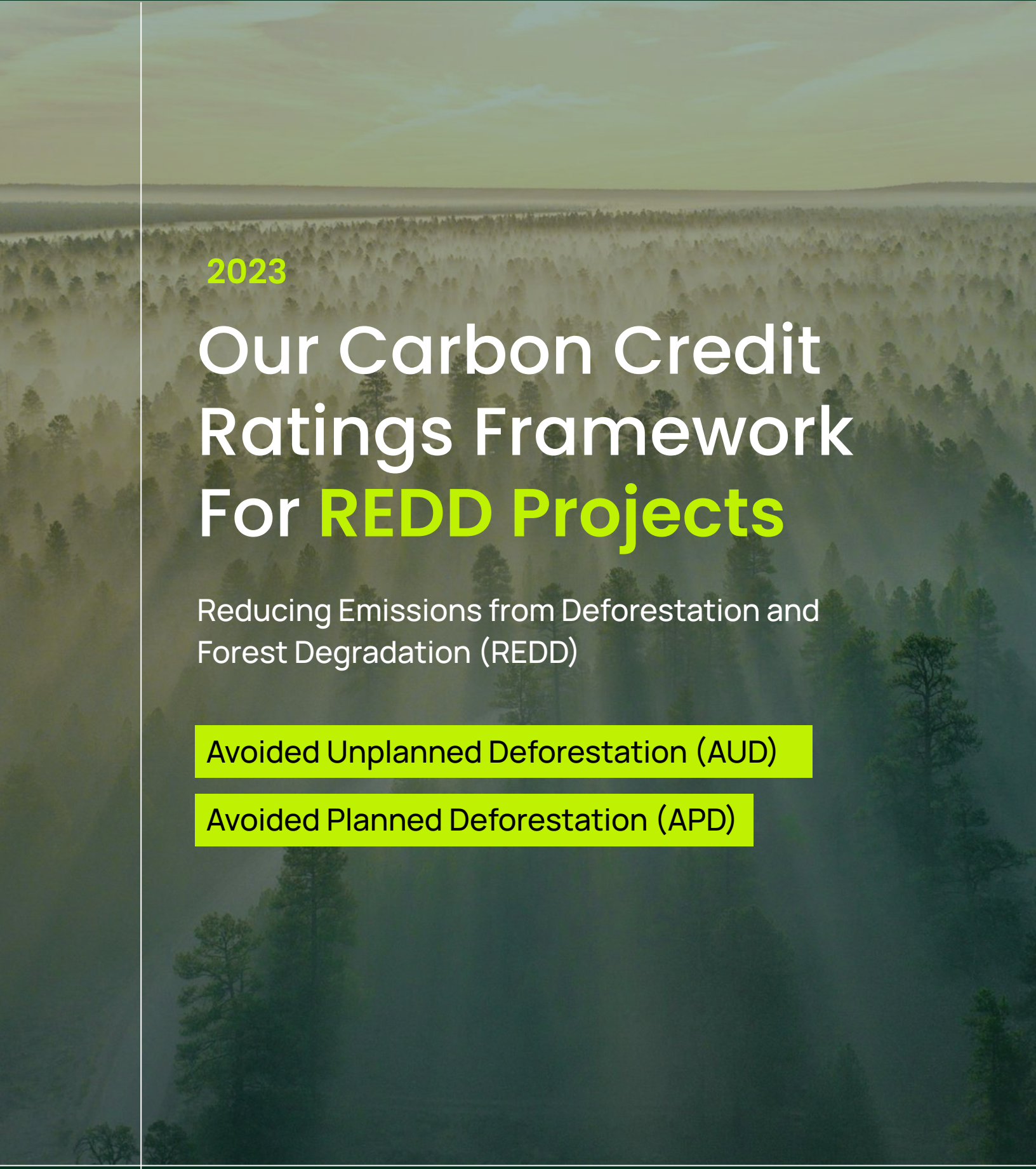


2023

Our Carbon Credit Ratings Framework For REDD Projects

Reducing Emissions from Deforestation and Forest Degradation (REDD)

Avoided Unplanned Deforestation (AUD)

Avoided Planned Deforestation (APD)

Sylvera

Introduction

Sylvera carbon credit ratings are the most reliable and trustworthy in the market.

Sylvera has developed a rigorous bottom-up approach in order to produce the most accurate ratings and analyses for carbon projects in the VCMs.

What sets Sylvera apart

- **Unparalleled depth & accuracy:** We build robust and bespoke ratings frameworks and production systems for each project type. Our ratings are not generated by algorithms alone, but by a team of experts analyzing a variety of quantitative and qualitative data, who then distill it into detailed reports.
  Read our white paper for more information.

- **Technical and scientific expertise:** We have a large and growing team of experts who hold advanced degrees, working across our Multi-Scale Lidar, Geographic Information System (GIS), Commodities, Finance, Policy, Ratings and Machine Learning disciplines.

- **Independence:** We don't sell carbon credits and we never have. We also aren't paid by developers to rate carbon projects. This means we avoid conflicts of interest, and you can trust that our ratings and reports are unbiased.

What are REDD carbon credit projects?

REDD projects are one of several nature based carbon credit types. They seek to Reduce Emissions from Deforestation and forest Degradation driven by human activities in developing countries. The framework for the creation of these projects was developed by the UNFCCC Conference of the Parties (COP) and adopted at COP19 in 2013.

As of December 2023*, over 445 million credits have been issued from REDD projects, making up 59% of nature based credits and 25% of the total credits issued to date in voluntary carbon markets (VCMs).

Two project types sit under the REDD umbrella. Although similar, there are a few key differences between them. Our REDD framework is adapted to appropriately reflect the nuances in project type and fairly assess their quality.

1. **Avoided unplanned deforestation (AUD) projects**
   These projects seek to protect forests from highly localized agents of deforestation. This includes deforestation caused by local communities engaging in subsistence agriculture (i.e. growing crops for local consumption) and deforestation due to illegal logging. Large scale commercial deforestation in the project area has not been planned and is illegal.

   Example: An AUD project may introduce increased patrols to monitor fire and deforestation activities, including the creation of new roads to access timber, and provide financial support to local communities to reduce their reliance on deforestation-linked activities for their livelihoods.

2. **Avoided planned deforestation (APD) projects**
   These projects primarily seek to protect forests from large scale, commercial agents of legally permitted deforestation. These agents include the planned deforestation of a large share of the project area to convert land to an alternative use, such as for crop plantations or cattle ranches. These projects also seek to protect the forest from secondary agents of deforestation, which are primarily local communities.

   Example: An APD project may be implemented to prevent the entire project area from being cleared over 5-10 years by a global corporation that has well-documented plans to convert the forested area to a commercial palm oil plantation. Ongoing protections similar to an AUD project may be implemented to further protect the area from secondary agents of deforestation for the remainder of the project lifetime.

*Source: "Berkley Voluntary Offsets Database - May 2023" v8

Why are we updating our REDD rating framework?

We are committed to continuous improvement of our frameworks, to ensure that the insights we provide our customers stay at the market forefront.

There are three main drivers of this update:

1. **New, cutting-edge data**
   a) **Incorporating multi-scale LiDAR (MSL) data**
   Sylvera uses proprietary MSL data to measure forest biomass accurately and uses it as training data for scaling biomass predictions to project/regional/continent scale, allowing us to assess Over-crediting Risk more accurately. We compare Sylvera's proprietary biomass data product with carbon stocks reported by projects.

   b) **Introduction of new proprietary deforestation detection algorithm using SAR data**
   Our machine learning models are bespoke to different regions and forest types, such as dense tropical forests, dryland and mangroves. For dry woodlands, we have improved the consistency of our Synthetic Aperture Radar (SAR)-based model by confirming each detection of deforestation with imagery, when available.

   We have also updated the definition of deforestation to be a change from above 10% tree cover to below 10% tree cover, this new definition allows us to detect deforestation in areas with sparse tree cover. Finally, we have validated all the models using Aerial LiDAR data. This has improved accuracy by 17% compared against publicly available global forest change data, allowing us to assess Over-crediting Risk and Carbon Score more accurately.

