n/a	
<b>CARBON CASH FLOW IN</b>	14	\$4,000,000	\$9,644,118	\$0	\$15,844,273	\$0	\$17,134,133	\$0	\$18,524,354	\$454,539,146
<b>NON-CARBON CASH FLOW IN</b>	15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL PROJECT CASH FLOW IN</b>	1	\$4,000,000	\$9,644,118	\$0	\$15,844,273	\$0	\$17,134,133	\$0	\$18,524,354	\$454,539,146
<b>PROJECT CASH FLOW OUT</b>										
Project Costs	2	\$3,423,863	\$3,283,795	\$3,226,555	\$3,212,775	\$3,212,775	\$1,990,336	\$1,990,336	\$1,990,336	\$65,710,644
Carbon Development Costs	17	\$464,329	\$426,192	\$96,820	\$432,141	\$101,820	\$442,454	\$101,820	\$452,559	\$9,392,264
<b>TOTAL PROJECT CASH FLOW OUT</b>		\$3,888,192	\$3,709,987	\$3,323,375	\$3,644,916	\$3,314,595	\$2,432,789	\$2,092,156	\$2,442,894	\$75,102,908
<b>PROJECT INCOME SHARING</b>	3	\$111,808	\$5,934,131	(\$3,323,375)	\$12,199,357	(\$3,314,595)	\$14,701,344	(\$2,092,156)	\$16,081,460	\$379,436,238
% Net Income Sharing	18	\$44,723	\$2,373,652	\$0	\$4,879,743	\$0	\$5,880,538	\$0	\$6,432,584	\$164,366,805
<b>NET PROJECT CASH FLOW (NPCF)</b>	4	\$67,085	\$3,560,478	(\$3,323,375)	\$7,319,614	(\$3,314,595)	\$8,820,806	(\$2,092,156)	\$9,648,876	\$215,069,432
<b>CASH BALANCE (CUMULATIVE NPCF LESS PAYOUTS)</b>		\$67,085	\$3,627,563	\$304,188	\$7,623,803	\$4,309,207	\$13,130,014	\$11,037,858	\$20,686,734	\$215,069,432

Figure 4. Example financials for a REDD+project requiring \$4.0 million pre-payment of first tons issued

## Developing Investment Grade Project – Financial Projections over Project Life

Financial projections will become more accurate as the project develops, but a minimum set of financials will be needed for investors. This will require annual estimates for at least the crediting period including a detailed set of project costs that ties to the planned activities, an estimate of the carbon related costs and revenue estimates using realistic carbon estimates and prices. The financial model should provide cash flow, IRR, and net present value from both the project's and the investor's perspectives. It should also include sensitivity tables on price, tons, issuance dates and other key factors that impact the project's financials.

## Community and Stakeholder Engagement

For projects that have communities living within and in close proximity to the project area, investors will typically want to see how communities are engaged in the project, and evidence of the process under which they have agreed to this engagement. For projects that will verify under the Climate, Community and Biodiversity Standard, the nature of community and stakeholder engagement must be clearly documented, monitored and reviewed during validation and verification. Certification to this standard will therefore provide full information on the community and stakeholder engagement of the project to the investor.

Apart from the moral or ethical interest that typically applies, investor interest in such engagement is risk-motivated: proper integration of communities and well-designed alternative income and livelihood programs reduce the risk that project implementation will fail or under-deliver its projected emissions reductions. Inclusion of local communities in the design and development of a REDD+ project from an early stage—particularly for projects preventing “unplanned” deforestation—reduces the risk that the project will fail to adequately address community-based drivers of deforestation and degradation. Project plans should detail each activity that directly involves communities, as well as any broader programs for community-level capacity development, livelihood improvement, and employment opportunities.

## Developing Investment Grade Projects – Community and Stakeholder Engagement

Most investors will expect community-based REDD+ projects to achieve validation and verification under the Climate, Community and Biodiversity Standard (CCB), and to perform the on-going monitoring and verification to allow the credit issued under the VCS or CDM to be “tagged” with the CCB certification. CCB validation is most important for *avoided unplanned deforestation* REDD+ projects, particularly those with a meaningful community component. Investors should understand that *avoided planned deforestation* projects, which typically prevent conversion of forest areas to a large-scale commercial plantations or timber harvesting operations, are less likely to achieve CCB validation. Still, developers and project proponents for *avoided planned deforestation* REDD+ projects should aim to include the guiding principles of the CCB – namely, biodiversity conservation and protection, and enhancement of community livelihoods – into their projects.

## Benefits Sharing and Funds Management

As REDD+ projects begin to reach the verification stage and start generating meaningful emission reductions, there has been an increased focus on benefits sharing. When evaluating benefits sharing schemes, it is necessary to consider all the areas in which benefits are received by rights holders and project participants. The table below illustrates various potential ways that benefits can accrue to beneficiaries. It is important to note that not all benefits derived from REDD+ projects are purely monetary in nature. Safeguarding watersheds and water quality by preventing erosion, clarifying land tenure, and promoting improved agricultural practices are three examples of benefits that are very valuable to project communities even though they are not distributed via “traditional” benefits sharing structures.

**Table 1. Types of REDD+ Benefit Sharing**

Source of Benefit	Benefit Type	Examples
\$ from project Implementation Budget (directly tied to emission reductions)	Employment Opportunities	<ul style="list-style-type: none"> <li>• Forest patrolling</li> <li>• Field data collection</li> <li>• ANR planting</li> </ul>
	Alternative Incomes	<ul style="list-style-type: none"> <li>• NTFP (Non-Timber Forest Products)</li> <li>• Agricultural intensification</li> <li>• Livestock programs</li> </ul>
	Livelihoods	<ul style="list-style-type: none"> <li>• Land tenure security</li> <li>• Fuel efficient stoves</li> <li>• Mosquito netting</li> </ul>
\$ from Revenue or Net Income of Project	Potential Long-Term Asset Base	<ul style="list-style-type: none"> <li>• Share granted from project proponent of revenue or net income of the project</li> <li>• Ownership of the revenue or net income of the project</li> </ul>
Indirect Programs (supported by project funds)	Ancillary Livelihood Improvements	<ul style="list-style-type: none"> <li>• Education programs</li> <li>• Health services</li> <li>• Water quality</li> </ul>

The availability of donor finance can significantly improve the equity of the distribution of benefits in REDD+ by reducing the amount of private capital needed and improving the transaction terms by supporting the project to achieve a more advanced stage of development. Achieving better transaction terms (a higher carbon sale price, for example) will thus increase the future benefits that can accrue to rights holders and project participants.

Another key consideration, when evaluating benefits sharing arrangements, is to determine whether all the rights holders and project participants have been considered and included in the allocation of benefits. Allocation differs from actual distribution of benefits. Allocation is about who gets how much and how this amount is determined. Distribution describes in what form and how these benefits actually reach the recipients as the benefits are earned. Investors will focus on ensuring that the proper incentives are in place to motivate the long-term support of the project from rights holders and project proponents. Investors will also look to see that the benefits are accruing in a way that is consistent with the land-tenure and carbon rights of the project.

Separate from benefits sharing, funds management is the transactional control of funds generated by the project and the mechanisms to ensure that these funds reach i) the implementing partners required to produce emission reductions and ii) the beneficiaries as defined in the benefit sharing plan.

Investors will need to see that the entity controlling financial flows from the project has sufficient capacity to ensure prompt and accurate distribution, and that this entity can support transparent operations and a third party audit of the financial accounting for the project, if required. Investors are very likely to build these requirements into the transaction agreements that will ensure that funds are managed and distributed effectively.

### **Developing Investment Grade Projects: Benefits Sharing and Fund Management**

A benefits sharing plan needs to be developed that identifies all project participants and rights holders and details each type of benefit that they shall be allocated and under what terms and conditions. The project also needs to demonstrate that the entity that will manage funds has both the capacity and financial controls to ensure that funds are managed according to all the legal agreements and the benefits sharing plan.

## **Engaging the Private Sector**

Once the project has gathered all required information to demonstrate that it is investment grade, as described above, it is in a strong position to begin discussions with potential investors.

The process of engagement is likely to differ slightly from investor to investor, but ought to include the following steps:

- identify potential investors;
- execute non-disclosure agreement (“NDA”);
- engage legal and financial advice to support investor negotiation;
- undertake preliminary due diligence (project assessing investor and investor assessing project);
- execute memorandum of understanding (“MOU”);
- complete final due diligence;
- execute term sheet;
- finalize approvals;
- execute transaction documents.

### ***Identify Potential Investors***

There are a variety of potential types of investors that may be interested in investing in a REDD+ project, each of whom may have different internal mandates, expectations, and risk appetites. Projects should attempt to target investors who are seeking to make an investment that is aligned with project requirements. For example, some investors will have more flexibility to invest in projects at an early stage and may be able to enter into a forward purchase agreement prior to the project being validated. Others may be interested in making an equity investment in the operating company established by the project proponent. These distinctions will start to become clear following initial conversations with investors. The various types of potential investors and their potential requirements are discussed in further detail in the sections on Equity Investment Transactions and Loan Transactions.

There is no one established way for a project to seek an investor, and each project is likely to go about the investor identification process differently. In general, a project benefits from retaining an individual or advisory organization with experience in developing and securing investments in successful land-use

carbon projects. Investors who have already made investments in land-use projects, or who have already made purchases of carbon credits (provided that the projects in which they have invested continue to be successfully verified), may be interested in making similar investments in other land-use carbon projects, including REDD+. As more land-use carbon projects receive investment funds and begin to sell credits, information on these transactions will become publicly available and thus become a valuable starting point for projects seeking investors. Dedicated land-use carbon project investment funds are beginning to emerge and may also prove to be valuable investment partners. Projects should also research the corporate social responsibility (CSR) obligations of organizations with a presence in the host-country or have a strategic interest in the region. The economic terms for any party that is used to help attract funding should be contractually agreed upon upfront.

