Measurement guidelines for the sequestration of forest carbon

Measuring, monitoring, and verifying changes in forest carbon stocks are requirements for including forestry activities and receiving credit according to the protocols of most emerging greenhouse gas registries and markets.

Summary: Measurement guidelines for forest carbon sequestration were developed to support reporting to greenhouse gas registries by public and private entities. These guidelines are intended to be a reference for designing a forest carbon inventory and monitoring system by professionals with knowledge of sampling, statistical estimation, and forest measurements. This report provides guidance on defining boundaries; measuring, monitoring, and estimating changes in carbon stocks; implementing plans to measure and monitor carbon; and developing quality assurance and quality control plans to ensure credible and reproducible estimates of the carbon credits.

Why use this and who is interested: The methods presented are based on standard approaches to forest measurement, and can be adapted to specific sites, forest conditions, and reporting requirements. Expected users include individual landowners, industrial forestry companies and managers of utility company lands who are interested in implementing forestry activities and projects designed to generate carbon credits that could be traded as an offset, or for registering carbon dioxide reductions using the U.S. Department of Energy 1605(b) voluntary reporting registry or other similar registries. Users should be familiar with specific protocols required by the registry to which the forest-carbon estimates will be reported. By carefully referencing these guidelines and other sources of information, reporters can meet targeted levels of precision.

Carbon in forest ecosystems: Plot-level inventory data are the bases for estimates of distinct ecosystem carbon pools, required to meet the measurement specifications and reporting requirements of greenhouse gas registries.