

## Carbon Sequestration... What's That?

Randy Brooks

Carbon dioxide and other gases that naturally occur in the atmosphere absorb solar radiation and reflect it back to earth. This warms the surface of the earth and is referred to as the greenhouse effect. Without this effect, our planet would be about 60 degrees F colder on average.

Carbon sequestration essentially means capturing carbon dioxide emissions in trees and other plants. It appears to be a simple common sense approach to climate crisis. Carbon is the very basis of life. Every life form we know is based on carbon. Carbon is stored in a carbon sink. A carbon sink is defined as a process or an activity that removes a greenhouse gas from the atmosphere. A carbon source is a process or activity that puts a greenhouse gas into the atmosphere. Concentrations of  $CO_2$  are elevated either from emissions or by taking  $CO_2$  out of the atmosphere and storing it in terrestrial or freshwater ecosystems. In fact, that was temporarily thought to be

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Recent discussions have centered on the need for methods to track, map, and calculate carbon emissions, and account for worldwide land use and management. Such a system would be the foundation of a market-based system for trading standardized, certified, and internationally recognized carbon sequestration credits. Much of the work to establish a trading system has been done. What remains is for agencies, industry, and institutions to agree to final protocols. Then governments must recognize these credit certification systems.

Carbon offset credits could initially be offered at wholesale levels for \$6 per ton, of which \$3 would go to the landowner/manager for production of the credit. Three dollars would go to certifying and monitoring the credit for its life span to ensure the carbon was actually being stored. Actual market price would be determined by supply and demand. For example, a typical acre of mature mixed conifer forest in the Pacific Northwest can store 1 to 4 tons of carbon annually. Under the credit system, a landowner could get \$3 to \$12 of income annually from each acre of forest for simply managing a healthy forest, other crop, or rangeland. Six dollars per ton is a legitimate incentive to US, and other developed countries, landowners and managers to produce certified carbon credits. It would also provide developing countries the ability to create a new industry to care for and profit from their lands, far beyond what was ever realized from mining their natural resources to depletion. For all countries, the credit system would provide incentives and profit down to the individual land user to promote individual

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**About the Author:** Dr. Randy Brooks is an Area Extension Educator - Forestry and Professor at the University of Idaho.