Projects need to prepare and circulate marketing documents to the quality typically received by institutional investors. These documents should clearly outline the details of the project and the investment opportunity, and describe the project's status against investment readiness criteria discussed above. It is advisable for a project to prepare public, non-confidential marketing documents that can be shared online but omit potentially sensitive information, such as project cash flows and carbon estimates. Those details could be shared via direct communications with a specific interested party after execution of a non-disclosure agreement (see below), rather than with a broader circulation list. The project should be sure to list details on relevant project databases, such as the Ecosystem Marketplace Forest Carbon Portal and VCS Project Database.<sup>16</sup>

### ***Execute Non-Disclosure Agreement***

Sensitive information will be exchanged by both parties throughout the investment evaluation and execution process, so it is important early in this process to execute an NDA. Investors are likely to have their own standard form NDA, though numerous examples are publically available for use. It is important to ensure that an NDA is “two-way” meaning that confidential information provided by both the project and the investor is protected. The confidentiality provisions in the NDA are likely to carry over into any formal agreements between the project and the investor, and these agreements may make explicit mention to the NDA enacted between the parties. The project should review the agreement to ensure that there are no clauses that bind its ability to work with multiple potential investors at the same time.

### ***Engage Legal and Financial Advice to Support Investor Negotiation***

At this point, it is advisable for the project team to retain a legal expert or advisor to assist with preparing the investment agreements and negotiating with potential investors. A financial advisor may not be necessary for project proponents that already have experience in investment transactions. However, lawyers do not typically structure and negotiate the economic terms of investments; using a financial advisor will help with this aspect of the transaction. Project proponents are likely to be exposed to agreements and negotiations that are beyond their level of expertise. Although expensive, retaining a lawyer and financial advisor with REDD+ experience will likely prove invaluable for ensuring there is a balance in knowledge between the project and the investor. This will promote fairer terms between the parties.

Ideally, legal and financial experts will have experience negotiating and executing term sheets of ERPAs, equity investments, loans, and other transaction forms for carbon projects. Knowledge of host-country legal processes and requirements related to transactions, taxes, and similar topics will also be important. Given that there has been a limited number of transactions and investments in the land-use carbon market, it may prove difficult to find an expert with direct experience in the sector and in the host

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<sup>16</sup> See <http://www.forestcarbonportal.com/> and <http://www.vcsprojectdatabase.org/>

county. Transaction and legal experience in the broader carbon market can substitute for land-use carbon sector experience, as the structure of the transactions between an investor and a land-use carbon project is likely to resemble transactions in other carbon market sectors. However, knowledge of legal processes related to land-tenure and carbon rights in the host country will prove valuable. Sometimes there is a need for two lawyers, one with international carbon transaction experience and one with host country experience.

### ***Preliminary Project and Investor Evaluation***

This preliminary evaluation will likely consist of a desk review of project-related information and documents. Although a field visit to the project site may also take place during this stage, project proponents should expect to engage in conference calls and meetings to introduce the project and stakeholders to the prospective investor in detail. Key project components related to carbon rights and financial projections are likely to be reviewed by the investor at this stage.

Project proponents should use this opportunity to gain an understanding of type of investment the investor is looking to make, the level of investment funding available, the desired timeline, and any other related constraints or investment criteria that the investor may have. Project proponents should inquire about the motivations of a prospective investor to invest in their project, particularly with respect to the potential control requirements of equity investors. If the outcome of the preliminary review is satisfactory to both parties, the project and investor can move forward with the drafting of an investment Memorandum of Understanding (MOU).

### ***Execute Memorandum of Understanding (MOU)***

After an initial evaluation is completed to satisfaction of the project proponent and the investor, the parties will likely enter into an MOU. The MOU does not necessarily place a binding requirement on the investor to invest, however certain clauses, such as confidentiality and exclusivity may be binding. In some cases, an investor may choose to not enter into an MOU, preferring instead to detail all economic terms in the “Term Sheet” that will be prepared after due diligence has been completed. The MOU can be detailed or high-level, but should clearly state the goals of the parties and the process that will be used to determine how to execute a transaction, with agreed dates if possible.

### ***Complete Final Due Diligence: Project Assessing Investor and Investor Assessing Project***

The formal due diligence process will expand upon the preliminary evaluation and will include a detailed review of the investment readiness criteria among other project-specific information. Project proponents can expect the due diligence process to include:

- assessment of the project’s benefits sharing structure;
- extent of community consultation;
- background check on all implementing organizations and the key personnel involved in the project;
- confirmation receipt of all required government and community approvals and agreements;
- field visit to the project site and in-person meetings with the project stakeholders;
- detailed assessment of the project work plan and budgets;
- assessment of the methodology and other technical carbon-development steps that go into generating carbon estimates.

For a more detailed discussion of due diligence, see the section on Due Diligence.

## ***Execution of Term Sheet***

Once preliminary due diligence has been completed and an investor has made a decision to invest in a project, the investor will prepare a Term Sheet. This is an “agreement to agree” document with summary content that is covered in more detail in the Emissions Reductions Purchase Agreements Section below. The Term Sheet can also be used to define the economic terms of an equity investment. The financial advisor and legal expert that have been retained by the project should help review the Term Sheet, which then serves as the written basis for professional drafting of the ERPA by legal advisors.

## ***Finalize Due Diligence and Approvals***

The Term Sheet will usually specify a period within which all due diligence must be completed and the Board or investment committee approvals of each party must have been obtained. This period will be used for each party to fully investigate operational and legal aspects of the other, and will naturally be dominated by the investor requesting information of the project proponent and seller’s entity. Assuming information requests are reasonable, prompt and co-operative responses are in the best interests of the seller. A trusting and co-operative relationship between the project and the investor will benefit both parties for the lifetime of the investment in the project. Because REDD+ is a new market with slowly developing frameworks, professionalism of projects in working with investors is critical for the sector’s development and private sector support. During this period, conditions precedent could be identified and required by either party (for more detail, see the Section on Conditions Precedent).

## ***Execute Transaction Documents***

The ERPA is a legally binding contract executed between the investor/buyer and seller’s entity (project proponent). The ERPA builds on the terms established in the term sheet and should be written by a legal professional. The term sheet will indicate which party’s legal counsel is responsible for preparing the first draft of the ERPA, but all legal experts should be heavily involved in this process. ERPAs may be drafted for multiple types of credit purchase transactions or investments, including an agreement to purchase future streams of credits from a project, or an agreement to undertake a spot transaction once the credits have been issued. Equity investments are contracted through some type of shareholder’s agreement whose exact form will depend on the legal form and jurisdiction of the seller’s entity. Loans are typically presented in a loan agreement or other form of financing agreement.

All document types serve to apportion project and financial risk across the counterparties signing the document. The terms of each are the outcome of negotiation rather than a standard template or regulatory determination of REDD+ transaction terms, though REDD+ transaction documents must fit into the legal and regulatory framework of the jurisdiction in which they are undertaken or implemented.

# **Forest Carbon Project Transaction Types**

There are three distinct ways in which forest carbon projects can expect to receive funding from private investors. The table below provides a broad overview and each type of transaction that is detailed in the following sections.

**Table 2. Summary Transaction Types and Advantages and Disadvantages**

Investment	Description	Advantages	Disadvantages
<b>Emissions Reduction Purchase Agreement (ERPA)</b>	<b>Pre-payment:</b> money is paid upfront for pre-verified credits to raise funds for project development, this is repaid with the first issued credits	Project receives cash injection at early stage. Pre-pay transaction provides precedent for other buyers and early demonstration to other finance providers or buyers that the project is investment grade.	Project gives discounted price per credit and probably does not participate in market upside.  Investor faces risk of non-delivery and loss of investment if project fails to be registered. Extensive buyer due diligence can be expected, with staged payments made on project milestones.
	<b>Payment-on-delivery:</b> the sale of credits may happen in advance, but they are only paid once credits are issued and delivered based on any pre-agreed terms	Provides certainty of timing and value of future cash flows following verifications. Supports raising other types of finance including loans. Portion of future deliveries may be retained by the project if exposure to future market price desired.	No contribution to early-stage financing needs of the project.  Price may prove “out of the market” at the time of delivery, i.e., a higher price may have been achievable through selling outside of the contract.
<b>Equity Investment</b>	<b>Investor acquires shareholding</b> in the project entity	Project receives cash injection at early stage. Investor may be strategic investor, i.e., brings network or knowledge of an aspect of the project’s implementation or financing Often a long-term relationship that may be more supportive in periods of difficulty compared to a lender.	There is no built in buyer of future credits.  Equity investor may gain governance control of seller’s entity.  Equity investor will expect and may contract a senior dividend that is a portion of annual profits generated by the project.  Other investment covenants may be overly binding on the project.
<b>Loan Financing</b>	<b>Loan</b> made to project	Project receives cash injection at early stage, from loan proceeds. Loan interest rate is typically fixed. Development finance banks are strong candidates to lend to REDD+ sector.	If a project is poorly performing, loan interest must still be paid, with priority over demands of other shareholders. Loan agreement terms will typically impose operating and financial performance criteria within which the project must perform.

# Emissions Reduction Purchase Agreement (ERPA) Transactions

Negotiating terms with a buyer/investor such that a project has sufficient financial and operating revenue is central to the financial success of a project. This purchase and sale transaction is made through the execution of an ERPA. A well-structured ERPA is critical to the financial sustainability of a project, since

it will balance incentives for the buyer/investor and the seller, and allocate risks to the party best able to mitigate them. This section summarizes the following:

- comparison of the purpose for an initial Term Sheet against definitive ERPA;
- parties and their motivations;
- ERPA types;
- typical ERPA language, terms, and components.

### Term Sheet Prior to ERPA

A preliminary agreement may be signed in advance of the ERPA to:

- secure exclusivity and confidentiality of negotiations;
- provide a written document that formalizes discussions in a way that may support the project to develop other commercial financing;
- provide the key economic terms on which legal advisors will draft the ERPA.

