



Forest Carbon Markets

Forest carbon markets are where businesses, municipalities, and other organizations can purchase carbon credits to offset their CO₂ and other greenhouse gas emissions (GHG). A forest carbon credit is created when landowners undertake specific projects to increase their forests' ability to absorb CO₂ and store carbon. Reducing emissions of CO₂ and other GHG's can be difficult and expensive, so forest carbon markets provide these entities with an alternative to reduce their impacts on climate change. In this way, the increased CO₂ intake from forests in one location offsets CO₂ emissions in another.

How can landowners participate in a forest carbon market?

Landowners can sell their carbon credits directly through a forest carbon market, but undertaking a carbon offset project is expensive, so many landowners participate through forest carbon programs where third-party companies assist with the up-front and ongoing costs of the project in exchange for a share of the profits.

Key Attributes of Forest Carbon Projects



There are three main types of carbon offset projects that can be used to participate:

- **Avoided conversion:** protecting the forest from future development to keep the carbon in the forest's trees and soils. These projects usually include the establishment of a conservation easement or the transfer of private land to public ownership.
- **Afforestation, reforestation, or revegetation:** growing new trees to remove CO₂ from the air and store carbon. For these projects, trees are planted and/or conditions are created that will encourage the growth of trees in an area.
- **Improved forest management:** using practices that increase the amount of CO₂ removed from the air and carbon stored in an existing forest. One way to do this is to limit the number of trees that are cut in the forest.

To be considered a valid carbon offset project:

- The amount of CO₂ absorbed by a forest, and/or the amount of carbon it stores, must be higher than it would have been had the project never taken place;
- There cannot be a loss of forest carbon in another area (e.g., a landowner reduces the number of trees cut in one forest, but cuts more in another to compensate);
- It must have a long-term time commitment to ensure the additional CO₂ absorption isn't short-lived; and
- It must be periodically checked to verify that the impact of the project continues to meet the carbon credits awarded.

Example Forest Carbon Project Development

Landowner contracts with a carbon developer

Developer determines if the land is eligible for enrollment in a carbon registry and specific protocol in that registry and if the project would be financially feasible.

Developer inventories living and dead trees to quantify carbon stocks

Developer models carbon stocks into the future under a baseline scenario and under the project scenario. Developer also computes the risk of reversal (buffer pool deduction) and leakage percentage.

Developer arranges independent third-party verification of project

Developer lists initial project offset for sale on a registry, each with a unique serial number

Once sold, ERTs are retired. Developer takes percentage of revenue to cover project development, inventory, marketing, and third-party verification costs.

Developer arranges periodic inventories, project updates, and verification to confirm the project management aligns with the offsets awarded.

Developer modifies generated ERTs depending on the inventory results.