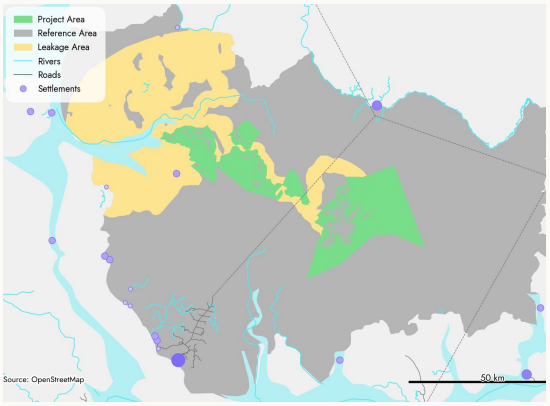
2. **Evolving jurisdictional landscape**
   As Jurisdictional programs are gaining momentum worldwide, particularly under the LEAF Coalition or ART TREES (CORSIA First Phase eligible) and the World Bank's Forest Carbon Partnership Facility (FCPF), the voluntary carbon market will shift, correcting some past problems and surfacing new issues. Our new methodology accounts for and helps participants navigate the complex,evolving landscape by providing an outlook on the impact of jurisdictional programs on a per project basis.

3. **Enhanced tests**
   We have introduced a more uniform science-supported approach with more nuanced tests by building on geospatially-derived insights and leveraging more geospatial datasets across additionality and co-benefits.

   We have integrated a proprietary database of policy and country-level analyses, land tenure disputes and reputational risks in order to provide a holistic view of each project's landscape.

Key Terms and Concepts

Project types	
REDD	Reduced emissions from deforestation and forest degradation
AUD	Avoided unplanned deforestation (and/or degradation)
APD	Avoided planned deforestation (and/or degradation)
Relevant areas	
Project area (PA)	The area in which activities are implemented by the REDD project to prevent deforestation and degradation of existing forest.
Reference area (RA)	A proxy area with similar characteristics and risk profiles to the project. Deforestation in the reference area is used to forecast deforestation and demonstrate the threat of deforestation in the project area.
Leakage area (LA)	An area in which deforestation is monitored to determine whether deforestation or degradation within the project area is being displaced elsewhere as a result of project activities. Also known as the "leakage belt."
Key accounting variables and concepts	
Baseline emissions scenario	This refers to the hypothetical projected emissions that would have occurred within the project area if the project had not been implemented. Also known as the "business as usual (BAU)" or "counterfactual" emissions scenario.
Project emissions	Emissions that have occurred in the project area despite the activities implemented by the project, and any additional emissions associated with shifting deforestation from the project area to the leakage area. It is realistic to expect some degree of residual emissions within high quality REDD projects, which may increase over time, particularly in areas of high deforestation pressure.
Verified (gross) emissions reductions (VERs)	The emissions that have been reduced or avoided as a result of project activities that have been certified by a registry, such as Verra. This is the delta between the baseline emissions scenario and the attributable emissions in the project and leakage area.
Buffer pool	Registries mandate a share of verified gross emissions reductions be set aside in a "buffer pool," and not initially sold as carbon credits. This helps increase the integrity of issued carbon credits in the case of future forest loss and acts as an insurance policy for issued credits to mitigate the risk of previously issued credits being reversed. The share set aside is proportional to the non-permanence risk of carbon stored in the project.
Carbon credit	A tradable unit representing one metric ton of carbon dioxide (CO_2), or an equivalent amount of another greenhouse gas (GHG), avoided or removed from Earth's atmosphere.

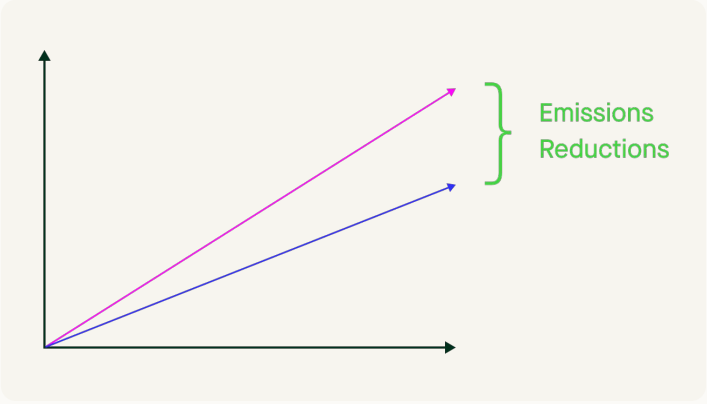


Key accounting variables

How many credits can a project issue?

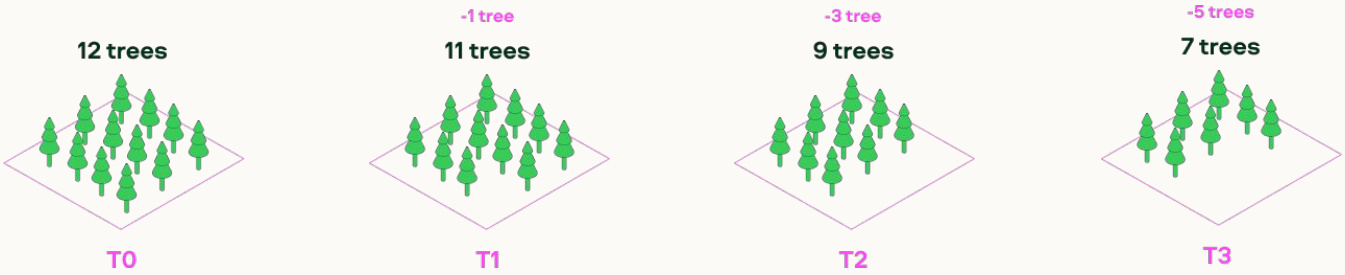
Once certified by a registry, REDD projects can issue carbon credits for the emissions that have been avoided due to the project's activities.

The number of carbon credits that can be issued is the difference between the baseline emissions and project emissions, net any further deductions. Deductions include emissions that have been displaced elsewhere - known as leakage, buffer pool contributions and other uncertainty deductions mandated by the registry.

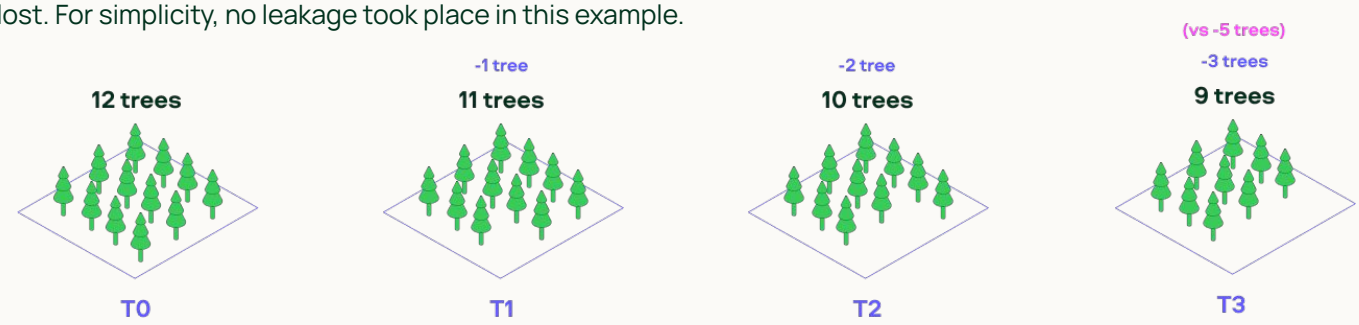


A simplified example

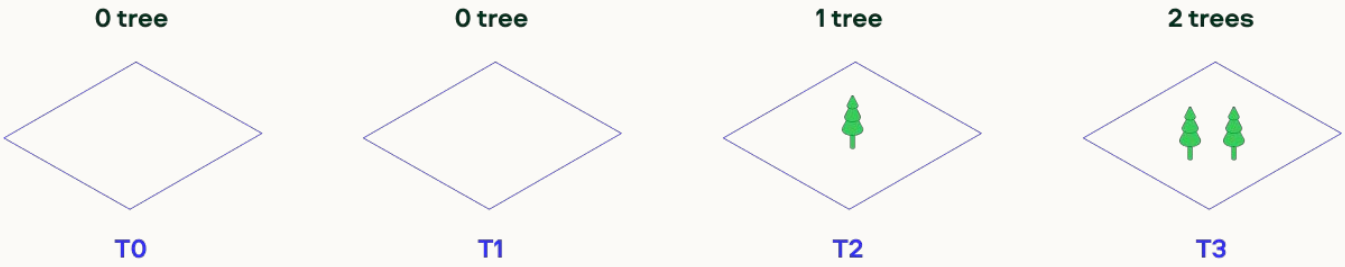
Baseline emissions – The project forecasts the loss of 5 trees between T0 and T3 due to deforestation and forest degradation that would have occurred in absence of the REDD project.