The Term Sheet—with its content and key terms—is differentiated from the ERPA (legally referred to as the “definitive agreement” in the Term Sheet) in the following table:

**Table 3. Summary of differences between a Term Sheet and an ERPA**

Term Sheet	ERPA
<ul style="list-style-type: none"> <li>• Written summary of negotiating points agreed between seller and purchaser, but not a contract and not necessarily legally binding</li> <li>• Certain provisions may be binding, typically those securing exclusivity and confidentiality.</li> <li>• Will help the project proponent to obtain other financing, such as loans</li> <li>• Gives comfort to the buyer to start spending money on due diligence and contract drafting and negotiations</li> <li>• May provide for cost recovery by a party in case the other party unilaterally decides not to move forward with negotiations, though this is unusual</li> </ul>	<ul style="list-style-type: none"> <li>• Legally binding contract subject to the law of contracts in the governing jurisdiction (as will be defined in the contract) and should be written by a legal professional.</li> <li>• Fundamental terms must be agreed upon for the agreement to be enforceable. Clauses “agreeing to agree” may not be enforceable, unless terms are provided.</li> <li>• Must adhere to mandatory contract requirements under national law (such as unfair contractual terms)</li> <li>• Conditions “Precedent” and “Subsequent” can prevent the agreement coming into force or continuing in force (a complex area within contract law)</li> </ul> <p><i>Note that in rare cases, a project may be subject to more than one ERPA, should credit sales be divided across different investors or buyers.</i></p>

### Parties and Motivations

ERPAs are typically contracted between investors pre-paying for credits<sup>17</sup> and the project’s seller’s entity (shortened to “seller”) as referred to in the Project Partners’ Capacity and Sellers’ Entity section above.

The investor is motivated by gaining access to a pre-defined stream of carbon credits, which may be used to:

- meet compliance obligations within an emission trading program, or take a hedging (or risk reduction) position with respect to future compliance obligations;

<sup>17</sup> or “buyer” in the case of a payment-on-delivery (POD) ERPA, though “investor” is used through this section

- develop experience and secure a potential price discount in anticipation of future regulations (“pre-compliance” motivation);
- voluntarily achieve product line or business-wide emissions offsetting or carbon neutrality objectives;
- take a speculative position for financial gain—financial buyers may be long-term in nature (carbon funds, and certain banks) or specialist short-term speculative investors, often with a commodities focus (can be referred to as traders and “hedge funds”);
- retire the credit from its registry, thereby achieving a verified quantity of emission reduction. This is a motivation for organizations seeking to mitigate climate change for corporate social responsibility reasons.

## **Due Diligence**

An investor will seek to understand all details of a project and the factors that will determine its profitable operation. The process will vary for each investor, but the following aspects are likely to be reviewed in detail through investor due diligence:

- feasibility study that estimates the emissions reductions expected under the project;
- PD (if already available) outlining all project activities, work plans, monitoring plans, etc.;
- carbon asset development and project implementation budgets and project cash flows;
- land ownership, tenure and associated carbon rights;
- legal authority of the project to enter into an ERPA or other investment agreements (which may require host country legal opinion to confirm);
- relevant permits;
- historical and current lawsuits or disputes;
- financial liens and encumbrances;
- any pre-existing financial liabilities of the SPV (if already existing prior to the project);
- sponsor/project proponents capability and capacity;
- local implementing partner capability and capacity;
- any other ERPA agreements already in place; and
- terms of bank lending or bond issuance.

During due diligence, the project should be prepared to provide details on all aspects of the project to demonstrate that the project meets the investment grade criteria covered in the Developing Investment Grade REDD+ Projects section above.

## **ERPA Types**

An ERPA may be a “spot agreement” that contractually defines the terms for the purchase and delivery of already issued credits, or—as is most common—a “forward purchase agreement” in which price and delivery terms are agreed today for future settlement. Under a forward purchase agreement, there may be a pre-payment for credits purchased, as a means to fund the project upfront (pre-payment), as well as other payments made at the time of delivery.

Projects are commonly—and increasingly—seeking financing through the execution of a forward agreement with a pre-payment for a portion of the emissions reductions to fund early-stage project development. To alleviate the investor’s risk to the greatest extent possible:

- It is typically for pre-payment only and covers the first credit vintages issued by the project.
- Disbursement of pre-payment funds is made in staged payments on achievement of ERPA milestones.
- The deposit and flow of funds in accordance with milestones are managed through an independent intermediary, referred to as an escrow agent.

With respect to item (i) above, the investor securing “senior” rights to the first issued credits will be a critical aspect of negotiations, particularly when there is no collateral that may be offered against the settlement of pre-payment.

## **Overview of Typical ERPA Language, Terms and Components**

While there is no legal requirement to draft a contract in a particular way for it to be legally binding, standardized formats have been developed for ERPAs that provide advantages in logic, familiarity and clarity of the document.<sup>18</sup>

The following sections summarize the most important provisions and issues to consider when negotiating an ERPA (or its prior Term Sheet).

### **Conditions Precedent**

Conditions Precedent, or “CPs,” are an important concept in contract law, listing the events or conditions that are required to have been met before contractual duty comes into effect, unless waived per the terms for waiver described in the contract.

For ERPAs, CPs will typically include:

- evidence of capacity and authority of the seller (its incorporation and representation of signatories);
- receipt of letters of approval required by the host country national or local authorities;
- all other financing necessary for project development is secured (external to that contracted under the ERPA);
- receipt of a copy of a feasibility study or the official project document (for pre-payment) or proof that the project has achieved validation and registration (for payment on delivery) under an agreed upon market standard;
- a signed Communications Agreement with the registry, defining the parties (authorized representatives) and modes of communication with respect to project operations and issuance;
- completed investment due diligence, confirmed in writing;
- where negotiated, credit support in place.

### **Price**

As with any transaction, price is negotiated to meet the dual expectations and circumstances of the seller and investor. For streams of carbon credits, positioning on price will depend on:

- the seller’s desire to forward sell in order to fix future price terms and/or volume;
- the investor’s desire for different vintages;
- both parties’ preference for a fixed price or “floating” price (i.e. sale price that is calculated at the time of delivery with reference to changes in market value for that type of REDD+ project, preferably using an index):<sup>19</sup>
- any negotiated profit sharing of on-sale profits where a fixed floor price is used.<sup>20</sup>

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<sup>18</sup> IETA, the International Emissions Trading Association, offer standardized ERPA templates at <http://www.ieta.org/trading-documents> and The Katoomba Group provide a list of organizations and agencies that have developed template ERPAs (including the World Bank) at: [http://www.katoombagroup.org/regions/international/legal\\_contracts\\_cdm.php](http://www.katoombagroup.org/regions/international/legal_contracts_cdm.php)

<sup>19</sup> There are currently no forest carbon indices available, but in the absence of having an index, there are profit sharing transactions being executed.

<sup>20</sup> For example, if the 2014 vintage is sold at a fixed \$4 in 2014, with an agreement to share 50% profits from on-sale, and the buyer sells these credits on at \$8, the buyer will be obligated to pass \$2 of the on-sale back to the seller.

The ERPA should also define whether the price includes or excludes taxes, and whose duty it is to bear home/host country taxes on credits sold. Where there are administrative/issuance fees levied by the market standard or registry, or financial arrangement fees (in markets where the credit is considered a derivative, for example), the party responsible for paying such fees should be identified in the ERPA.

Terms for payment should be described in full detail, including account details for the registry (where available), the sellers' bank account details and the deadline for receipt of funds. Where an Escrow Agent is being used for settlement of payment and delivery, the details of the process may be deferred to an Escrow Agreement.

The price and settlement sections of the ERPA will suggest possible remedies for failure to pay purchase price in time, including default interest rates, recovery of delivered credits (if escrow is not used) and the process for supplementary payments under any agreed-upon profit sharing arrangements.

### **Delivery**

The ERPA will describe the ERPA pre-payment investor and payment-on-delivery buyer obligations to take delivery on issuance.

The responsibilities of seller and investor/buyer where deliveries vary from the contract will be specified, including:

- shortfall in volume;
- failure to deliver and delay in delivery (typically providing for negotiation of an amended delivery schedule);
- delivery of replacement credits from other projects/third parties (and liability to seller of any cost difference);
- delivery of additional credits in future years;
- agreed penalty or ability for the ERPA pre-pay investor or payment-on-delivery buyer to terminate the agreement in the event of shortfall/failure to deliver.

The delivery volume may be fixed (and a provision to accelerate may be negotiated), or described as a percentage of credits issued for a specific vintage or vintages. It is critical that the ERPA requires that legal title is assured and can be transferred from seller to investor/buyer.

Often through the definition of "deliver(ed)," the process following project registration is clarified, with the procedures of transfer from seller's registry account to investor's registry account (both accounts have to be defined).

The ERPA may provide for penalty terms in the event of delivery shortfalls, known as "liquidated damages." The relevant ERPA clause will pre-determine the compensation sum (fixed or via formula) for investor losses resulting from poor project performance or other specified failure to meet the terms of the ERPA.

### **Pre-Payment ERPA: Milestones Relating to Project Implementation**

Payment milestones are a critical aspect of risk management from the investor's perspective when they make a pre-payment for future credits. When a pre-payment amount is agreed, the pre-payment is likely to be "tranching" into smaller sub-payments that are released when certain conditions or "triggers" have been met. In this way, the investor is able to increase their financial commitment as successful project development thresholds are achieved, thereby minimizing risk of loss to the investor.

An example of pre-payment milestones for an early stage-project, and the associated use of funds, is summarized below. Selected milestones should be unambiguous in terms of being able to confirm the completion of the milestone being achieved.

**Table 4. Example of ERPA Pre-payment Milestones**

Example Milestone	Explanation
ERPA Execution	First payment amount, typically small and sized to move an early-stage project forward from current position to successful completion of second milestone.
Host Country Approval/No Objection Letter	Host country approval is the key early-stage regulatory milestone, giving increased reassurance to the investor that the project will not fail to achieve registration. The funds will be used to move the project to the next milestone.
Completion of Project Document Carbon Estimates	An important first carbon asset development milestone that can be expensive to complete.
Submission	Submission of project documents to the selected standard.
Validation	Validation of the project by the selected standard, allowing the project to move into issuance.

