

Company Overview

- Founded in 2006, based in San Francisco with the mission to facilitate the market for land-use carbon offsets
- Exclusively devoted to agriculture, forestry and other land-use carbon markets
- Technical innovator; first to submit methodology for mosaic avoided deforestation (REDD) to VCS
- Only firm with integrated, in-house team of technical, development and carbon finance experts
- Partners with NGOs, governments and private sector to collaboratively develop and monetize carbon credits
- Global project pipeline with diversification across regions, project types, developer types and market standards
- Expertise in developing A/R, agroforestry, REDD, IFM and agricultural projects
- Focused on developing cost-effective rigorous carbon accounting and innovative financing structures

Terra Global Capital's Offering

Carbon Development Services

- Project carbon feasibility assessments
- Methodology development for all land-use project types
- Biomass inventory standard operating procedures for participatory measurement
- Project Document development, with carbon estimates from field data and remote sensing analysis
- Management of validation process

Carbon Monetization

- Development of project financial projections
- In-country tenure assessment and carbon rights and ownership assessment
- Structuring carbon related agreements with project participants and governments
- Development of business process tools to manage development process with multiple stakeholders
- Marketing of carbon credits
- Support for due diligence process on carbon sales and investment
- Management of development partners for carbon deliverables and financial investments
- Project capital raising
- Land-use carbon investment management

Carbon Monitoring

- Quality assurance and quality control on monitoring data
- Calculation of actual carbon credits from monitoring data and remote sensing analysis
- Development of monitoring systems
- Preparation of verification report and management of verification process
- Updating baselines in accordance with methodology requirements
- On-going estimates of forward delivery schedules and permanence risk assessment

Strategic Carbon Advisory

- National REDD strategy development
- National baseline and reference scenario development
- New protocol assessment and development for CAR and VCS
- County-level land-use mitigation assessment
- Voluntary offsets calculator for small businesses
- In-country training and capacity building



Terra Global Capital Carbon Development Expertise

Technical Capabilities

Terra Global Capital combines all required technical expertise with a suite of techniques and models to quantify current land-based carbon stocks and project land-based carbon credit quantification with the highest possible accuracy. The calculations used in this process are comprehensive, and leverage the power of remote sensing data analysis to maximize the effectiveness of ground-based sampling techniques. Key metrics included in this process are the determination of potential losses through leakage, assessment of emissions from project-related activities such as fuel-use or fertilizer application, and the evaluation of permanence and other project risks. Terra's technical staff includes a diverse and experienced team of development specialists, statisticians, programmers, foresters and ecosystem scientists. In addition, Terra has strategic relationship with senior professors at the University of California at Davis to successfully deliver remote sensing, field science, and development research.

Terra Global Capital combines this technical capability in carbon measurement with expertise in global carbon markets to support the registration and monetization of carbon credits from our projects. This includes all work at the local level necessary to transfer carbon rights and develop equitable income sharing mechanisms with stakeholders. Through the carbon feasibility process developed by Terra Global Capital, project developers are provided with an assessment of their project against target carbon standards, net carbon financial projections, and registration risk analysis. Terra Global Capital also manages the carbon credit registration process and handles all aspects of identifying buyers and selling credits.

A summary of Terra's qualifications includes:

- *Remote-sensing experience* at the project, regional, and national level, which can be extended for global application. Familiarity with multispectral, hyperspectral, LIDAR and RADAR on both airborne and satellite platforms.
- *Management experience* with large and global geographical datasets and working remotely with multiple collaborators and third-party verifiers.
- Prediction of future land-use and land cover changes using *our proprietary TerraChange* model, which is based on a fusion of GIS layers with population statistics, roads, soil types, etc., and a series of historical satellite images.
- *Technical forestry experience* for in-field carbon quantification including all aspects of forest mensuration, field surveys and ground-truthing.
- *Completed land classification and carbon feasibility studies* in a number of developing countries in Asia, Africa and Latin America.
- *Incorporation of existing timber inventories and current management plans* into the process of quantifying carbon credits to meet multiple protocols.
- *Experience in working with landowners and communities* on their existing working forests to achieve sustainable forest management plans.