Project emissions – Despite project activities, some deforestation took place and between T0 and T3, and 3 trees were lost. For simplicity, no leakage took place in this example.



Carbon credits – The project successfully prevented the loss of 2 trees between T0 and T3 as only 3 trees were lost compared to the 5 that were forecast in the baseline.



What we look for in high quality REDD projects

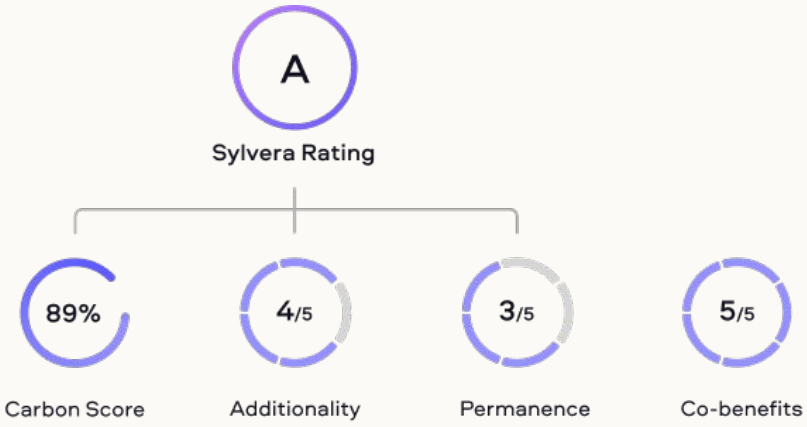
A reminder of our scoring pillars

We assess the quality of REDD projects using defined processes and frameworks, as outlined in our whitepaper.

Our top level Sylvera Ratings span from AAA-D and reflect whether each credit associated with the project is likely to avoid 1 metric tonne of CO2e emissions.

This rating is derived from a combination of scores that assess the **carbon** performance, **additionality** and **permanence** of the project. The scores in these three core pillars are combined in a series of matrices to ensure that underperformance in one key area does not get overshadowed by high performance in others.

Co-benefits are also assessed but they do not feed into the Sylvera Rating, as they do not have a direct bearing on the climate impact of carbon credits. Including them in the Sylvera Rating could lead to a high co-benefits score obscuring poor performance on carbon avoidance. Aspects of the project relating to co-benefits that could materially impact the project's ability to deliver it's stated climate benefit are, however, reflected in the Sylvera Rating.



Carbon score

Sylvera's Carbon Score compares the emissions reductions we calculate, using deforestation estimates from our proprietary machine learning algorithms, with those that have been reported by the project and verified by the registry. Emissions that have been displaced as a result of the project, known as leakage, are also accounted for.

Additionality score

Sylvera's Additionality Score assesses the likelihood to which the project activities would have been implemented in absence of the project. It also quantifies the likelihood and extent that the project is inflating the threat of deforestation and, therefore, issuing too many credits.

Permanence score

Sylvera's Permanence Score assesses whether the GHG emissions avoided or removed by the project are likely to be maintained for an atmospherically significant period of time, typically 100 years.

Co-benefits score

Sylvera's Co-benefits Score assesses the scope and relative impact of project activities on local biodiversity and communities - which are linked to UN Sustainable Development Goals (SDGs).

Carbon score

What is it?

Sylvera's Carbon Score compares the emissions reductions we calculate, using proprietary machine learning algorithms, with those that have been reported by the project and verified by the registry.

Note: This score assumes the baseline and carbon stock assumptions are appropriate. Therefore, the Carbon Score must always be considered alongside our Additionality Score to understand the climate impact of the project.

Why does it matter?

Accurate carbon accounting underpins the validity of a project's issuance and material under or over reporting of emissions will impact the number of credits that have been issued. This could either reduce the risk of overissuance or call into question whether too many credits were issued.

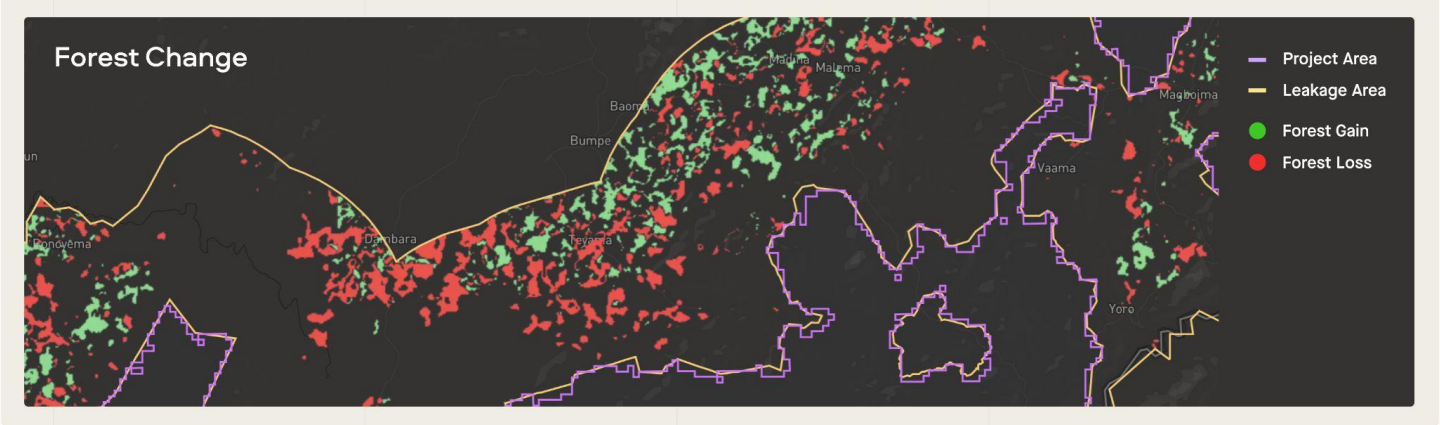
The current methods commonly used by REDD projects to monitor deforestation may over or underestimate forest loss. These errors are introduced when labour intensive, in person monitoring of deforestation in a number of sample plots is then extrapolated to the project area as a whole. Often, more innovative ways to monitor forests at scale are cost prohibitive to smaller REDD projects. Sylvera conducts an independent assessment of forest loss using satellite data across the entire project and leakage area, to give buyers confidence in the emissions being reported by the project.

How do we calculate the Carbon Score?

To verify whether the project is accurately reporting on emissions that are attributable to the project, we first calculate observed deforestation attributable to the project. Then we compare the emissions reductions verified by the registry with those that we calculate using detected deforestation estimates.

We use proprietary machine learning (ML) models that detect deforestation with very high accuracy. These models are tailored to the biome of the project. Currently, carbon stock values provided by the project developer are input into those calculations. However, our research team is building the world's largest biomass dataset based on multi-scale lidar and developing cutting-edge model capabilities which allows us to determine any Over-crediting Risks associated with reported inflated carbon stock values.

Where applicable, we also monitor deforestation that has been displaced from the project area, known as leakage. We include detected leakage emissions in our carbon score if leakage emissions exceed the baseline, or if we disagree with the project's rationale for not attributing leakage emissions to the project.