### **Representations and Warranties, Liabilities and Indemnities**

Representations and Warranties are standard legal aspects of an ERPA to prevent fraud and ensure “license to operate” (at the time of contract execution, and ongoing) for purposes of entering into the contract by all parties. Representations attest to certain facts (such as approval letters being in place) while warranties offer mitigation against certain risks and uncertainties, such as title to credits being in place, or being free of restrictions on use of collateral. Both parties are typically representing that they have had the full opportunity to review terms and understand the risks of the contract.

Liability will typically be limited to the obligations of the ERPA and prohibit liability for loss of income, profit, and indirect or consequential damages arising from failure to perform under the terms of the ERPA.

In the rare instance that a forest and land-use carbon project involves the development of structures or use of equipment, an investor will typically require it to be indemnified and held harmless against third party claims, demands or losses etc. that arise from any issues relating to the development of structures or use of equipment.

### **Force Majeure**

The term Force Majeure refers to circumstances in which a project cannot perform due to events that are beyond the control of the project, and typically include weather and natural catastrophe “acts of God” events outside of human control, as well as human events beyond the control of both parties, such as war, strikes and riots. The clause will not usually excuse responsibility for performance indefinitely, but for a defined period of time to allow remedy using a process specified in the ERPA. The time period should be specified, in addition to whether excused non-performance must be made up. A failure in the registry or international transfer mechanisms for credits may be considered Force Majeure. Conditions that may lead to termination will be described but are always a last resort, since this is not the intent of Force Majeure clauses.

### **Termination, Material Adverse Change and Events of Default**

Termination events are events that allow either party to terminate the contract early. They may be for reasons of poor performance not covered as default and not considered a breach of the agreement.

They can be events that trigger termination because some event has not been completed within a set timeframe. Example events for an ERPA include prolonged Force Majeure as described above, mutual written agreement and consent, bankruptcy of one party, or change in the legal framework that governs emission reduction credit generation.

Material Adverse Change is a termination event, that refers – with respect to either party – to an event that results in a party’s financial creditworthiness materially changing (in the reasonable opinion of the investor) to negatively affect the ability of the party to perform its obligations under the contract.

Events of Default are pre-agreed events or actions for which there is a party at fault (i.e. failure to perform) that allow the non-defaulting party to terminate the agreement and be released from making further payments or deliveries. For a pre-payment ERPA, an Event of Default by the seller may require that the pre-pay finance be returned to the investor or allow the investor to seize any collateral posted against the pre-payment. Many REDD+ project entities have limited capital or collateral, and thus they should not agree to financial terms that they cannot deliver the Event of Default.

### **Management of Communications between Parties and the Registry**

The ERPA will define the responsibilities and processes through which counterparties can and must communicate with the issuer/registry of credits. Typically, the project proponent will appoint an Authorized Representative as the project’s “Focal Point” that is responsible for official communications with the registry on the project proponent’s behalf, and the ERPA will stipulate investor and seller representatives through whom all official communications shall be directed.

### **Maximizing Validity of Emissions Reduction in Future Compliance Frameworks**

As the sector develops, credits from existing carbon market standards are likely to be approved as fungible for use within new compliance frameworks. In order to maximize the value of credits acquired by the investor through the ERPA, the contract will stipulate that the seller must reasonably seek to ensure that emissions reductions must verify under market standards that are perceived by the investor and seller as most likely to be accepted under future compliance regimes.

### **“Boiler Plate” Provisions – Standard ERPA Clauses**

The ERPA will define Rule of Applicable Law—the national legal framework that governs the enforceability of the document—and the process for Dispute Resolution in an judicial court or through arbitration (such as the Permanent Court of Arbitration, or another institution) to allow for a process to salvage a breakdown in performance of the contract by either party and award any possible damages. For arbitration, the contract will also specify the language of the arbitration proceedings and the place of arbitration.

Other key standard clauses will specify:

- the methods for parties to notify or deliver written communications;
- severability (voiding of one part, but not the whole) of clauses that have been ruled to be void and unenforceable;
- ability (or not) to on-sell;
- inability to assign the agreement without prior written approval of the other party;
- lack of third-party rights under the contract;
- sound business practice with respect to the agreement and the performance, payment for and delivery of credits under the agreement;
- confidentiality of the terms of the Agreement.

There is also generally an assignment clause that provides the conditions under which a party may transfer the agreement.

## Equity Investment Transactions

In the

Forest Carbon Project Transaction Types section above, the question of how to select a capital structure for a project has been introduced. At the start of a business, owners put funding into the business to finance operations. Similarly, equity investors put funding into a business or operation seeking financial returns by taking an ownership stake equivalent to its investment. An equity investor would make an investment into a project—or its Special Purpose Vehicle (SPV), which is the seller’s entity for the project—that will i) pay a percentage of future profits/dividends back to the investor and ii) appreciate the financial value over the time until the investor’s planned exit. Equity ownership may also be assigned to project sponsors that contribute “sweat equity” (unpaid time) in the initial origination and structuring of a project. Of particular importance to forest carbon projects is the equity participation of stakeholders that are community members with little access to capital but who may own or have personal or communal land tenure rights to the land on which the project is undertaken.

An SPV will be an attractive means to incorporate and fund the project where there are multiple funders, employing different means (equity or loans for example). Having this legal company structure is imperative to securing equity investments or loans because it specifies governance, distributes profits, and grants collateral as needed to raise finance.<sup>21</sup>

Note that “sweat equity investors” do not provide a cash injection to the project, and in this section we look specifically at the motivation and process of equity investors that become project owners through cash investment into forest carbon project. Given the financing needs of the sector, these risk-taking investors are critical to the future growth and success of forest carbon.

### Goals of the Equity Investor

The most important characteristic of an equity investor against other investor types in REDD+ financing is that equity investors take the most risk, and commensurately seek the greatest return. An equity investor is motivated by the higher rates of return from the “upside exposure” to the project’s success through sharing in future annual profit: the net income<sup>22</sup> generated by the project *after* all other financing costs, including loan interest and tax.

The equity investor takes the most risk due to being “junior” to loan providers in the capital structure of an SPV. They are also junior to the ERPA pre-pay investor who has claims on the credits from the project before they can be future sold to repay equity. Loan obligations must be paid before the equity owners receive their share of profits. Equity owners are therefore referred to as junior to loan providers in a project’s capital structure.

Since the forest carbon market and its regulatory framework is still in its infancy, the sector is certainly perceived as risky and investors will likely seek returns in excess of 20% per annum. While this may appear to be a high return, particularly in a global environment today where banks and governments are paying interest to consumers and bond holders that are in single digits (i.e., under 5% per annum), it is a reasonable expected return to compensate for the uncertainties of the carbon markets.

It is important to add that certain equity investors will be motivated by an element of project control that is gained through their ownership stake, or – as introduced further below – may be seeking to gain

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<sup>21</sup> Denton Wilde Sapte (2004)

<sup>22</sup> See Financial Projections over the Project Life section for explanation of net income

experience and insight into forest carbon project operations through their investment (known as a “strategic investor”).

### **Types of Equity Investors**

There are numerous potential sources of forest carbon project equity investment:<sup>23</sup>

- **Founder’s equity:** the cash investment of the project’s founding owner, typically the originator of the project and lead contributor in terms of developing project feasibility, outlining the structure and business plan, and securing approvals and permits required. This may or may not be the project proponent.
- **Sweat equity:** As discussed above, “sweat equity” refers to in-kind investment made through the time investment of the owner (note that this will not be a cash investment).
- **External equity:** The following investor types should have the mandate to make investments in forest carbon projects (with risk profiles and time horizons indicated in brackets):
  - pension funds (long time horizon, low risk tolerance);
  - insurance companies (long time horizon, low risk tolerance);
  - investment banks taking positions in the carbon market (varying time horizon and risk tolerance);
  - asset management companies’ pooled investment vehicles (e.g., hedge funds and private equity funds, with full spectrum of time horizon and risk tolerances depending on the fund’s investment objective);
  - venture capital companies make investments in early-stage companies, typically focusing on particular sectors and phases of early-stage growth. The term “private equity” refers to the same approach for later-stage and more mature technologies or projects. (Both are focused investors with medium time horizon, typically seeking exit between 3 and 7 years);
  - green/forest/ethical private equity funds (again a focused investor with shorter time horizon but high risk tolerance);
  - carbon investment funds, either forest carbon focused or generalist carbon market investment funds investing across several emissions reduction sectors (long time horizon, high risk tolerance);
  - commodity and infrastructure investment funds (varying time horizon, high risk tolerance).
- **Strategic investors:** corporations that have an interest in the project for strategic or experience rationale (long time horizon, typically high risk tolerance).
- **High net worth individuals:** entrepreneurs or investors of generational family wealth that are motivated by the “mission” of forest carbon and willing to accept the sector’s risks given their long-term wealth preservation perspective.
- **Public equity:** shares issued on a public stock exchange (this would not yet be applicable for individual projects given stringent listing rules, but may be an option for a portfolio of projects).

The UNDP summarizes the above investor types—including debt (discussed below)—in the below table taken from their document “International Private Financing Sources for Mitigation Options.”<sup>24</sup>

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<sup>23</sup> With reference to Sinclair, G. (2009) *Financing Options for CDM Projects* Standard Bank

<sup>24</sup> Limaye, D.R. and X. Zhu (2012). *Accessing International Financing for Climate Change Mitigation*. UNEP Accessed 28 August 2012 at <http://climatefinanceoptions.org/cfo/node/376>

Venture capital	Private equity	Infrastructure funds	Pension funds	Bank mezzanine debt	Bank senior debt
Start-ups, new technology, prototypes	Pre-IPO* companies, demonstrator technology	Proven technology, private companies	Proven technology	Demonstrator/proven technology, new companies	Proven technology, established companies
>50% International Rate of Return (IRR)	IRR>35%	15%> IRR	IRR >15%	LIBOR* + 700 bps	LIBOR + 300 bps

**Table 5. Summary of Investor Types and IRRs (UNDP 2011)**

The expectation of higher returns means that equity investors are referred to as having the highest “cost of capital” of different investor types. It is important to distinguish, however, that equity investors are not typically contracted<sup>25</sup> to receive a certain level of return, as will be the case for a loan agreement (where the rate of return is defined in the interest rate). As such, the reference to the high cost of capital reflects the expectation of a high level of return from the equity investor, rather than a contracted rate of return that can be seen as a cost, and the high expected return of equity investors will be calibrated based on their perceived risk of the project investment and sector.

