



# 2021 IMPACT REPORT





# Letter from TerraCarbon.

TerraCarbon was formed with the belief that nature is crucial to solving the climate crisis, and with the mission to drive market-based funding to natural climate solutions. We are pleased to share this impact report on our progress in 2021 as well as our goals for the future towards fulfilling this mission.

We are ever grateful to our clients for their trust and the opportunity to support their inspiring work. And we are thankful to our growing number of colleagues at TerraCarbon who have tirelessly and enthusiastically supported increased efforts around the world.

We are at a critical time where the scaling of natural climate solutions is both required and within grasp. To be successful, innovation, integrity, and inclusion will need to be at the core of these scaling efforts. We're excited to work with our clients and partners to meet these challenges and to implement these solutions for the benefit of nature and all life that depends on it.

*~ Scott Settelmyer and David Shoch  
Directors of TerraCarbon*







# TerraCarbon connects **natural climate solutions** to climate finance.

We believe innovative approaches that place a value on nature and ecosystem services and that provide incentives for natural climate solutions (NCS) are critical to addressing climate change, improving the availability and quality of freshwater, protecting biodiversity, and alleviating poverty.

Since our founding in 2006, TerraCarbon has supported project design and monitoring for over **45 carbon projects** on **5.5+ million acres** around the world, resulting in nearly **55 million tons** of verified emission reductions and removals.

Our work is grounded in our guiding principles of **science, trust, collaboration, capacity-building, and equity and inclusion**.

In 2012, we became a Certified B Corp in order to demonstrate that our business has a higher purpose than simply profit.

We have been named Best for the Environment by B Lab in 2017, 2018, 2019, and 2021.



## Our 2021 priorities

1

Develop and improve NCS methodologies that support the highest accounting quality and integrity.

2

Emphasize landscape level initiatives that have an impact at scale.

3

Expand staff resources and advisory support in agricultural soils and remote sensing.

4

Prioritize and support NCS projects that promote resilience, inclusion, and equity for those impacted by project activities and by climate change.

5

Build capacity and partnerships with our clients and within the industry to support scaling of natural climate solutions.



# Emphasize landscape level initiatives.

In 2021, TerraCarbon supported feasibility assessment and project design for several projects at regional scales, including:

### Makame Savannah | Tanzania

Located in proximity to Tarangire National Park, this project protects 100,000+ hectares of essential habitat for endangered and migratory wildlife, as well as seasonal grazing areas critical to the traditional herding lifestyle of the Masai people, from deforestation and conversion to agriculture by outside forces. TerraCarbon supports the design and monitoring of this Carbon Tanzania project.



### Tongwe-Masito | Tanzania

The Tongwe-Masito Reduced Emissions from Deforestation and Degradation project protects a 750,000 hectare ecosystem of deciduous woodlands crossed by tracts of river forest as well as a mixed pattern of grasslands, marshlands, and bamboo shrubs. TerraCarbon has been providing project planning and design support for this project led by Carbon Tanzania.

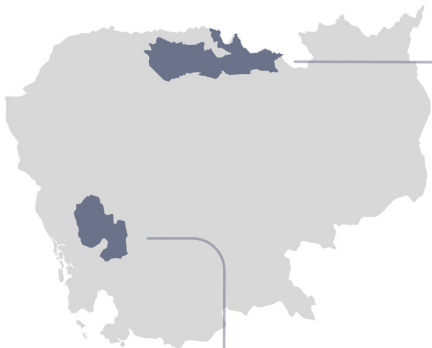


### Ntakata Mountains | Tanzania

This Reduced Emissions from Deforestation and Degradation project supports local communities in the protection of 216,000 hectares of their village forest reserves located near Mahale Mountain National Park—an area that has experienced dramatic land use change detrimental to forests, community livelihoods, and critical species. TerraCarbon provides project design and monitoring support to these efforts led by Carbon Tanzania.

### Northern Plains | Cambodia

Cambodia’s Northern Plains is a critical landscape rich in biodiversity and vital for subsistence livelihoods but threatened by increasing pressure on its natural resources. TerraCarbon is providing project design and monitoring support for this 600,000+ hectare Reduced Emissions from Deforestation and Degradation project that links livelihoods and conservation efforts, led by Wildlife Conservation Society and the Cambodian Ministry of Environment.



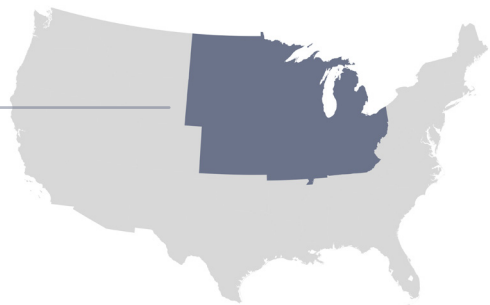
### Central Cardamom Mountains National Park | Cambodia

TerraCarbon is advising on project design, community engagement, and monitoring for this 400,000+ hectare Reduced Emissions from Deforestation and Degradation project led by Conservation International. The project area is Southeast Asia’s largest surviving rainforest, home to dozens of threatened animal and tree species, and an important watershed for drinking water and livelihoods, but faces deforestation threats from illegal logging and forest clearing.