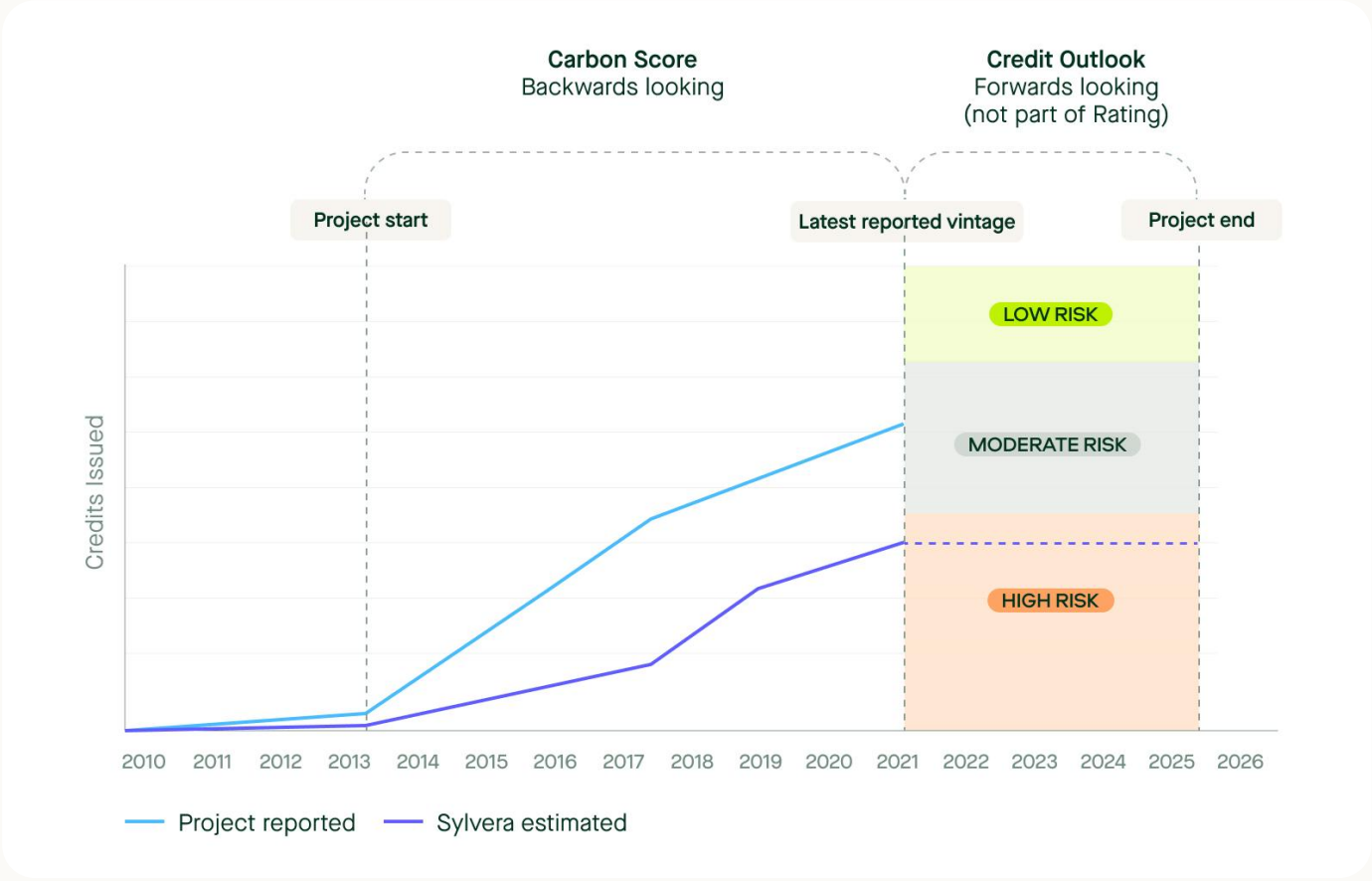
Carbon Score (continued)

Introduction of Credit Outlook

In addition to the Carbon Score, we also track and combine a number of parameters that may impact the future issuance of the project:

a. The potential impact of a project being part of a future Jurisdictional program, primarily the impact this may have on the baseline of the project
b. The permanence risk to the project compared to the buffer contributions of the project
c. The rate of deforestation in both the project area and leakage area
d. The forecasted emission reductions from the projects PDD (ex-anti credits) compared to the realised emission reductions from the projects VRs (ex-post credits)

The ongoing monitoring provided in our carbon outlook empowers buyers to identify potential red flags in project performance early.



Additionality Score

What is it?

Sylvera's Additionality Score assesses whether (1) the activities, that would not have taken place without the revenue derived from the VCM project, are implemented to protect the forest and (2) the baseline deforestation rate and carbon stocks proposed by the project are reasonable and accurately quantified.

Why does it matter?

For REDD carbon credits to reduce GHG emissions, they must have prevented carbon emissions that would have occurred otherwise. A measure of the likely additional impact of carbon credits is, therefore, essential to understand the credit integrity.

How do we assess the additionality of REDD credits?

Our Additionality Score is split into two key components:

1. Additionality of activities implemented by the project
2. Risk of overcrediting due to an inflated baseline and/or carbon stocks.

Due to the differing drivers of deforestation between AUD and APD projects, we modify our additionality frameworks to reflect the nuances of each project type.

What we look for when assessing additionality of AUD vs APD credits

	AVOIDED UNPLANNED DEFORESTATION (AUD)	AVOIDED PLANNED DEFORESTATION (APD)
ACTIVITIES	Is the project implementing activities not previously in place to protect the forest? This includes assessing whether the project engages with local communities and actively supports new economic activities that reduce the drivers of deforestation.	Are the claimed plans to clear the forest in the PA justified? This includes assessing whether the project provides well evidenced planned conversion documentation with strong economic rationale and lack of legal barriers that prevent conversion.
OVER-CREDITING	Has the project developer selected appropriate proxy areas close to the project area (PA), with the same agents of deforestation as the PA, similar risk factors and geophysical properties? We assess whether the proposed baseline deforestation rate in the PA is justified based on observed deforestation in the project selected and Sylvera selected proxy areas both pre and post project start, as well as the claimed carbon stocks.	Has the project selected appropriate proxy areas with the same agents of deforestation as the project area (PA), similar economic viability of conversion and geophysical properties? We assess whether the proposed baseline rates of primary conversion of forest to an alternate land use in the PA is justified based on observed conversion rates in the proxy areas, as well as the claimed carbon stocks.

Additionality Score: Activities

What do we look for when assessing the additionality of activities?

Three key elements indicate the likelihood of whether the project's activities are additional, and go beyond what would have been implemented in absence of the project.

COMMON PRACTICE

We assess the extent to which project activities are above and beyond the activities typically carried out in the region and/or by the proponent type. We also evaluate the effectiveness of project activity implementation against the defined BAU.

POLICY & REGULATORY BARRIERS

We evaluate the legal and non-mandatory regulations, incentives and sentiments that exist around forest management at local, state and national scale.

FINANCIAL ADDITIONALITY

We validate project economics to determine if the project activities would be sub-economic in BAU scenario and that carbon revenues bridges the economic viability gap of the project activities.

What do we test for when assessing AUD vs APD credits?

	AVOIDED UNPLANNED DEFORESTATION (AUD)	AVOIDED PLANNED DEFORESTATION (APD)
COMMON PRACTICE	If business as usual land use practices are similar to those proposed in the project scenario, then the project is likely not additional. We assess whether activities proposed in the project scenario are being implemented in the region already without requiring carbon credit revenues.	If the proposed commercial forest conversion is not common, and, or, forest protection is already common, then the project is likely not additional. We assess whether the proposed commercial forest conversion is practiced in region or by the named agent of conversion and if similar protective activities to those the project scenario are implemented in the region without credit revenues,
POLICY & REGULATION	If legal, policy, land use regulations and institutional conditions sufficiently limit deforestation, then the project is likely not additional. We assess the extent to which legal, policy, and land use regulations institutional conditions constrain deforestation.	If legal, policy, and institutional conditions sufficiently limit the legality and feasibility of forest conversion, then the project is likely not additional. We assess the extent to which legal, policy, and institutional conditions constrain forest conversion. For example, the presence of moratoriums on logging or plantations.
FINANCIAL	Legitimate AUD projects typically require credit revenue as there is no extractive revenue supplementing these projects. We assess financial additionality through a series of tests which compare different scenarios and funding requirement that each project reflected under it documentation.	Is the business as usual case to deforest the project area and convert to an alternate land use financially attractive? If not, the project is likely not additional. We assess financial additionality through a series of tests which compare different scenarios and funding requirement that each project reflected under it documentation.