The higher risk threshold is an important benefit of equity capital because a project may be rejected for more traditional loan finance. From the equity investor’s perspective, investing alongside loan finance is attractive. Since the loan provider does not partake in the profits (with repayment fixed), an equity investor’s returns will more than proportionately increase as a successful venture grows and becomes increasingly profitable. This effect is known as “leverage.”

Equity investor terms will vary widely as a function of:

- expected profit;
- project’s financing need and the level of detail provided to substantiate this;
- project’s willingness to grant control and step-in rights to the investor, should certain events occur or triggers be achieved;
- any improvement in the rank of pay-out, above the typical junior status of being the last financial stakeholder to have a claim on the residual value of a company or project in the event of bankruptcy.

### **Process for Equity Investment in a REDD+ Project**

There will likely be a self-selection within REDD+ investors as to whether they are more interested in an equity investment or an investment via a pre-paid forward ERPA. Once an equity investor has studied the business plan of a project (covering all the criteria in the Developing Investment Grade REDD+ Projects section) and has completed due diligence on the project plans and partners, the investor will make a cash payment to the seller’s entity or project SPV. Often, the timing of equity investor payments may be broken into stages as a function of pre-agreed milestones and conditions, not unlike an ERPA pre-pay investor.

<sup>25</sup> Other than a class of investment known as “preferred equity”

Equity investors will typically seek to inject only a portion of a project's total required funding as their investment, typically negotiating with close attention to the performance and financial incentives of other finance providers. The advantage of equity capital is that equity investors need not be reimbursed during the first years of the project, thus releasing cash flow for project development activities.<sup>26</sup>

An equity investor will undertake a due diligence process similar to that detailed in the Due Diligence section.

# Loan Transactions

## *Goals of a Lender*

Lenders provide capital in return for a pre-agreed interest rate,<sup>27</sup> usually paid routinely over the period of the loan,<sup>28</sup> and priced at a level that is higher than the bank's cost of financing, covers its expenses associated with originating and administering the loan, and has a premium over its cost of capital that reflects risk (i.e. probability of repayment). As such, a bank is motivated by its known stream of interest cash flows and minimizing the risk that this stream will not be repaid. Lenders can also earn revenue from loan arrangement fees that are charged on application or drawdown. The financial exposure of a loan to the project is less risky than an equity investor's position given the fixed interest repayments and the loan ranking ahead of equity capital for repayment. It is for this reason that equity providers seek much higher returns on their investment than the bank's interest rate. Loans vary in the priority with which they are repaid. Where there are numerous loans, they may be referred to as "senior," "junior" and "mezzanine" (see below) to describe the priority of repayment. Naturally, lower ranking loans will charge a higher interest rate to compensate for the greater embedded risk.

Examples of loans that have been made to finance carbon projects include loans made by development finance institutions and local banks in China, India and Indonesia for CDM projects.<sup>29</sup> These loans rely on the carbon revenue to repay principal and interest, with repayment timings matching expected carbon credit delivery dates. In cases where the project does not have non-carbon sources of revenue, most lenders would require that an ERPA be in place with a creditworthy counterparty secure repayment of the loan. The Plantar Coal Substitution project in Brazil, is an example of lending against ERPA contract where a buyer was the World Bank Prototype Carbon Fund.<sup>30</sup> Rabobank Brazil provided a loan with a repayment schedule that matched the carbon cashflows expected from the World Bank ERPA. As the depth of the market of REDD+ buyers' builds, it would be expected that similar structures will become "bankable" for financing REDD+ Projects.

Loan providers do not have rights beyond repayment of the interest and capital. However, loan providers may seek a guarantee or element of collateral (meaning the ability to seize other assets in the event of non-repayment) and use covenants (event triggers and restrictions on behavior, as explained below) to ensure that a project's performance and actions remain within pre-defined limits. In REDD+

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<sup>26</sup> UNEP/ONFI International (2010). Bringing Forest Carbon Projects to the Market. UNEP/ONFI International.

<sup>27</sup> For this reason, debt is often referred to as "fixed income"

<sup>28</sup> Or, less commonly, added to the value of the amount borrowed (known as "principal") and paid at the loan's maturity

<sup>29</sup> PFI Clean Energy and Carbon Report 2009 Unlocking CDM Revenues Accessed at [www.pfie.com](http://www.pfie.com)

<sup>30</sup> World Bank (2009) Carbon Finance as a Key Financial Tool for Project Development: Examples from the World Bank Carbon Finance Business. Accessed at

[https://www.google.com/#hl=en&sugexp=les%3B&gs\\_nf=3&tok=pvjYoH59EUI4jdZ4mWhSzw&cp=4&gs\\_id=11&xhr=t&q=loan+carbon+project&pf=p&tbo=d&output=search&client=psy-ab&oq=loan&gs\\_l=&pbx=1&bav=on.2.or.r\\_gc.r\\_pw.r\\_qf.&fp=7bb9b384f427c1da&bpc1=38093640&biw=1527&bih=801](https://www.google.com/#hl=en&sugexp=les%3B&gs_nf=3&tok=pvjYoH59EUI4jdZ4mWhSzw&cp=4&gs_id=11&xhr=t&q=loan+carbon+project&pf=p&tbo=d&output=search&client=psy-ab&oq=loan&gs_l=&pbx=1&bav=on.2.or.r_gc.r_pw.r_qf.&fp=7bb9b384f427c1da&bpc1=38093640&biw=1527&bih=801)

projects, that do not have land ownership that allows pledging of land or timber assets, the only collateral that could be posted would be the future carbon credits.

For a longer loan life, all else being equal, the interest paid will be greater, but each regular repayment amount will be smaller. The lender is repaid at the end of the loan's life (loan life is typically referred to as "loan tenor" or "loan maturity") though there may be a provision for early repayment at the borrower's request. Loan terms cannot exceed project life. Loans can vary in structure in the following ways:

- **Fixed/floating interest rate:** the interest rate agreed at a fixed value at the outset of the loan, or linked to the value of a certain market interest rate plus a profit margin (known as "spread");
- **Profile or "sculpting" of the repayment amount:** the repayment amount varying as a function of modeled future revenues, featuring escalating or balloon (repayment all at once) amounts;
- **Redemption or call option provisions:** lender requesting accelerated repayment after a certain period of time;
- **Covenants:** a restricted action or a pledge to take action that is accepted by the borrower through the loan agreement. Lenders use covenants to mitigate their risk through enforcing certain behaviors and performance requirements. The most important examples are:
  - cover ratios: the project life (or loan life) coverage ratio measures discounted cash flow over the remainder of the project life (or loan life) against the value of the loan outstanding;
  - prohibition of engaging in any business other than the project;
  - issuing new equity;
  - selling assets.

## Types of Loans

There are numerous terms used with respect to loan sources:

### Corporate Loans

Everyday lending to businesses to support their day-to-day operations, with the interest rate set as a function of the borrower's financial strength and associated risk of repayment. Such general facilities will be lighter on restrictions on use of funds, providing certain covenants are met.

### Project Finance

A company is incorporated specifically for one specific project with a bank loan, against the project's future revenue streams, the key source of finance. The project finance loan is made against the revenue generated by the project alone, and does not have "recourse" (i.e. access) to other sources of revenue that accrue to the project sponsor or other investors. For this reason, project finance loans are often referred to as "limited recourse" lending.

### Mezzanine Finance

This term is used to describe lending that is junior to the senior loan described above. However, the terms of mezzanine finance will ensure that it has seniority of repayment over equity capital providers. Such loans are typically shorter in duration and more expensive (i.e. charging a higher interest rate) than senior loans.

### Loan Re-financing

The replacement of existing loan arrangements by new ones just like the re-financing of a mortgage. Reasons include more attractive lending terms or longer durations (known as tenor) of loan becoming available.

## Debt Funds

Pooled debt investment funds established specifically to make bespoke loans and usually focusing on specific sectors or a particular financial characteristic within the loan market (for example, “distressed”). Debt funds have investment objectives consistent with bank lending: preserve capital and generate income.

## Development Finance Loans and Guarantees (from Development Finance Institutions)

Specialist public/private banks offering longer tenor loans to pre-approved countries and sectors, as a function of that development bank’s strategy. Such banks tend to have a greater ability to accept the developing country risk that is characteristic of forest carbon projects. Development finance banks can prove to be critical financial stakeholders in a project given their supervision by that bank’s Treasury and the associated link to that country’s donor agency, which may hold political persuasion over the host country government.

Government agencies and donor agencies may offer mechanisms for loans at preferential rates, and lenders or multilateral finance agencies may support commercial sector lending by offering loan guarantees. In this way, such agencies take on the risk that a lender will not be repaid its loan.

## Project Bonds - Issuance of Project Debt

A bond is debt that is issued by the SPV of the project through capital markets, where smaller investors participate together in a bond issue to collectively fund the project. Bonds are generally viewed as less flexible than loan finance since:

- Consents and waivers to breaches of covenants are impractical to request (resulting from, for example, a change in project timetable) and so covenant terms may be lighter (easier) than in the case of loan finance, where greater control will typically be sought.
- Bonds tend to be structured such that one large payment is made at financial close, where most early-stage financing for project structures in developing countries will require staged drawdowns to best mitigate risk of funds not achieving their objectives.

