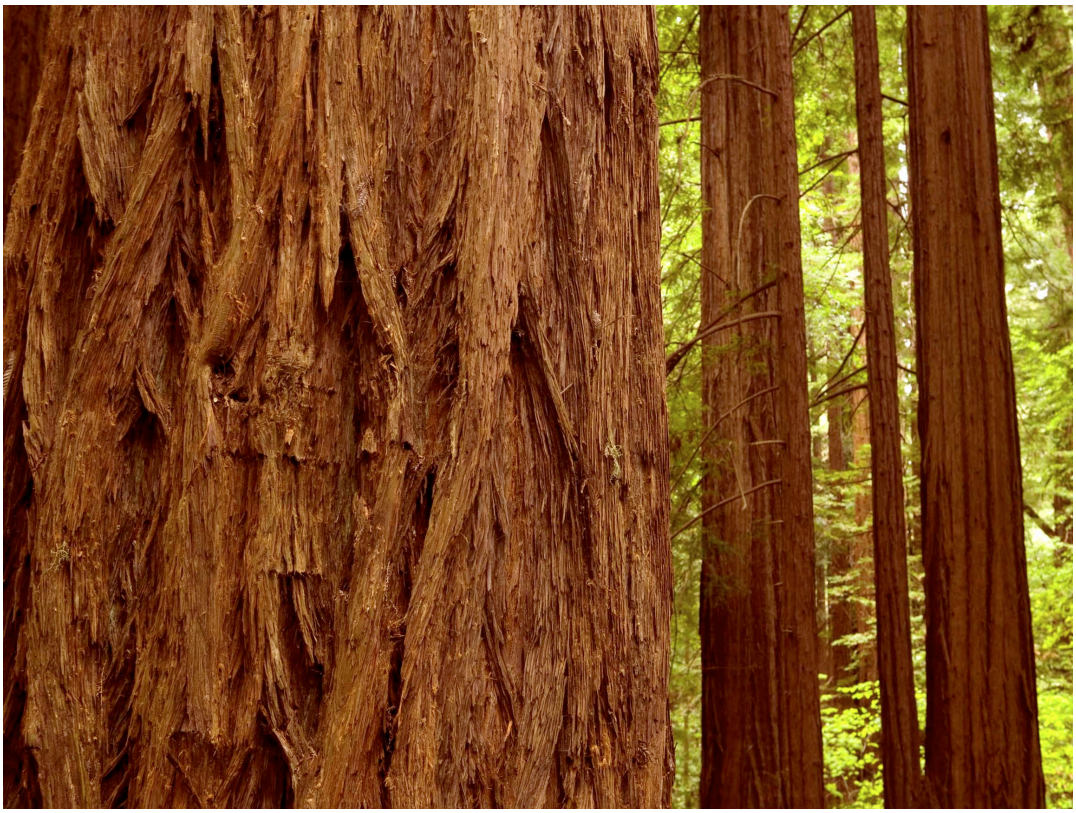
DO YOU KNOW WHAT YOUR FOREST CARBON OFFSETS ARE?



A Simplistic Example

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In the world of forest carbon offsets, it's absolutely essential to understand seven general terms with very precise meanings.

- real
- additional
- permanent
- verifiable
- quantifiable
- leakage
- reversal

These concepts apply to all offset projects, but each type of project has its own methodology for calculating offsets. In the case of California's Cap & Trade program, which allows qualified forest carbon offsets from anywhere in the U.S., projects may consist of reforestation, improved forest management, and avoided conversion (i.e. easements). No matter what the type of forest offset project, this simple "improved forest management" example serves to demonstrate how these important concepts apply.

Imagine you are a forest landowner with 100,000 acres of working forest land. You want to develop an offset project for California's cap & trade market on 1000 acres of your land. To offset 30,000 tons of carbon pollution (in other words, create 30,000 offset credits for sale), you have to sequester 30,000 tons of carbon with your project. Your forest project area's natural growth rate sequesters ~1000 tons of carbon per year, according to the US Forest Service Inventory and Assessment for your area and type of forest. You figure that improved management will sequester an extra 500 tons per acre over 20 years to reach your goal of 30,000 offset credits.

You might think the math would be:
20 years x 1000 tons per year sequestered already = 20,000
20 years x 500 tons extra sequestration = 10,000
Total carbon sequestered from offset project = 30,000

Your project consists of planting additional trees on your 1000 acre offset project to increase its low tree density. You decide to recoup the added expense of planting by increasing your harvest from some of your forestland elsewhere.

What is right and what is wrong with this scenario?

The good news is your project is **real**, meaning it is focused on specific management activities (tree planting) on a defined 1000 acres of real forest, which can be visited and audited.

Now for the bad news.

Your project as defined is not **permanent**. Global warming is occurring because fossil fuels have taken huge amounts of carbon out of long-term storage. To offset these emissions, offset projects must take carbon out of circulation over the long-term, which is currently defined in most carbon markets as 100 years, not 20.

Your project math is also wrong. Offset projects must sequester an amount of carbon above and beyond what would have occurred in the absence of your project ("business as usual"). In other words, your project must sequester carbon that is surplus or **additional** to your baseline. In this example, only the tons of extra sequestration from tree planting is additional.

Another problem is that your project must result in net carbon sequestration above and beyond your overall baseline, which applies to all your forest holdings. When you increase your harvest on property elsewhere - even in a different state or country, this represents internal **leakage**, and it cancels out the increased carbon uptake of your offset project. Leakage is not allowed.

Okay, what is the correct math?

Improved management over 100,000 acres will yield an additional 400 tons per acre above the calculated "common practice" baseline rate for your forest type and area, according to the U.S. Forest Service Forest Inventory & Analysis. You commit to continue this forest management for the next 100 years.

100 years x 1000 tons per year sequestered already = 100,000
100 years x 400 tons extra sequestration = 40,000
Total carbon sequestered from offset project = 40,000

Now that you have revised your proposed project to ensure it is real, permanent and additional. During the first six years of project implementation, however, your carbon sequestration on the ground does not match the calculations in your plan. Do you still get credit for all your offsets as originally envisioned?

No. Your project must be **verifiable**, meaning an independent third party with credentials approved by the market regulator can come inspect and audit your project to ensure that your results have met your goals. The project is made **quantifiable** by using real measurements and prescribed formulae for calculating carbon stocks.

After your first six years, you decide to abandon the project. Can you do that?

Yes, but not without repayment of offsets already issued. A carbon offset project must not only be verifiable but also **enforceable**, through a written legal instrument. If a project owner decides to back out of a project or sells to another such owner, he must surrender compliance instruments at least as great as the offsets already issued over the life of the project, and sometimes more.

Alternatively, suppose your project has been implemented flawlessly, but after 40 years a wildfire sweeps through, and all of your carbon offsets literally go up in smoke. This is known as **reversal**. As long as the reversal was involuntary, meaning the function of a natural or uncontrollable process, your investment is compensated using offsets in the "forest buffer account" to which every project must contribute. On the other hand, if a reversal is found to be intentional, then the project must compensate by surrendering compliance instruments equal to the size of the reversal.

This is a Simplistic Example

This example ignores many of the finer details in the Forest Offsets protocol for the sake of simplicity. For example, when calculating forest carbon stocks, a forest inventory must include not only standing carbon (live trees) but also standing dead carbon (dead and downed wood), shrubs and herbaceous understory and soil carbon.

Anyone seeking to develop a forest carbon project must work with a trained forester to ensure that their project meets the detailed requirements and also to lead you through the multi-layered steps in the project registration and verification process.