

SilvaCarbon

U.S. science, innovation and technical expertise to assist developing countries in monitoring and managing forest and terrestrial carbon

Recent years have seen rapid advancement of science and methodologies to help countries monitor their forest and terrestrial carbon. This includes impressive improvements in satellite data availability and quality, along with improved ground, or *in situ*, measurements, enhanced modeling capabilities, and increased knowledge through research. Ongoing research and international collaboration is particularly critical now for comparing methodologies and identifying good practices and approaches relevant to a variety of country circumstances.

With this in mind, United States federal agencies have joined together to create the SilvaCarbon program to enhance capacity worldwide for monitoring and managing forest and terrestrial carbon. SilvaCarbon will draw on the expertise of the U.S. scientific and technical community including experts from government, academia, non-governmental organizations, and industry. Working in partnership with developing countries and other partners, SilvaCarbon will enhance worldwide capacity by identifying, testing, and disseminating good practices and cost-effective, accurate technologies for monitoring and managing forest and terrestrial carbon.

SilvaCarbon is a flagship program under United States fast start financing for REDD+ and is a U.S. contribution to the Forest Carbon Tracking task of the intergovernmental Group on Earth Observations (GEO). SilvaCarbon will address technical issues including:

- Sampling protocols and design
- Data capture, processing, archiving, and distribution
- Collection and analysis of *in situ* data, including involvement of local communities and stakeholders
- Integration of remotely sensed and *in situ* data
- Classification and mapping of forest cover
- Carbon stock and flow estimation
- Design of monitoring systems for multiple uses
- Land use analysis and planning

Working cooperatively, U.S. federal agencies will draw on their respective strengths to implement SilvaCarbon. Agencies currently involved include: U.S. Agency for International Development (USAID), the U.S. Forest Service within the Department of Agriculture (USFS), the U.S. Geological Survey of the Department of Interior (USGS), the U.S. Environmental Protection Agency (EPA), the U.S. Department of State, the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration within the Department of Commerce (NOAA), and the Smithsonian Institution.

SilvaCarbon will be closely coordinated with international organizations and other governments that are also engaged in the GEO Forest Carbon Tracking task, or in related forest and terrestrial carbon activities.



SilvaCarbon Objectives

Objective 1: Demonstrate and compare forest and terrestrial carbon measurement and monitoring methodologies.

Achieving this objective may include critically reviewing methodologies and technologies for accuracy, uncertainty and cost to provide countries with a range of options for adoption and implementation; supporting an assessment and integration function for methodologies currently being deployed in National Demonstrator sites of the GEO Forest Carbon Tracking task; developing scientific designs for comparing methodologies within a National Demonstrator site; and supporting the implementation of new National Demonstrator sites.

Objective 2: Build capacity of selected developing countries to use forest and terrestrial carbon monitoring and management methodologies and technologies.

Achieving this objective may include developing and delivering good practice guides, manuals, trainings, and tools; facilitating learning exchanges, regional forums, and networks to enhance sharing among countries; providing technical advice and assistance to governments, including National Demonstrators; and partnering with other donors and with International Organizations to multiply impact and reach.

Objective 3: Facilitate, in cooperation with the Committee on Earth Observing Satellites (CEOS) and other partners in the GEO Forest Carbon Tracking task, the coordinated collection and dissemination of earth observation data related to forest and terrestrial carbon monitoring and management.

Achieving this objective may include supporting efforts to enhance interoperability, coordination, and transparency of data collection systems; participating in the design of global sampling schemes of continuous satellite observations aligned with *in situ* data collection; and enhancing access to, and facilitating the processing of, earth observation data for developing countries.

Objective 4: Strengthen the community of forest and terrestrial carbon technical experts

Achieving this objective may include establishing a web presence that includes knowledge management and social networking capabilities; convening meetings and workshops to build collaboration and greater consistency in technical understanding and in the recommendations provided to developing countries; and producing publicly-available technical documents that summarize and critique the latest methodologies and approaches.

For more information, contact the SilvaCarbon Steering Group Co-Chairs:

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