FOREST CARBON

ACCOUNTING

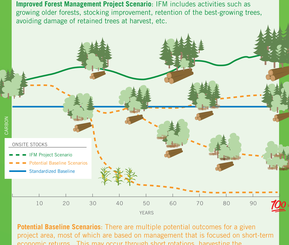
IN IMPROVED FOREST MANAGEMENT CARBON PROJECTS

How it **WORKS:**

Through sustainable management and protection, forests can play a positive and significant role to help address global climate change. The Reserve's Forest Project Protocol is designed to encourage sustainable management practices through the issuance of offset credits for additional emissions sequestration activity above the standardized baseline (business-as-usual or common practice) over a 100-year time frame.

The standardized baseline, which represents business-as-usual or common practice, is an important factor in offset credit issuance for improved forest management (IFM) projects. Offset crediting for IFM projects relies on a performance standard comparing the forest project area's carbon inventory to the average carbon stocks within a forest community.

Projects with inventories above common practice can get credits for avoiding the emissions that would occur should the forest be managed at the average, common practice level, plus carbon associated with future growth. Projects with inventories below common practice can only get credits for future growth. In addition, all projects must perform a conservative 100-year modeling analysis of legal and financial constraints.



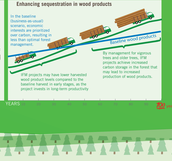
Potential Baseline Scenarios: There are multiple potential outcomes for a given project area, most of which are based on management that is focused on short-term economic returns. This may occur through short rotations, harvesting the best-growing and most valuable trees, and leaving only slow growing or poorly formed trees, or even conversion to other land use.

Standardized Baseline: A representation of business-as-usual for the project, which is based on an analysis of legally-binding and financially feasible criteria, and further governed by a performance standard, which is a statistic of average carbon stocking within a given forest community (common practice) and is conservatively defined to avoid over-crediting.

IFM projects receive credits in up to **3 possible ways**:

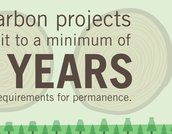
Avoided Emissions

Project stocking must be at least maintained. Committing to long-term monitoring, reporting, and verification removes the risk of emissions associated with conversion and degradation.



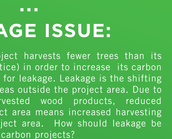
Enhanced Sequestration

This occurs by extending rotation ages, retaining the best trees, improving stocking, minimizing non-forest areas (roads and landings), etc.



Enhanced Wood Products

While onsite carbon stocks (trees) must be maintained or increase over the project life, the increased productivity associated with IFM projects may result in increased wood products relative to baseline levels and contribute to the overall crediting.



Forest carbon projects must commit to a minimum of **100 YEARS** in order to meet requirements for permanence.

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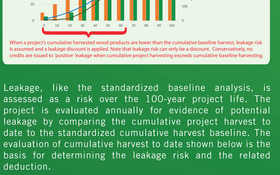
The **LEAKAGE ISSUE:**

If a forest carbon project harvests fewer trees than its baseline (common practice) in order to increase its carbon stocks, it must account for leakage. Leakage is the shifting of harvest activity to areas outside the project area. Due to the demand for harvested wood products, reduced harvesting in the project area means increased harvesting occurs outside the project area. How should leakage be accounted for in forest carbon projects?



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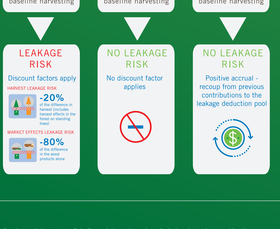
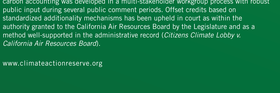
The Protocol's **SOLUTION:**

Determine the ongoing risk of potential leakage as a cumulative analysis through periodic monitoring, reporting, and verification of harvested wood products.



When a project's cumulative harvested wood products are lower than the cumulative baseline harvest, leakage risk is assumed and a leakage discount is applied. Note that leakage risk can only be a discount. Conservatively, no credits are issued to 'positive' leakage when cumulative project harvesting exceeds cumulative baseline harvesting.

Leakage, like the standardized baseline analysis, is assessed as a risk over the 100-year project life. The project is evaluated annually for evidence of potential leakage by comparing the cumulative project harvest to date to the standardized cumulative harvest baseline. The evaluation of cumulative harvest to date shown below is the basis for determining the leakage risk and the related deduction.



LEAKAGE RISK

Discount factors apply

HARVEST LEAKAGE RISK: **-20%** of the difference in the amount of harvest effects in the forest on standing trees

MARKET EFFECTS LEAKAGE RISK: **-80%** of the difference in the wood products store

NO LEAKAGE RISK

No discount factor applies

NO LEAKAGE RISK

Positive accrual - recoup from previous contributions to the leakage deduction pool

A substantial amount of dedicated thought and analysis has been invested in the development and ongoing evolution of the forest protocol. The methodology for forest carbon accounting was developed in a multi-stakeholder workgroup process with robust public input during several public comment periods. Offset credits based on standardized additionality mechanisms has been upheld in court as within the authority granted to the California Air Resources Board by the Legislature and as a method well supported in the administrative record (*Citizens Climate Lobby v. California Air Resources Board*).

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