### Initiative to Scale Regenerative Agriculture | USA

CIBO’s initiative aims to bring together advanced soil carbon modeling and remote sensing with innovative grower financial and technical support to scale adoption of no-till, cover crops, and improved nitrogen fertilizer application across the US Corn Belt. TerraCarbon has been providing advice on soil science and the requirements of the new Verified Carbon Standard agricultural methodology (VM0042) to support CIBO’s program design and monitoring approach.





# Develop and improve NCS methodologies.

We believe that carbon markets will be effective in funding NCS only if carbon accounting results are supported by sound science. That is why we have authored novel carbon accounting methodologies that incorporate new scientific data and methods. This past year, our methodology work included:



## Improved Forest Management (IFM) | In Validation

Family forest owners own more than 250 million acres, or 40%, of forest land in the U.S. TerraCarbon partnered with the American Forest Foundation and The Nature Conservancy to develop a methodology to measure the benefits from IFM practices, which will be used to register the Family Forest Carbon Program and provide incentives to landowners in the central Appalachians and eventually across the U.S. The methodology uses an innovative approach utilizing inventory data from surrounding landowners to establish a baseline for business-as-usual forest management.



## Afforestation, Reforestation, and Revegetation (ARR) Project Activities | Under Development

In partnership with Verra and Silvestrum, TerraCarbon has been developing the first ARR methodology under the Verified Carbon Standard. This methodology introduces an innovative, remote-sensing based approach for establishing a dynamic performance benchmark to estimate baseline emissions from business-as-usual reforestation.



## Coastal Resilience | In Validation

The Sustainable Development Verified Impact Standard (SD VISTA) provides methodologies for assessing the benefits of project activities to sustainable development. This SD VISTA methodology, written with The Nature Conservancy and University of California–Santa Cruz, will be the first approved methodology to quantify the climate resiliency benefits of tidal wetlands.

# Expand staff resources.

TerraCarbon hired five new employees, establishing our agricultural soil carbon team and expanding our forestry and remote sensing capacity.

In February of 2021, TerraCarbon welcomed Dan Kane as the practice lead for agricultural soil carbon. Dan is a soil scientist with extensive experience applying the latest science and technology to measuring soil carbon in agricultural lands.

In May, our agricultural soil carbon team expanded to include Jaclyn Kachelmeyer, who has previous work experience in soil health, carbon storage research, and conservation of working lands.

Aaron Holley joined the forestry team in November, bringing expertise in forestry and carbon markets from previous work at The Nature Conservancy and Aster Global Environmental Solutions.

Our remote sensing team welcomed the addition of two consultants, John Furniss and Aaron Meneghini, with expertise in geospatial analyses and modeling. At the beginning of 2022, both joined TerraCarbon's staff as full time employees.



Dan



Jaclyn



Aaron H.



John



Aaron M.



We work with mission-aligned organizations that are committed to equitable treatment and opportunity for all, as well as support for communities and the most vulnerable.