Additionality Score: Over-crediting Risk

What do we test for when assessing the over-crediting risk?

Three key areas of the carbon accounting are set by the project and the over crediting risk assesses the correctness of each of these choices.

STRENGTH OF BASELINE

Is the project's choice of baseline deforestation rate reasonable in its similarity to the deforestation rates present in the project-provided and Sylvera-selected Reference Areas, and whether the project-provided area is a good match. If not, then the project may be at risk of over- or under-calculating the amount of avoided deforestation.

CARBON STOCK

Is the projects choice of carbon stock reasonable when compared to Sylvera's multi-scale LiDAR based biomass models. If not, then the project may be at risk of over- or under-calculating the amount of tCO2e emissions when converting from hectares.

LEAKAGE

Are the projects assumptions of activity shifting leakage and market leakage reasonable when compared to expert opinion and local forest activity. If not, the project may be at risk of over or under calculating the amount of leakage emissions to deduct from its avoided emissions.

What do we test for when assessing AUD vs APD credits?

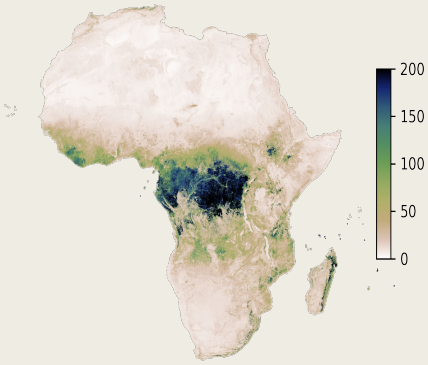
	AVOIDED UNPLANNED DEFORESTATION (AUD)	AVOIDED PLANNED DEFORESTATION (APD)
STRENGTH OF BASELINE	If the deforestation rates are higher in the RA and/or the RA is a bad match to the PA, then the project could be over crediting. We assess the similarity between the RA and PA, and propose a Sylvera-selected RA in the case of a bad match using geospatial analysis. We assess the similarity over time between the baseline and comparable deforestation rates.	If the conversion rates are higher in the proxy areas and/or the proxy areas are a bad match to the PA, then the project is likely over crediting. We assess the similarity between the proxy area and PA, and propose alternate areas in the case of a bad match using geospatial analysis. We assess the similarity over time between the baseline and comparable deforestation rates.
CARBON STOCK	If the project selects an inflated carbon stock value, they may overestimate the amount of avoidance that they achieve and hence be over crediting. We assess the projects choice of carbon stock, and the impact of this choice on the projects credits using Sylvera's own measurements from our MSL based biomass models.	If the project selects an inflated carbon stock value, they may overestimate the amount of avoidance that they achieve and hence be over crediting. We assess the projects choice of carbon stock, and the impact of this choice on the projects credits using Sylveras own measurements from our MSL based biomass models.
LEAKAGE	If the project implemented an inflated leakage area baseline, the project is likely over crediting. We create a new Sylvera-estimated leakage area baseline using deforestation in RS imagery and recalculate a penalty which should have been implemented. We ensure any penalty calculation is complementary to the deductions the project has already reported.	If the project implements a small market leakage penalty then it is likely to be over credited. We implement a heuristic of benchmarking a project's implemented penalty against values in the current literature. (Filewod & McCarney 2023)

Incorporating proprietary multi-scale LiDAR (MSL) data

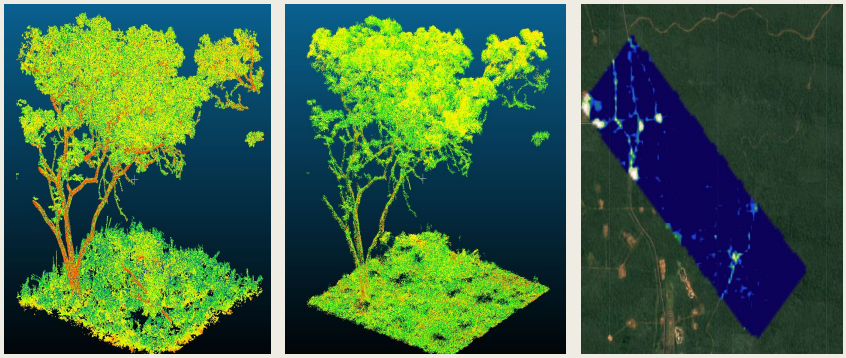
Impacting Over-crediting Risk as part of the Additionality Score

This advanced technology accurately measures forest biomass with a margin error as low as 3% (Burt et al, 2021), whereas other methods relying on allometries tend to see errors ranging from 15% to 30%. Our MSL data enables us to train our models with the best reference biomass data across different biomes, including dryland regions as well as tropical rainforest regions. We further complement our own MSL biomass data with spaceborne GEDI LiDAR, Synthetic Aperture Radar (SAR), and multispectral data in our models.

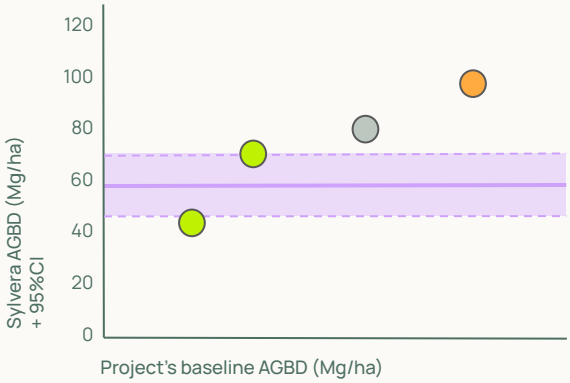
We use MSL data to measure forest biomass accurately and as training data for scaling biomass predictions to project/regional/continent scale.



Sylvera's biomass map for Africa using MSL data



For each REDD project, we create biomass maps used to estimate biomass density, carbon stocks, and their confidence intervals. We then compare our carbon stock data with project-reported carbon stock data



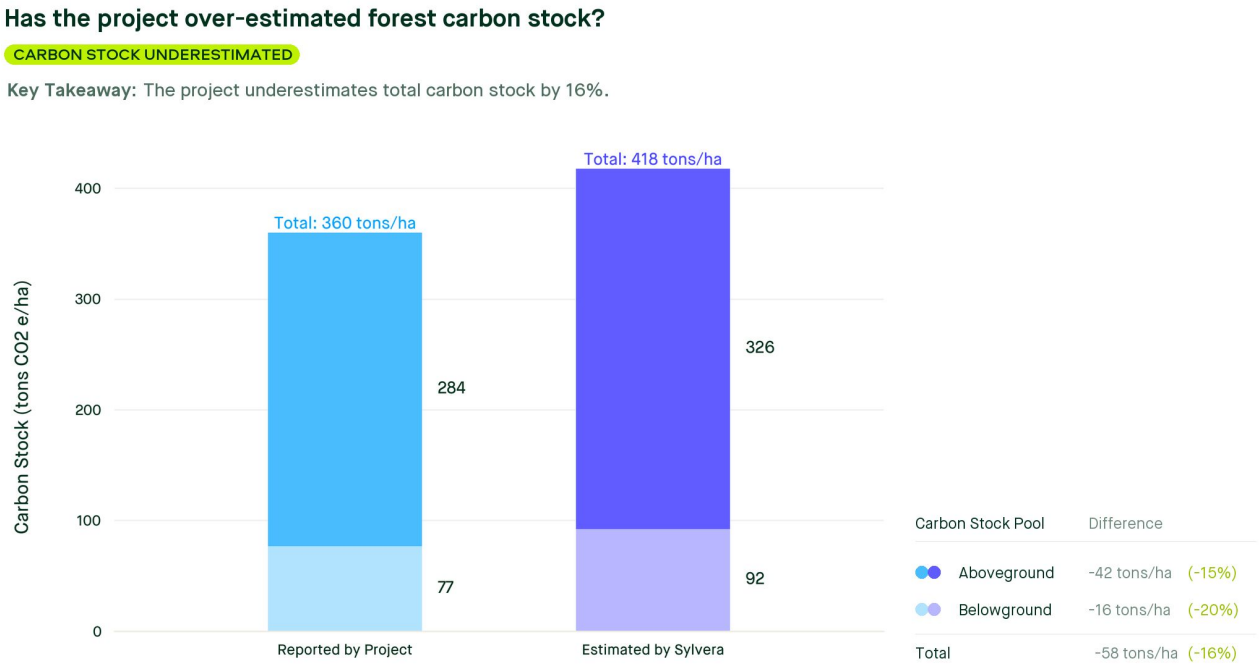
Project's reported AGBD vs Sylvera AGBD:

- Project's AGBD is **lower** than or **similar** to Sylvera's - no OCR
- Project's AGBD is **slightly higher** than Sylvera's - slight OCR
- Project's AGBD is **very much higher** than Sylvera's - high OCR

*Project reported AGB stocks are converted from tCO2e/ha to tC/ha to tDM/ha using standard IPCC factors of 44/12 and 0.47 respectively

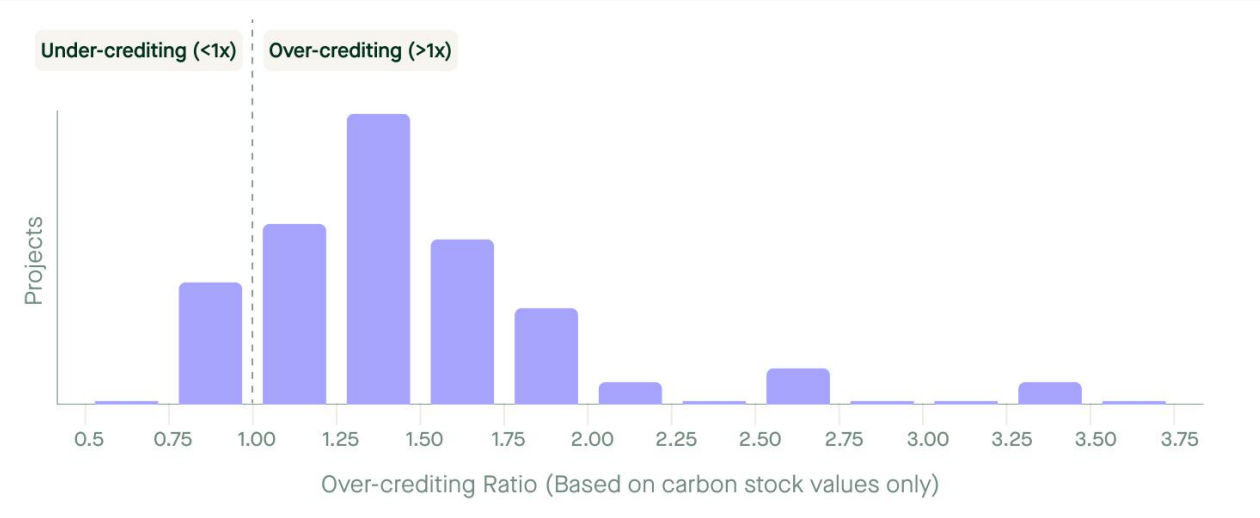
Incorporating proprietary multi-scale LiDAR (MSL) data

How we calculate carbon stock?



In this example, Sylvera finds that the project has underestimated the amount of carbon stored in its forests, per hectare. Therefore, the project is likely issuing too few credits, based on Carbon Stock alone.

This is combined with the Strength of Baseline and Leakage tests, to assess the overall over-crediting risk associated with the projects issuance.



Across all currently rated REDD projects, Sylvera finds that the average over-crediting ratio on the basis of carbon stock comparisons, is 1.5.

Introduction of new proprietary deforestation detection algorithm using SAR data

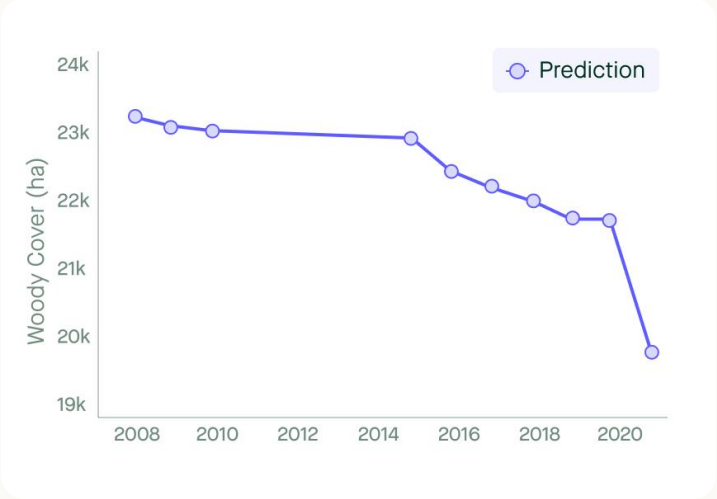
For dry miombo woodland projects; impacting Carbon Score and Over-crediting Risk as part of the Additionality Score

Our models are bespoke to different regions and forest types, such as dense tropical forests, drylands and mangroves.

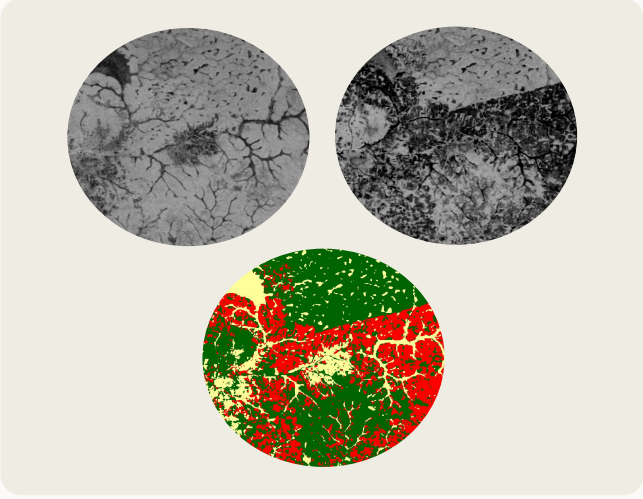
For projects taking place in dry miombo woodland ecosystems, we have improved our forest change detection methods. Using optical imagery (eg Landsat) presents a number of challenges in these ecosystems, as tree cover is often very sparse. Also, in the dry season, trees lose their leaves and are harder to detect, whereas in the wet season, the greening of the understory can be confused with tree cover.

To tackle these inaccuracy challenges, we have improved the consistency of our Synthetic Aperture Radar (SAR)-based model by confirming each detection of deforestation with imagery, when available. We have also updated the definition of deforestation to be a change from above 10% tree cover to below 10% tree cover, this new definition allows us to detect deforestation in areas with sparse tree cover. Finally, the model was trained on 4000 points interpreted from high resolution satellite imagery of Tanzania, and was validated against aerial lidar data from miombo woodland in Mozambique collected by Sylvera.

This method is 17% more accurate at detecting deforestation than Global Forest Watch data (Hansen, 2013).



