

## Improving Forest Information to Advance Climate Action

Forest loss is a major contributor to climate change. Carbon emissions from agriculture, forestry, and other land use make up almost a quarter of emissions globally, and represent the majority of emissions in some countries. Yet little is known about existing forest carbon stocks, and even less is known about changes in forest carbon over time. Without reliable, up-to-date information on forest dynamics and associated carbon dynamics, decision makers are poorly equipped to take effective action to address climate change.

Many countries are working to close this knowledge gap by developing national forest monitoring systems. National forest monitoring systems produce vital information on forest carbon emissions and removals that can be used to strengthen forest management and policy, implement Reducing Emissions from Deforestation and Forest Degradation (REDD+) programs, and set and track emissions reductions targets under the United Nations Framework Convention on Climate Change (UNFCCC).

The **SilvaCarbon Program** works with partner countries to support the development of transparent, cost-effective national forest monitoring systems that are appropriate to their needs and circumstances.



*Participants in Bangladesh's social forestry program are key stakeholders in the SilvaCarbon-supported national forest inventory.*

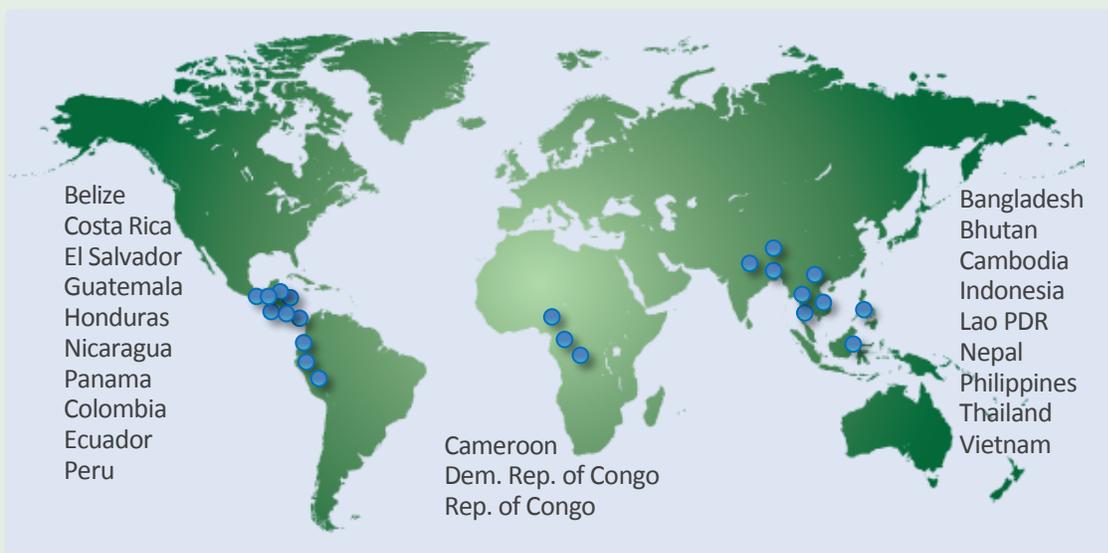
### What is SilvaCarbon?

 **SilvaCarbon is a flagship initiative of the US Government to assist partner countries in the production and application of improved information related to forest and terrestrial carbon.**

Drawing on the strengths of multiple US agencies and a global network of experts, SilvaCarbon provides targeted technical assistance to build capacity in measuring, monitoring, and reporting forest and terrestrial carbon. SilvaCarbon agencies include the US Agency for International Development (USAID), US Department of State, US Forest Service (USFS), US Geological Survey (USGS), US Environmental Protection Agency (EPA), and National Aeronautics and Space Administration (NASA).

### Geographic Scope

SilvaCarbon works with 22 tropical forested countries through a combination of country-specific and regional capacity-building activities.



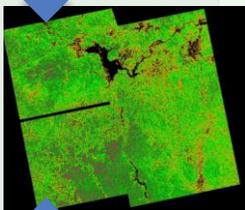
## Program Areas

SilvaCarbon capacity-building activities typically focus on three interrelated areas and their integration:



### National forest inventories

Ground-based forest inventories are essential for understanding the carbon content of different forest ecosystems. SilvaCarbon draws on the forestry expertise of the USFS and other partners to help countries design and implement national forest inventories that are statistically robust, tailored to country priorities, and integrated with other systems and processes.



### Remote sensing

New remote sensing technologies such as Sentinel satellite data and LiDAR can be highly effective tools for tracking forest change over time. By providing expertise from USGS, as well as NASA, USFS, and other partners, SilvaCarbon helps countries adopt new remote sensing approaches and integrate remote sensing data with field data for better carbon estimates. SilvaCarbon partners with the Global Forest Observations Initiative (GFOI) to increase the availability and use of satellite data.



### Terrestrial greenhouse gas (GHG) inventories

In order to meet national and international climate change commitments, including Nationally Determined Contributions under the Paris Agreement of the UNFCCC, countries must transparently account for GHG emissions and removals across a range of sectors. The EPA, through SilvaCarbon, has assisted countries in the use of key tools for developing GHG inventories for the land sectors.

## Accomplishments (selected examples)

- Training technicians in **Vietnam** on the Agriculture and Land Use software tool, which they are now able to apply in the production and analysis of the national GHG inventory, and provide input to the UNFCCC
- Assisting **Peru** to produce a large-area map of forest change that can be used to estimate forest cover and deforestation rates and support Measurement, Reporting, and Verification for REDD+
- Working with **Bangladesh**, in collaboration with the Food and Agriculture Organization of the United Nations (FAO), to design the country's first national forest inventory and train the inventory field teams
- Assisting the **Republic of Congo** to produce its first national-scale, multi-strata forest/non-forest map for sustainable forest management
- Convening forestry departments, mapping authorities, and space data agencies throughout **South and Southeast Asia** to identify forest monitoring needs, assess different approaches, and share lessons learned
- With **GFOI**, delivering needed Earth observation data to country partners and helping them develop long-term data acquisition strategies
- Contributing to international **guidance and tools** for forest monitoring, including GFOI's Methods and Guidance Documentation, FAO's Voluntary Guidelines on National Forest Monitoring, and the OpenForis toolkit
- Funding eleven innovative **research grants** focused on the application of emerging approaches for forest carbon measurement and monitoring

## Contact Information – SilvaCarbon Global Program



- **Sylvia Wilson**, Physical Scientist, USGS; [snwilson@usgs.gov](mailto:snwilson@usgs.gov)
- **Sasha Gottlieb**, Senior Program Specialist, USFS; [sbgottlieb@fs.fed.us](mailto:sbgottlieb@fs.fed.us)
- **Moses Jackson**, Communication Specialist, USFS; [mosesm.jackson@fs.fed.us](mailto:mosesm.jackson@fs.fed.us)

Website: [www.silvacarbon.org](http://www.silvacarbon.org) | E-Newsletter: <http://goo.gl/sGDFL>