### **Smallholder Health and Reforestation | Malawi**

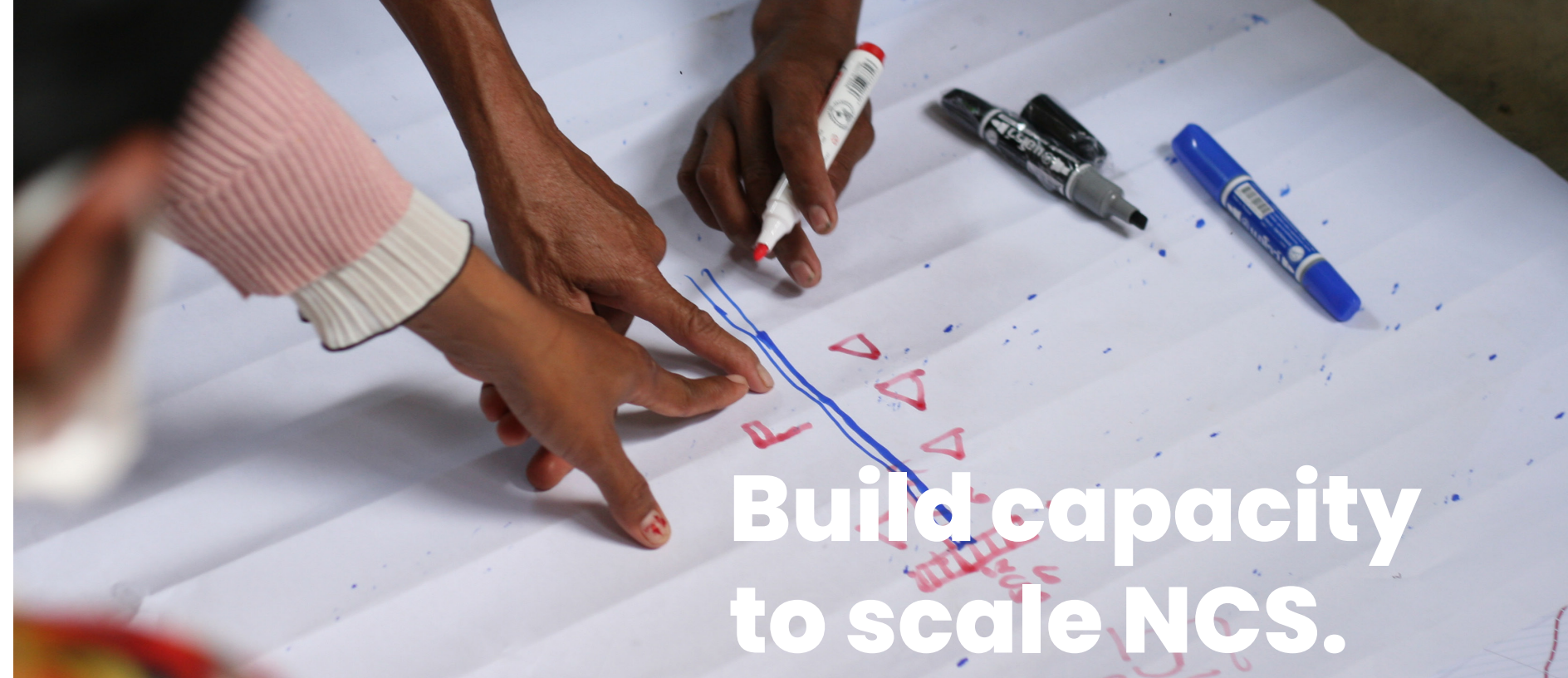
C-Quest aims to reduce greenhouse gas emissions while helping families in the poorest communities around the world live healthier lives. TerraCarbon has been providing project design and monitoring services for C-Quest's reforestation work in Malawi that compliments C-Quest's successful clean cookstoves program.



### **Smallholder Resilient Agriculture | Global**

TerraCarbon advised a global international development organization that has prioritized work to promote ecosystem restoration and climate-smart agricultural practices that support livelihoods and resilience among smallholders. TerraCarbon evaluated the mitigation and resilience potential of these practices in Central America and recommended project design principles to support equity, inclusion, and improved livelihoods in potential projects worldwide.

# Support resilience, equity, and inclusion.



## Build capacity to scale NCS.



TerraCarbon helps build capacity of our clients and their stakeholders to implement and fund natural climate solutions. We provide presentations on carbon markets and project development to broad stakeholder groups and technical training to project teams on topics such as forest inventory and community consultations.

Some of the clients and partners that we collaborated with on presentations and training in 2021 include:

- The Nature Conservancy
- Carbon Tanzania
- Conservation International
- Catholic Relief Services
- CIBO
- Verra
- Wildlife Conservation Society







# Impacts of our business.

## Employees

During the year, we provided employment to 6 full-time and 1 part-time staff. We provided health insurance options to all full-time staff and 401(k) benefits to all full-time staff with at least one year of service.



## Community

We presented several times during the year on climate change and forests to students at Bradley University, Wake Forest University, and Yale University. We also volunteered to teach the Tree Identification Workshop at the University of Virginia and to participate in The Nature Conservancy's annual census of bird populations in conservation areas in Virginia held by TNC and its state and federal partners.



## Environmental

The climate mitigation, resiliency, and co-benefits resulting from our support of natural climate solutions represent our most significant positive environmental impact. Greenhouse gas emissions from business-related air travel comprise our largest negative environmental impact. We have significantly reduced our environmental footprint due to air travel during COVID-19, and we have aimed to continue to use video conferencing when appropriate and bundle trips if possible when travel is necessary. In 2021, TerraCarbon purchased 36 tons of offsets from reforestation and avoided deforestation projects supported by our clients.



## Vendors

TerraCarbon prioritizes supporting locally-owned businesses and uses local providers for office space, and tax, legal, and insurance services.



# Priorities in 2022

**1** Emphasize landscape level initiatives that have an impact at scale, helping bring to market projects in protected areas of Cambodia, the Philippines, and Tanzania, as well as programs for farmers and forest owners in the U.S.

**2** Develop and improve NCS methodologies that support the highest accounting quality and integrity, including final approval of the VCS IFM and ARR methodologies and SD VISTA Coastal Resilience methodology.

**3** Expand staff resources and advisory support to address growing needs, particularly in blue carbon and smallholder land management systems.

**4** Prioritize and support NCS projects that promote resilience, inclusion, and equity for those impacted by project activities and by climate change, including smallholder projects in sub-saharan Africa.

**5** Build capacity and new partnerships with our clients and within the industry to support scaling of natural climate solutions.