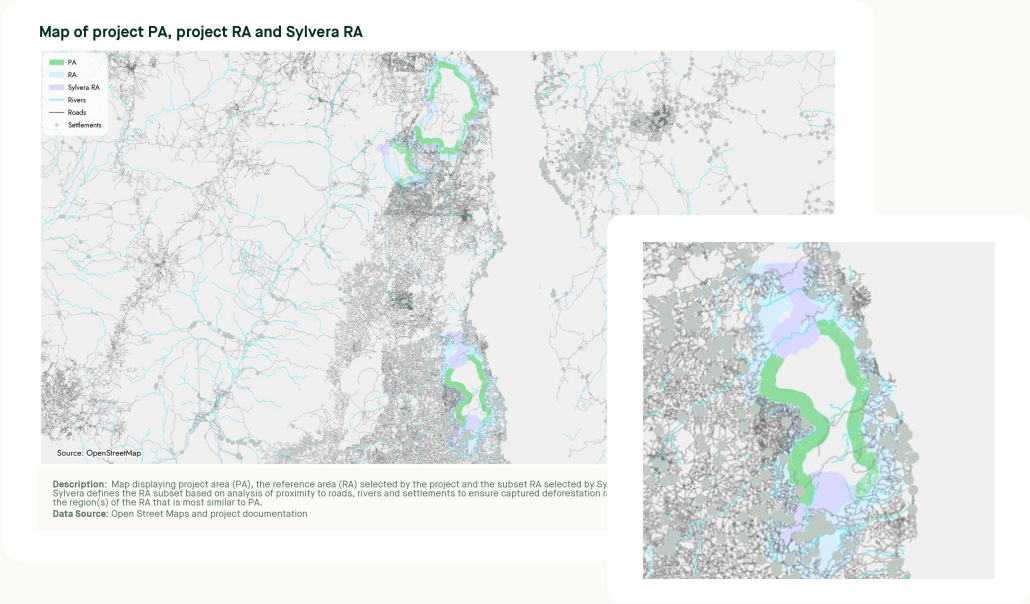
Example of time-series deforestation data



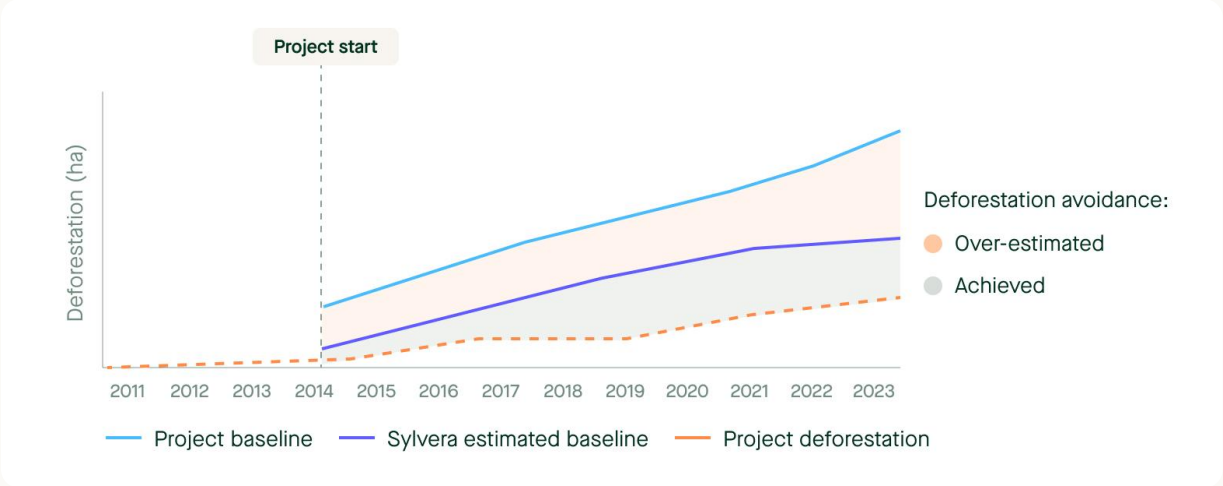
Example observed deforestation derived from PALSAR

Case Study: Strength of Baseline analysis using SAR data

For our Strength of Baseline analysis, we measure the project's reported baseline against deforestation detected by Sylvera in the projects Reference Area (RA). We also test a Sylvera-selected RA (shown as Sylvera RA on the map and chart below), to establish an area that is a better proxy for the Project Area (PA) in terms of key deforestation risk drivers, including accessibility, presence of protected areas and a range of other factors.



Studies show that lower biomass areas generally have a higher deforestation rates than high biomass areas (McNicol et al, 2018), so for dryland forest projects, Sylvera also ensures that Sylvera-selected areas also match the PA biomass at the project start date, using biomass data from the Bouvet et al (2018) study.



The new deforestation detection method shows higher rates of deforestation in the project's RA, as well as the area selected by Sylvera, than previous methods. This reduces the Over-crediting Risk associated with this project and improves the Additionality Score.

Permanence score

What is it?

Sylvera's permanence score reflects the degree of confidence that carbon will remain sequestered in the project for the long-term (i.e., reversal risk).

Why does it matter?

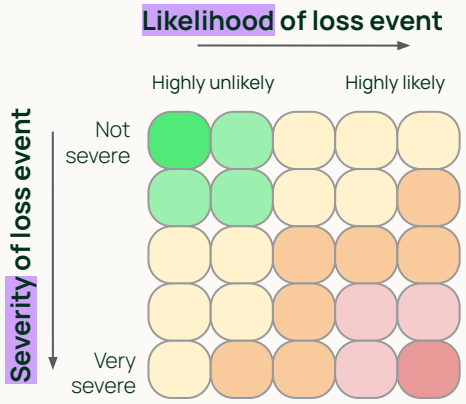
REDD credits are often purchased on the assumption that they will have prevented deforestation, and that the standing forest will continue to be protected over the project lifetime. However, high levels of natural and human risks could prevent the project from providing continued protection. As a result, deforestation may have simply been delayed for a relatively short period of time. Permanence risk is particularly important to monitor if engaged in long term offtakes with a project.

What do we test for when assessing the permanence risk of REDD credits?

FIRE RISK	• Fire patterns and impacts in the PA are mapped using geospatial data. • Fires are analyzed to distinguish between natural and anthropogenic causes. • Our bespoke modeling of future fires merges historical, cause, and trend data with climate projections, tailored to the biome.
DROUGHT RISK	• Current and future drought risk is assessed using climate modelling. • Vulnerability to drought is assessed at the biome, as well as species level.
PEST AND PATHOGEN RISK	• The presence and likelihood of impact on tree mortality of invasive species and pests are assessed, as well as the susceptibility to pest pressure based on drought risk.
FLOOD RISK	• Flood risk trends are assessed, noting their potential to damage roots and soil, leading to biomass loss and carbon release. Area flood vulnerability is assessed using factors such as soil texture.
STORM RISK	• We assess the prevalence of storms and extreme wind in the project's state, as well as any associated loss of trees.
ANTHROPOGENIC RISK	• We assess the proponent's credit issuance rights by examining land rights, local land tenure dispute history, and the presence of informed consent from local communities. • We leverage national and subnational statistics such as the International Country Risk Guide (ICRG) to benchmark the background drivers of geopolitical risk.

Risk Matrix

For each of the different potential causes of carbon stock loss (Fire, Drought, Pests & Pathogens, Floods, Storms Anthropogenic) we evaluate the risk individually by considering factors that influence the likelihood and severity of events that would cause carbon stock loss. We also consider the interactivity of any risks present (e.g. drought events can exacerbate the likelihood of a pest outbreak).



Co-benefits rating

What is it?

Sylvera's co-benefits rating examines whether the project is implementing activities to support local biodiversity and communities, as well as, the scale and likely impact of these activities.

Why does it matter?

REDD project activities often go beyond preventing deforestation and support for local communities and biodiversity is provided. The co-benefits of a project are often used to help market the project. Understanding the scope and impact of these activities can help buyers determine whether the project is aligned with their own priorities and whether the project is delivering material benefits.

How do we assess the co-benefits of REDD credits?

We determine the impact of REDD credits on co-benefits by assessing the scale, scope, novelty and impact of activities on both local biodiversity and communities.

BIODIVERSITY

RICHNESS & DIVERSITY

We assess the species richness and diversity of local flora and fauna, and presence of threatened species to understand the importance of protecting the area from biodiversity losses.

THREATS

We determine whether the project area is under threat of biodiversity loss by considering whether it was already protected and weather risk factors such as the presence of commercial interests, local communities, and non-remoteness present material threats to the biodiversity in the project area.