While there has been a large global focus on green bonds, there has yet to be a REDD+ bond issued. And the general market approach to REDD+ bonds has been to issue a bond on a portfolio of REDD+ projects, typically structured such that the bond coupon (i.e. interest payment) is met through distribution of issued credits. The concept of using bond issuance as a source of capital with coupon linked to environmental performance is being increasingly adopted within environmental finance<sup>31</sup>. The issuer will be a large bank or multilateral, rather than the project SPV. Only a small portion of the bond proceeds would actually go to the project. But, the advantage of this type of structure is that it can offer bond investors all or partial principal guarantees from the highly rated issuer. Whereas a bond issued from the project SPV will allow all the proceeds to go to the project, they are more difficult to execute as they tend to be smaller in size and they require that an investor take the project and REDD+ market risk on their full investment. Thus, they have more difficulty attracting investors to from the capital markets.

## Loan Guarantees

A loan guarantee is a pledge that may be given by another bank or insurance company to guarantee repayment for the value of all or part of the borrower’s obligations under a forest carbon loan agreement. The loan guarantee provider will usually have stronger credit-worthiness (i.e. ability to repay) than the project entity itself. The use of such a guarantee allows a lower interest rate than would

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<sup>31</sup> For a more detailed introduction and examples, see the Resources page of the Climate Bonds Initiative at [www.climatebonds.net/resources](http://www.climatebonds.net/resources)

be achieved by the project without the guarantee. The guarantor is typically motivated by supporting the development of a business, project or sector. One such loan guarantee product is being developed by the USAID Development Credit Authority (DCA). DCA is developing a carbon credit guarantee product that included REDD that would underwrite a portion of a lender's risk related to non-delivery or under-delivery of emission reductions after validation. In this context the lender could be an entity or a pooled vehicle (e.g. a fund) that provides up-front funding to a REDD+ project through an ERPA transaction or in a traditional loan structure. The DCA product is still under development, but once finalized could provide REDD+ projects with a valuable risk reduction tool to catalyze investment.

### **Lender Due Diligence**

In considering a loan application from a project, a lender will consider many of the same criteria used by a prospective equity investor, though its financial modeling will focus on cover ratios in different scenarios as part of setting loan covenants. A loan provider will undertake a due diligence process similar to that detailed in Due Diligence section. Financial close is achieved when all documentation and other requirements for the first drawing of funds by the borrower are met.

## **Insurance Transactions**

Both investors and project developers can benefit from the use of insurance for REDD+ projects. The two main types of REDD+ related risk that can be mitigated with insurance are political risk and natural catastrophic risk.

Insurance providers will insure aspects of an investment, accepting risk (such as a project's performance being impacted by government expropriation) in return for an annual premium. Similar to loans, the insurance contract may impose restrictions on the project actions for it to remain insurable. Insurance providers are motivated by earnings streams of premiums at an acceptable level of risk that an insured event will not happen.

In the REDD+ sector, insurance is rather new for both political and natural catastrophic risk. The first ever REDD+ political risk insurance contract was underwritten by Overseas Private Investment Corporation (OPIC) on an investment made by Terra Global Capital in a project in Cambodia in June 2011. Insurance against carbon losses, due to natural disasters is been fairly limited but has been explored by the leading forest reinsurance provider ForestRe ([www.forestre.com](http://www.forestre.com)), see Natural Catastrophic Risk section below), an established specialist insurer and reinsurer for forestry and tree crops. The use of insurance in the sector can reduce the risk of a project for both the project proponent and the investor. The obvious benefit of taking on such insurance and reducing the overall project risk is to make the investment more attractive to private sector investors.

### **Political Risk Insurance**

Political risk insurance can cover a number of risks including two broad categories: expropriation and political violence. Expropriation covers the acts that a host country government makes that deprive the project or investor of their fundamental rights. For OPIC, traditional expropriation coverage protects against nationalization, confiscation and creeping expropriations which result in a loss of the total investment. But they also include government interference in a project in other forms including:

- abrogation, repudiation, and/or impairment of contract, including forced renegotiation of contract terms;
- imposing of confiscatory taxes;
- confiscation of funds and/or tangible assets;
- outright nationalization of a project.

Expropriation insurance can also include denial of justice coverage and protects the insured from non-payment of an arbitral award by a host country government.

For REDD+ investments, political violence coverage insures property (including that which produces carbon credits) and income losses caused by:

- declared or undeclared war;
- hostile actions by national or international forces;
- revolution, insurrection, and civil strife;
- terrorism and sabotage.

A loss covered under political violence could include a case where there is civil unrest near the project that results the destruction of forest in a REDD+ project by outside actors involved in the civil unrest.

In practice, political risk insurance for expropriation covers one of the major risks of REDD+ projects, which is that the government invalidates the project proponent's land tenure and/or ownership of carbon. One of the largest REDD+ project risks today is the lack of carbon ownership laws in most countries. Thus, projects will generally secure carbon ownership with a government agreement confirming the project proponent's right to develop the carbon asset and the ability to own or use for the project crediting period the resulting credits. If the government later refuses to acknowledge the rights granted under the agreement then political risk insurance would protect the insured. Another risk for REDD+ is that when a government adopts a formal REDD+ program in the country it significantly decreases that value of a project's carbon assets, as explained in the Emerging Jurisdictional Accounting Standards section above. Most political risk insurance contracts will require an agreement or some form of approval letter to be in place with the host country government that can be "insured" with respect to expropriation but some insurers are developing "change of law" insurance that could provide coverage, even in the absence of a government agreement.

In addition to OPIC's underwriting of REDD+ political risk, the Multilateral Investment Guarantee Agency (MIGA) has expressed interest in underwriting REDD+ risk. There do not appear to be other active REDD+ political risk underwriters. This is not surprising given that government owned insurers, rather than private sector insurers, are the major players in the political risk insurance market.<sup>32</sup>

Project proponents and investors can seek insurance directly from the underwriters or through an insurance broker. The project will need to demonstrate its commercial viability, has a government agreement, and be prepared to pay an insurance premium based on the percentage of the underwritten contract value. The contract value is generally based on the invested amount. Both OPIC and MIGA will require that the project meet their social and environment performance standards. Some insurers have additional requirements to qualify. OPIC, for example, requires 25% ownership by a U.S. entity. Some insurers will not insure projects after they have started implementation.

### ***Natural Catastrophic Risk***

REDD+ projects are exposed to catastrophic risk that can destroy the value of carbon credits. These risks include naturally occurring fire, extreme weather causing damage from wind or rain, and the pathogenic plant diseases known as "blight."

One of the innovative carbon reinsurers in the market is ForestRe, who provide the following list of information needed to apply for catastrophic insurance:

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<sup>32</sup> Overview of the Political Risk Insurance Market, Hamdani et al 2005

- all locations, areas, boundaries, carbon stocks (reference emissions rate if REDD) and base lines and boundaries;
- management details and risk mitigation plans;
- community involvement details;
- relevant local loss and growth data for the forest areas;
- an initial critical mass of forestry pool to provide a sufficient buffer (project size large enough);
- ability to monitor the forest for all forest disturbance and to provide evidence of stock changes when insurable event occurs (satellite monitoring).

Most of these requirements are met through the process of validating and performing ongoing verification of a project under recognized carbon market standards. Insuring forests for natural catastrophic risk is most common for private, commercial and industrial forest plantations, but not public or natural forests.<sup>33</sup> There should be the ability to extend the current practice of insuring plantations to insuring REDD+ projects. This will require long-term data on losses related to natural disasters around the project area and that risk mitigation activities such as fire breaks and water storage facilities are in place to limit losses. However, insurers' appetite for underwriting natural catastrophic risk of forests is fairly limited and, in the area of carbon, the accurate valuation of forest carbon appears to be a major obstacle.<sup>34</sup>

### ***Interaction with Risk Buffer and Insurance***

Under markets standards that incorporate the use of a risk buffer pool to protect against non-permanence, it is important to understand how the buffer pool insurance interacts with the other insurance that might be taken out by the project proponent or investor. In the case of the VCS, once carbon credits are issued, they cannot be lost as they are protected under through the VCS non-permanence pool (see Revenue section for more detail). Thus, any insurance taken by a project proponent or investor should insure only those future credits that have yet to be issued.

To illustrate this point, assume a REDD+ project has a 30-year crediting period with no plan to renew. If in the first 29 years it has produced 5,800,000 tons before the risk buffer and it has a 15% risk discount and has deposited 870,000 tons in the VCS buffer pool to date. In the final year the project expects to produce its final 200,000 tons less the risk buffer of 30,000 tons for a total issuance of 170,000 tons. If, in year 30, an extreme case of fire occurs and the entire forest burns down, then the only loss to the project proponent or investor is the last 170,000 tons that had yet to be issued. The buffer pool is not a loss to the project proponent or the investor because the VCS buffer pool is not returned to the project at the end of the crediting period. Thus, the insurance should only be taken on the un-issued tons.

Another important mechanic to consider for insuring carbon credits on a REDD+ project versus an afforestation project, is that credits for REDD+ are earned on the difference between the baseline deforestation rate and the project deforestation rate, not the total standing carbon stocks. For an afforestation project, the carbon credits are earned on the total standing carbon stocks, since the project baseline is generally zero. Thus, to avoid over insuring, a REDD+ project should insure the difference between the baseline and the project, not the total carbon stocks.