- *In-depth knowledge of all AFOLU carbon markets standards* and experience as a contributing scientific and procedure reviewer of VCS AFOLU guidelines. Contacts with all eligible third-party verifiers. Contributor to the California Climate Action Registry Forestry Protocols.
- *Partnerships with tenured professors at the University of California at Davis.* These partnerships allow Terra Global Capital to keep connected with the rapidly evolving technical methods of quantifying land use and carbon credits. Students and post-doctoral researchers at the UC Davis Center for Spatial Technologies and Remote Sensing (CSTARS) can be leveraged to increase our capacity.

Developed First VCS REDD Methodology

Terra Global Capital has submitted the first REDD methodology to the VCS. This methodology is specific to mosaic-type deforestation, and can be applied in situations where a complex set of deforestation agents and drivers interact. It provides a platform for the prevention of deforestation and the implementation of forest management activities to increase carbon stocks in degraded forests. Management activities are tailored to specific project conditions, and include, inter alia, coppicing, removal of invasive species to allow for regeneration of native species, and enrichment planting. A suite of comprehensive carbon accounting tools are included, allowing for the incorporation GHG fluxes from deforestation, forest degradation and forest regeneration to quantify all project-activity related increases in GHG emissions. More specifically, Terra Global Capital's methodology provides guidance to quantify N₂O emissions from increased fertilizer use and greater animal stocking rates, CO₂ emissions from fuel use, and leakage of boundary poles and signage.

Conceptually, the methodology is informed by the World Bank BioCarbon Fund's REDD methodology, UNFCCC good practice guidance, and elements of CDM-approved A/R methodologies. Baseline deforestation and forest degradation rates are quantified using remote sensing analysis in a reference region outside of the project and leakage areas. Leakage from activity shifting is monitored and accounted for in the leakage belt, the area immediately adjacent to the project areas. The size and location of the reference region and the leakage belt is selected using a comprehensive GIS analysis. The location of the leakage belt is checked frequently and updated if necessary to assure accuracy and integrity.

To determine the quantity of gross carbon credits generated by a project, the difference between the observed deforestation rate and the baseline deforestation rate is determined, and GHG emissions related to project activities and leakage are subtracted from this value. Project activity and leakage related emissions are quantified by tracking all project-related activities, field assessments, adoption of project activities, and occasional interviews and social appraisals with the local communities.

The methodology has been designed from the ground up to be robust and conservative at every step. Carbon credits must be calculated ex-post (after project activities have been implemented), based on observed deforestation rates in the project area and leakage belt using frequent monitoring of the land use changes in the surrounding area using remote sensing analysis. Baseline deforestation rates must be measured and approved ex-ante (before the start of project activities) or before the period during which additional carbon credits will be generated. Baseline deforestation



rates and the size and location of the leakage belts are updated at least every five years, requiring an explicit error analysis. Only the lower 95% confidence limit of the net carbon offsets can be traded.

Diverse Project Pipeline

Terra Global Capital maintains a diverse pipeline of projects spanning nearly 40 countries, including the United States, in both regulatory and voluntary markets. Projects activities include A/R, Agroforestry, REDD, IFM and other land use practices. Terra works to support the carbon measurement, methodology development, registration and sale of credits under CDM, VCS, CAR, CCB and CCX market standards.

For a detailed overview of the company, capabilities and team bios, please see our company website: www.terraglobalcapital.com

GLOSSARY OF TERMS

AFOLU	Agriculture, Forestry, and Other Land Uses
A/R	Afforestation and Reforestation
CAR	Climate Action Reserve
CCX	Chicago Climate Exchange
CDM	Clean Development Mechanism
GHG	Greenhouse Gas
GIS	Geographic Information Systems
IFM	Improved Forest Management
LIDAR	Light Detection and Ranging, an optical remote sensing technology
REDD	Reducing Emissions from Deforestation and Forest Degradation
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard

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