BIODIVERSITY PROTECTION

We assess the increase and effectiveness of activities to protect biodiversity, including physical protection like the coverage and effectiveness of patrols and forest ranger We also look at whether biodiversity protection is further increased through improved income diversification and agricultural practices to reduce local pressures on the forest.

COMMUNITIES

SUSTAINABLE DEVELOPMENT GOALS

We independently identify which UN SDGs the project is contributing towards by assessing the activities implemented by the project, as outlined in the project documentation.

SCHEME

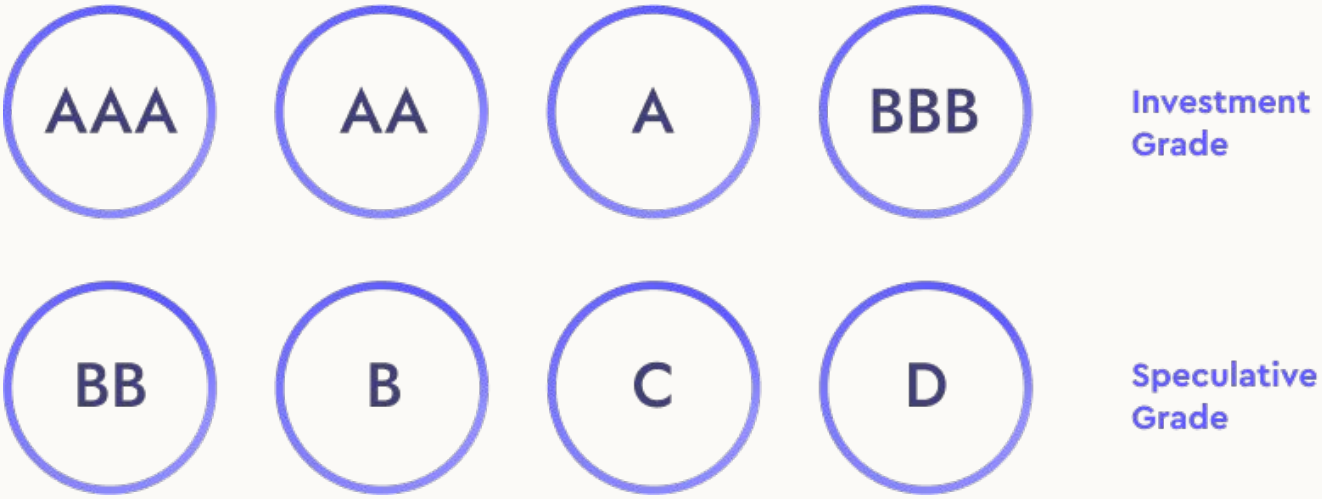
We determine whether the scheme is novel or ongoing, and if it goes beyond activities currently implemented in the region. We also assess whether the project makes a foundational contribution to activities that support SDGs.

IMPACT

We determine the relative impact of activities on local communities by scaling the SDG impact against country level performance, the size of the population affected, and the emissions reductions achieved by the project. We also determine a holistic view of project impact by considering positive impact versus the risk of any negative impact; considering engagement with the community, the presence of equitable benefit sharing and any community disputes.

Interpreting the Sylvera Rating

Our rating categories



The terms “investment grade” and “speculative grade” are market conventions and do not imply any recommendation or endorsement of a specific project for investment purposes.

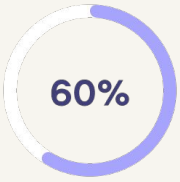
Investment grade categories indicate relatively low risk, while ratings in the speculative categories signal either a lower level of potential impact, a relatively high risk to the project in the future or that an important negative event has already occurred.

Sylvera may also disclose issues relating to a project that means that it can not be rated. Such issues can be fundamental red flags (such as potential fraud) or the absence of the necessary data to produce a rating.

Interpreting the carbon score

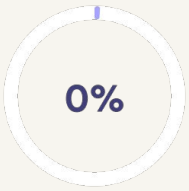
The project has accurately reported the verified emissions reductions relative to the baseline.

Sylvera detects the same or less deforestation than the project.



The project has inaccurately reported verified emissions reductions relative to the baseline.

Sylvera detects more deforestation that is attributable to the project than the project reports.



The project has inaccurately reported verified emissions reductions, which are above the baseline, and should not be issuing credits.

Sylvera detects significantly more deforestation than the project reports. The level of deforestation may in some cases exceed the deforestation proposed under the baseline scenario.

Interpreting the additionality score

Indicates very high confidence that a project is additional and there are minimal or no over-crediting risks.

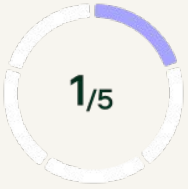
Example: The project's baseline, carbon stock and leakage deductions are conservatives leading to a very low risk of over issuance. There is a significant difference in activities between the "business as usual" and the "with project" scenario. The project activities implemented were a direct result of the revenue derived from the credit project.

Indicates high confidence that the project is additional and there are few over-crediting risks.

Indicates the project is likely additional and there may or may not be some over-crediting risks.

Example: The project's baseline, carbon stock and leakage assessments have mixed results and present some risk over issuance. There is a difference in activities between the "business as usual" and the "with project" scenario. The projects activities implemented may be a direct result of the credit proceeds.

Indicates uncertainty about the project's additionality claim but some plausibility remains and/or there is high over-crediting risk.



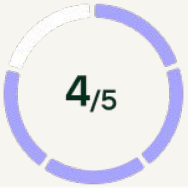
Indicates we found a serious red flag questioning the project's claims of additionality and/or level of crediting claims.

Example: The project's baseline, carbon stock and leakage assessments indicate high likelihood of severe over issuance. There is no difference in activities between the "business as usual" and the "with project" scenario.

Interpreting the permanence score

Indicates very high permanence, the project carbon credits are very likely to be valid beyond the claimed period.

Example: Human risks in the area are low and high impact activities to reduce these risks are in place, while fire risk in the area is low.

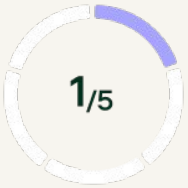


Indicates high permanence, the project carbon credits are likely to be valid for the claimed period.

Indicates moderate permanence, the project carbon credits may be valid for the claimed period.

Example: Human risks in the area are moderate, while fire risk in the area is stable or only slightly increasing.

Indicates low permanence, the project carbon credits are unlikely to be valid for the claimed period.



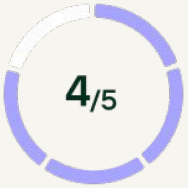
Indicates a very low permanence, the project carbon credits are highly unlikely to be valid for the claimed period.

Example: Human risks are high with little or no mitigation measures, while there have been fires in the project area and are increasing in severity and frequency.

Interpreting the co-benefits rating

Indicates exceptional progression of targeted SDGs, as well as extraordinary species richness and high quality activities to reduce pressure on biodiversity.

Example: The project implements a broad range of SDG activities with extensive reach in the community, operates in a biodiversity hotspot and successfully reduces pressures on the ecosystem.

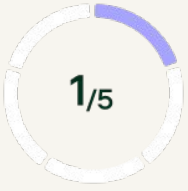


Indicates strong progression of targeted SDGs, as well as high species richness and quality activities to reduce pressure on biodiversity.

Indicates either average progression of targeted SDGs, as well as average species richness and adequate activities to reduce pressure on biodiversity, or, mixed progression towards targeted SDGs and reductions in pressure on biodiversity.

Example: The project implements SDG activities with moderate reach in the community, has average species richness, and takes acceptable action to reduce pressures on biodiversity.s increasing.

Indicates either limited progression of targeted SDGs and low species richness and limited activities to reduce pressure on biodiversity, or, the possibility for negative outcomes from project implementation on local communities or biodiversity.



Indicates either very limited progression of targeted SDGs well as very low species richness and deficient activities to reduce pressure on biodiversity, or, evidence of significant negative outcomes from project implementation on local communities or biodiversity.

Example: The project implements limited SDG activities with limited reach in the community, while not taking meaningful action to reduce pressures on biodiversity or its species diversity is low and possibly under low threat.

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