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<sup>33</sup> UNEP-FI (2008) Making Forests Competitive, Exploring Insurance Solutions for Permanence Available at [http://www.unepfi.org/fileadmin/documents/Exploring\\_Insurance\\_Solutions\\_for\\_Permanence.pdf](http://www.unepfi.org/fileadmin/documents/Exploring_Insurance_Solutions_for_Permanence.pdf)

<sup>34</sup> *ibid*

# Appendix A – Excerpt from a REDD+ Project Plan

Category & Objective	Detailed Activity	Timeframe	Expected Results	Verifiable Indicators	Resources/Required	Monitor	Implementer Y4-Y8 Y9	
<b>6. To develop sustainable forest and land-use management plans</b>	<b>6.1. Solve issue of agricultural in holdings in all 13 sites</b>							
	6.1.1. Ground demarcation of agricultural inholdings & settlements	Y4 - Y6	There will be a better understanding of the extent, type, and ownership of inholdings	Assessment report	Village meetings/researcher	Partner 1	Partner 3	n/a
	6.1.2. Finalizing agricultural inholdings & settlement mapping	Y4 - Y6	Each site will have a map showing inholdings with GPS boundaries demarcated	GPS boundary polygons of areas demarcated on map for each area	staff time	Partner 1	Partner 1	n/a
	6.1.3. Communities sign agreements with government for no further expansion of inholdings	Y4 - Y6	Most owners will agree in writing not to expand inholdings	Signed agreements between communities and government	Village meetings	Partner 1	Partner 1	n/a
	6.1.4. Monitor inholdings in all 13 sites on a bi-annual basis (may be integrated in regular monitoring)	Y5 - Y30	Inholdings in CF areas do not expand	Satellite images verify no expansion of inholdings	staff time from local NGO	Partner 1	Partner 3	Partner 1
	<b>6.2. Support communities to develop forest management plans</b>							
	6.2.1. Facilitate community forestry management plan	Y4 - Y5	Community forestry management plan	Management Plan	Community consultation meetings	Partner 1	Partner 2	Partner 1

Category & Objective	Detailed Activity	Timeframe	Expected Results	Verifiable Indicators	Resources/R required	Monitor	Implementer Y4-Y8 Y9		
	6.2.2. Prepare large-scale maps for communities to track management tasks and achievements	Y5	Communities can track their activities to improve forest management	All communities display management map and use as a tool	GIS, printing, field visits	Partner 1	Partner 1	Partner 1	
	6.2.3. Harmonize management plans with Commune Council development plans	Y4 - Y30	REDD is included in all relevant commune council plans	Commune Council development plans consistent with REDD requirements	staff times	Partner 1	Partner 3	Partner 3	
<b>7. To control the drivers of deforestation - forest protection</b>	<b>7.1. Demarcate forest boundaries with signage</b>								
	7.1.1. Transfer data from maps into GIS database on a regular basis	Y4 - Y30	Maps convey management strategies and challenges	GIS forest management maps for all sites updated annually	GIS staff time	Partner 1	Partner 2	Partner 1	
	7.1.2. Manufacturing of additional cement boundary posts (100 posts per CF every year for 3 years)	Y4 - Y7	3,900 posts are manufactured	3,900 posts	Cement, etc.	Partner 1	Partner 1	Partner 1	
	7.1.3 Installation of boundary posts	Y4 - Y7	3,900 posts are installed on CF boundaries	GPS waypoints of post locations	Labor	Partner 1	Partner 4	n/a	
	7.1.4. Manufacturing of additional CF signs (300 signs per CF per year for 3 years) + 2 billboards per CF every year	Y4 - Y7	Well-maintained signs along all CF borders	9200 signed manufactured	Funds to contract	Partner 1	Partner 1	Partner 1	
	7.1.5 Installation of CF signs	Y4 - Y7	9200 signs installed on CF boundaries	9200 signs total installed	Labor	Partner 1	Partner 4		
	7.1.6. Continued boundary maintenance	Y7 - Y30	CF boundaries are clearly visible	Poles and signs installed	Paint, replacement signs	Partner 1	Partner 4	Partner 4	

Category & Objective	Detailed Activity	Timeframe	Expected Results	Verifiable Indicators	Resources/R required	Monitor	Implementer Y4-Y8 Y9	
<b>7.2. Strengthen forest law enforcement</b>								
	7.2.1. Organize regular village patrols and establish protection contracts	Y4 - Y30	Illegal activity in the project sites decreases. Offenders are caught and educated or punished.	Patrol logbooks	Support for patrols	Partner I	Partner 4	Partner 4
	7.2.2. Organize, equip, and support government mobile enforcement units	Y4 - Y30	4 years intensive law enforcement. mobile unit effectively cracks down on illegal activity	2 units. 4 WD vehicle, helmet , uniform , GPS, camera, motorbikes+ repair and maintenance	Equipment costs, per diems	Partner I	Partner I	Partner I
	7.2.3. Construct guard posts (44) and wooden towers (4)	Y4 - Y6	All sites will have several guard posts and a towers in strategic areas	44 guard posts, towers	Materials for construction, flashlights	Partner I	Partner 4	Partner I
<b>7.3. Forest crime database system</b>								
	7.3.1. Establish and maintain case tracking & reporting system at community and government Cantonment level.	Y4 - Y8	Repeat offenders decrease	Case tracking files and reports	Staff time, field visits, files	Partner I	Partner I	Partner I

# Appendix B – REDD+ Financing Checklist

Requirement	Key Questions	Yes/No	Comments/Response
<b>Developing Investment Grade REDD+ Products</b>			
<b>1. Determine Project Feasibility</b>	Has the project completed a full feasibility study that confirms key aspects of the project definition, stakeholder identification, and technical and financial potential for carbon asset development?		Investors will require a full feasibility study to demonstrate the commercial viability of the project.
<b>2. Market Standards and Methodology</b>	Can the project meet Voluntary Carbon Standards or other credible standard? Can it achieve dual VCS/CCB certification?		Over the last 3 years, investors have recognized the VCS as the standard that will create the highest quality forest and land-use credits. With the ability to link VCS and CCB credits, most investors will look for dual VCS/CCB certification as this demonstrates social and environmental benefits of the project and reduces overall risk by ensuring proper community consultation and livelihood development.
	Can the project demonstrate its ability to move into jurisdictional accounting?		A project can demonstrate certain qualities to investors related to its ability to move into jurisdictional accounting. These include clauses in the government approval documents that support grandfathering of the project into the jurisdictional REDD+ program; using a baseline that covers an entire state or province; and incorporating elements of the VCS jurisdictional technical guidance in the carbon accounting.

Requirement	Key Questions	Yes/ No	Comments/Response
<b>3. Project Partners' Capacity and Sellers' Entity</b>	Can the project demonstrate that it has the “right of use” of the emission reductions generated by the project?		There are a number of ways that project proponents may demonstrate right of use, but for REDD+ projects right of use will likely often be demonstrated by a formal examination of the land tenure and how it can meet the following VCS definition: “a right of use arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or removals (where such right includes the right of use of such reductions or removals and the project proponent has not been divested of such right of use)”.
	Does the project team, in total, have the capacity to manage the implementation of the project and the delivery of verified emission reductions?		As part of due diligence, investors will look into the role of each project partner to assess: the organization(s) that will manage the implementation of activities that produce the reduction in emissions, and whether they have a proven track record; the organization managing the carbon development process; the organization managing the financial aspects of the project; and most importantly the partners involved in implementing activities that reduce deforestation.
	Are there clear roles and responsibilities defined between partners within a detailed work plan that clearly defines which entity is responsible for delivering what activity? Is this aligned with budget allocations to each partner and backed by legal contracts and/or service agreements to hold partners accountable?		Each of the partners contributing to implementation of the project must have legally binding agreements that clearly detail their roles and responsibilities for the duration of their involvement

Requirement	Key Questions	Yes/ No	Comments/Response
	Is the seller's entity established to act as the counterparty to the ERPA and manage the revenue and expenses from the project?		There must be a legal entity that exists or is established to act as the seller of the carbon credits and who will manage the financial aspects of costs and revenue. This seller's entity must demonstrate that it has carbon tenure or "right of use" (see above). The governance mechanisms of the entity must define who and how all revenue and costs will be managed in accordance with the multiple project agreements and benefits sharing plan including the mechanism to distribute "net income". The appointed managers of the entity must have the capacity to fiscally and operationally control the entity and establish a 3 <sup>rd</sup> party audit or evaluation on a regular basis.
<b>4. Project Plan Alignment with Emission Reductions and Livelihoods Improvements</b>	Does the project have a long-term plan (covering the crediting period or longevity period) detailing each of the activities being implemented?		Project plans should have each activity detailed year by year, with the responsible project partner identified. Plans must also articulate the quantitative metrics for implementation
	Does the plan demonstrate a detailed understanding of the drivers, agents, and underlying causes of deforestation and how each is addressed through the planned activities?		The design of the project will be evaluated to ensure that the emission reductions can be generated and that project implementation risk has been minimized.
	Does the plan show how communities in and around the project area are or will be engaged, and how livelihood-specific activities will be implemented?		In cases where the drivers of deforestation are driven by livelihood needs, project activities must demonstrate how alternative livelihoods will be developed to ensure the drivers can be successfully reduced and agents of deforestation improve their livelihoods.

Requirement	Key Questions	Yes/ No	Comments/Response
<b>5. Land Tenure and Carbon Rights</b>	<p>Can the project demonstrate who has land tenure by producing a clear and detailed report on the land ownership and land / natural resource tenure of the project, with references to the supporting local laws? This includes producing the country-specific documents that demonstrate the land tenure.</p>		<p>The analysis should demonstrate who owns the land, who has rights to live on the land and who has rights to use the natural resources and under what conditions. It should also detail any contractual agreements that are in place to transfer rights for either management of land, development of carbon or carbon rights. Any legal processes related to establishing a carbon project in the host country should also be included. The process will also include GPS boundary demarcation for each of the REDD+ parcels, this should be done through a participatory mapping process to ensure any overlapping claims are resolved during the process.</p>
	<p>Have all potential carbon rights holders and the government provided a written agreement of their consent to the development of the project, and assignment of the carbon rights to the seller's entity?</p>		<p>All potential rights holders should agree that carbon rights are legally granted to a seller's entity approved by the project proponent and all other participants. The agreements will ensure that all parties agree to support the project and will not attempt to sell any credits from the project area, except through the seller's entity. Given that the land tenure framework in many developing countries is such that much of the land eligible for REDD+ is actually owned by the government, this belt and suspenders approach will likely require that the government provide written consent or approval for a REDD+ project. For projects where the communities have tenure, the approach requires agreements to be put in place with the community groups.</p>

Requirement	Key Questions	Yes/ No	Comments/Response
<b>6. Financial Projections Over Project Life</b>	Has a minimum set of financials been prepared for investors?		This will require annual estimates for at least the crediting period including; a detailed set of project costs that ties to the planned activities, an estimate of the carbon related costs, and revenue estimates using realistic carbon estimates and prices. The financial model should provide cash flow, IRR, and net present value from both the project's and the investor's perspectives. It should also include sensitivity tables on price, tons, issuance dates and other key factors that impact the project's financials. This exercise must be completed prior to seeking investor capital in order to make the financial case to the investor for the funding amount sought, and to support the negotiation of investment terms from a position of full information.
<b>7. Community and Stakeholder Engagement</b>	Will the project validate under the Climate, Community, and Biodiversity Standard?		Most investors will expect community-based REDD+ projects to achieve validation and verification under the Climate, Community and Biodiversity Standard (CCB), and to perform the on-going monitoring and verification to allow the credit issued under the VCS or CDM to be "tagged" with the CCB certification. CCB validation is most important for <i>avoided unplanned deforestation</i> REDD+ projects, particularly those with a meaningful community component.
	Do project plans detail each activity that directly involves communities, as well as any broader programs for community-level capacity development, livelihood improvement, and employment opportunities?		Inclusion of local communities in the design and development of a REDD+ project from an early stage - particularly for projects preventing "unplanned" deforestation - reduces the risk that the project will fail to adequately address community-based drivers of deforestation and degradation.
<b>8. Benefits Sharing and Funds Management</b>	Is there a benefits sharing plan that identifies all project participants and rights holders, and details each type of benefit that they shall be allocated and		Investors will focus on ensuring that the proper incentives are in place to motivate the long-term support of the project from rights holders and project proponents. Investors will also look to see that the benefits are accruing in a way that is consistent with the land-tenure and carbon rights of the project. The benefits sharing plan should clearly detail how benefits (all forms) are to be shared with participants and if details cannot be completely

Requirement	Key Questions	Yes/ No	Comments/Response
	under what terms and conditions?		finalized, there must be agreement on how they will be formalize in the future.
	Can the project demonstrate that the entity that will manage funds has both the capacity and financial controls to ensure that funds are managed according to all the legal agreements and the benefits sharing plan?		Investors will need to see that the entity controlling financial flows from the project has sufficient capacity to ensure prompt and accurate distribution, and that this entity can support transparent operations and a third party audit of the financial accounting for the project, if required (see seller's entity).
<b>Engaging the Private Sector</b>			
<b>I. Identification of Potential Investors</b>	Does the project have an individual or advisory organization with relevant experience in structuring transactions and identifying investors/buyers?		In general, a project benefits from retaining an individual or advisory organization with experience in developing and securing investments in successful land-use carbon projects. This should include key personnel with ERPA structuring and transaction experience.
	Has the project identified all possible investor types (equity, debt, etc.)?		

Requirement	Key Questions	Yes/ No	Comments/Response
	Does the project have a marketing strategy and adequate marketing documentation?		Investors who have already made investments in land-use projects, or who have already made purchases of carbon credits (provided that the projects in which they have invested continue to be successfully verified), may be interested in making similar investments in other land-use carbon projects, including REDD+. Projects need to prepare and circulate marketing documents to the quality typically received by institutional investors. These documents should clearly outline the details of the project and the investment opportunity, and describe the project's status against investment readiness criteria discussed above. It is advisable for a project to prepare public, non-confidential marketing documents that can be shared online but omit potentially sensitive information, such as project cash flows and carbon estimates. Those details could be shared via direct communications with a specific interested party after execution of a non-disclosure agreement, rather than with a broader circulation list. The project should be sure to list details on relevant project databases, such as the Ecosystem Marketplace Forest Carbon Portal and VCS Project Database.
<b>2. Protection of Sensitive Information</b>	Does the project have a Non-Disclosure Agreement with interested parties prior to beginning negotiations?		Investors are likely to have their own standard form NDA, though numerous examples are publically available for use. It is important to ensure that an NDA is "two-way" meaning that confidential information provided by both the project and the investor is protected. The confidentiality provisions in the NDA are likely to carry over into any formal agreements between the project and the investor, and these agreements may make explicit mention to the NDA enacted between the parties. The project should review the agreement to ensure that there are no clauses that bind its ability to work with multiple potential investors at the same time.

Requirement	Key Questions	Yes/ No	Comments/Response
<b>3. Support for Investor Negotiation</b>	Will the project retain a lawyer and financial advisor?		<p>Although expensive, retaining a lawyer and financial advisor with REDD+ experience, prior to preparing investment agreements and negotiating with potential investors, will likely prove invaluable for ensuring there is a balance in knowledge between the project and the investor. This will promote fairer terms between the parties.</p> <p>Ideally, legal and financial experts will have experience negotiating and executing term sheets of ERPAs, equity investments, loans, and other transaction forms for carbon projects. Knowledge of host-country legal processes and requirements related to transactions, taxes, and similar topics will also be important. Sometimes there is a need for two lawyers, one with international carbon transaction experience and one with host country experience.</p>
<b>4. Preliminary Project and Investor Evaluation</b>	Does the project understand the prospective investor's requirements and motivations?		<p>A prospective investor's preliminary evaluation will likely consist of a desk review of project-related information and documents. Project proponents should use this opportunity to gain an understanding of type of investment the investor is looking to make, the level of investment funding available, the desired timeline, and any other related constraints or investment criteria that the investor may have. Project proponents should inquire about the motivations of a prospective investor to invest in their project, particularly with respect to the potential control requirements of equity investors. If the outcome of the preliminary review is satisfactory to both parties, the project and investor can move forward with the drafting of an investment Memorandum of Understanding (MOU).</p>
<b>5. Execution of Memorandum of Understanding</b>	Will an MOU be completed?		<p>After an initial evaluation is completed to satisfaction of the project proponent and the investor, the parties will likely enter into a MOU. In some cases, an investor may choose to not enter into an MOU, preferring instead to detail all economic terms in the "Term Sheet" that will be prepared after due diligence has been completed. The MOU can be detailed or high-level, but should clearly state the goals of the parties and the process that will be used to determine how to execute a transaction, with agreed dates if possible.</p>

Requirement	Key Questions	Yes/ No	Comments/Response
<b>6. Final Due Diligence</b>	Is the project prepared for the due diligence process?		<p>Project proponents can expect the due diligence process to include:</p> <ul style="list-style-type: none"> <li>• assessment of the project’s benefits sharing structure;</li> <li>• extent of community consultation;</li> <li>• background check on all implementing organizations and the key personnel involved in the project;</li> <li>• confirmation receipt of all required government and community approvals and agreements;</li> <li>• field visit to the project site and in-person meetings with the project stakeholders;</li> <li>• detailed assessment of the project work plan and budgets;</li> <li>• assessment of the methodology and other technical carbon-development steps that go into generating carbon estimates.</li> </ul>
<b>7. Execution of Term Sheet</b>	Does the project have an individual or advisor qualified to develop and/or review and negotiate the investor's Term Sheet?		<p>Once preliminary due diligence has been completed and an investor has made a decision to invest in a project, the investor will prepare a Term Sheet. A preliminary agreement may be signed in advance of the ERPA to:</p> <ul style="list-style-type: none"> <li>• secure exclusivity and confidentiality of negotiations;</li> <li>• provide a written document that formalizes discussions in a way that may support the project to develop other commercial financing;</li> <li>• provide the key economic terms on which legal advisors will draft the ERPA. The financial advisor and legal expert that have been retained by the project should help review the Term Sheet, which then serves as the written basis for professional drafting of the ERPA by legal advisors.</li> </ul>
<b>8. Finalization of Due Diligence and Approvals</b>	Have due diligence and approvals been finalized?		<p>The Term Sheet will usually specify a period within which all due diligence must be completed and the Board or investment committee approvals of each party must have been obtained. This period will be used for each party to fully investigate operational and legal aspects of the other, and will naturally be dominated by the investor requesting information of the project proponent and seller’s entity. Assuming information requests are reasonable, prompt and co-operative responses are in the best interests of the seller.</p>

Requirement	Key Questions	Yes/ No	Comments/Response
<b>9. Execution of Transaction Documents`</b>	Does the project have an individual or advisor qualified to prepare or closely review the ERPA?		The ERPA is a legally binding contract executed between the investor/buyer and seller's entity (project proponent). The ERPA builds on the terms established in the term sheet and should be written by a legal professional. The term sheet will indicate which party's legal counsel is responsible for preparing the first draft of the ERPA, but all legal experts should be heavily involved in this process. ERPAs may be drafted for multiple types of credit purchase transactions or investments, including an agreement to purchase future streams of credits from a project, or an agreement to undertake a spot transaction once the credits have been issued. Equity investments are contracted through some type of shareholder's agreement whose exact form will depend on the legal form and jurisdiction of the seller's entity. Loans are typically presented in a loan agreement or other form of financing agreement.
<b>Insurance Transactions</b>			
<b>I. Insuring against risk</b>	Will the project be insured against political risk?		The first ever REDD+ political risk insurance contract was underwritten by Overseas Private Investment Corporation (OPIC) on an investment made by Terra Global Capital in a project in Cambodia in June 2011. In addition to OPIC's underwriting of REDD+ political risk, the Multilateral Investment Guarantee Agency (MIGA) has expressed interest in underwriting REDD+ risk. There do not appear to be other active REDD+ political risk underwriters.
	Will the project be insured against natural disaster risk?		Insurance against carbon losses, due to natural disasters is been fairly limited but has been explored by the leading forest reinsurance provider ForestRe ( <a href="http://www.forestre.com">www.forestre.com</a> ). Information needed to apply for catastrophic insurance includes: all locations, areas, boundaries, carbon stocks (reference emissions rate if REDD) and base lines and boundaries; management details and risk mitigation plans; community involvement details; relevant local loss and growth data for the forest areas; an initial critical mass of forestry pool to provide a sufficient buffer (project size large enough); ability to monitor the forest for all forest disturbance and to provide evidence of stock changes when insurable event occurs (satellite monitoring).