



Climate and Land Use Alliance

*Cultivating solutions for people and the planet*

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# Strategic Focus and Priorities

## **United States Initiative 2013-2016**





THE CLIMATE AND LAND USE ALLIANCE:

# An Overview

The mission of the Climate and Land Use Alliance (CLUA) is to realize the potential of forested and agricultural landscapes to mitigate climate change, benefit people, and protect the environment. The Alliance's members include the ClimateWorks Foundation, the David & Lucile Packard Foundation, the Ford Foundation, and the Gordon and Betty Moore Foundation. Each of the member foundations brings to this mission distinct organizational perspectives and priorities that inform the development of CLUA strategies and their implementation. The Margaret A. Cargill Foundation works in alignment with CLUA and supports its strategies through the implementation of site-specific activities.

## **WITH THE RIGHT POLICIES AND PRACTICES IN PLACE, CHANGES IN LAND USE PRACTICES CAN:**

- ▶ **Yield substantial, cost-effective emission reductions**
- ▶ **Provide sustainable socio-economic development opportunities**
- ▶ **Improve the livelihoods and control over natural resources of forest-dependent communities, including indigenous peoples and smallholder farmers**
- ▶ **Provide many environmental and social “co-benefits,” including biodiversity protection, reduced air and water pollution, and protection of watersheds, which improve local and regional resilience to climate change**

CLUA strategies are currently organized into four geographically focused initiatives (Brazil, Indonesia, Mexico and Central America, and the United States) and one Global Initiative that focuses on relevant public and private sector policies and finance that are international in scope. Our multi-foundation teams bring diverse expertise and seek to develop and maintain strong relationships with partners—ranging from grantees and contractors to other donors, government agencies, and the private sector. We put priority on strategic interventions, aim to fill important gaps, and work collaboratively with others.

CLUA faces a complicated global landscape. International negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) process are too slow and alone will not achieve the fundamental objective for which the UNFCCC was intended—“the stabilization of greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system”—or the more specific land-use-related task to which it committed itself to “slow, halt, and reverse forest cover and carbon loss.”

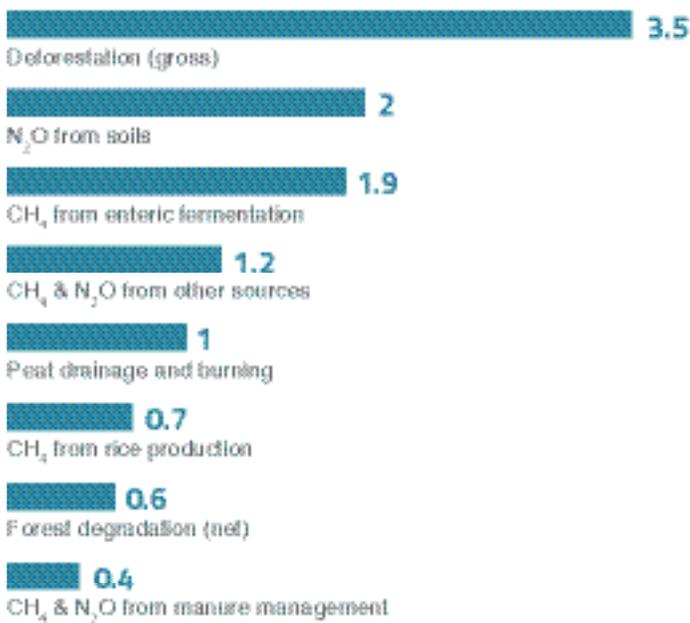
A scientific and political consensus has emerged around the imperative of limiting climate change to an increase of no more than 2 degrees Celsius. The opportunity to stabilize greenhouse gas concentrations in the atmosphere at a level that would achieve that result, however, is rapidly slipping away, with current “business-as-usual” projections at 4 to 6 degrees Celsius.



Land use is currently responsible for about 25% of greenhouse gas emissions caused by human activity—more than the transportation sector worldwide. These emissions come predominantly in the form of carbon dioxide (CO<sub>2</sub>) from deforestation, forest degradation, and the draining and burning of tropical peatlands, as well as nitrous oxide (N<sub>2</sub>O) production from fertilizer application to agricultural fields and methane (CH<sub>4</sub>) from rice and cattle production. Avoiding dangerous climate change will be significantly more difficult and costly if emissions from land use are not substantially reduced.

### Greenhouse Gas Emissions From Land Use

Measured in CO<sub>2</sub>e per year (billions of tons)



New risks to CLUA’s mission include less political attention to climate change, generally, and to the role of land use, specifically. In addition, unrealistic expectations that accompanied new initiatives to reduce emissions from deforestation and forest degradation (REDD+) have not been realized, despite some very significant progress. Recent poor performance of carbon markets, and the risks of linking forests to those markets, has raised concerns about the “payment-for-performance” approach associated with REDD+.

Meanwhile, the expansion of commodity production and infrastructure expansion—major drivers of deforestation and the displacement of indigenous peoples and smallholder farmers—increasingly threatens tropical forests and the people who inhabit them. Agricultural commodity production itself is no longer driven primarily by demand from the industrial world but by demand from “emerging” economies.

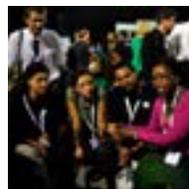
**Our strategies must recognize these realities and address the challenges and opportunities they present. We recently developed revised strategies for each of our geographically focused initiatives in Brazil, Indonesia, Mexico and Central America, and the United States, and for our Global Initiative. Collectively, this work is linked by our crosscutting intent to:**



**Shift the expansion of commodity production away from native forests and peatlands to areas that are already under cultivation, where sustainable productivity increases are achievable, or to areas that were previously degraded and are currently underused**



**Increase recognition of the rights of indigenous peoples and rural communities over forests as a critical part of achieving clear and more coherent land and resource tenure**



**Encourage incentives for emission reductions through policies, measures, and actions that are consistent with internationally recognized guidance on safeguards, monitoring reporting and verification, and carbon reference levels**



**Promote transparency and strategic communications**



**Build relevant capacities and capabilities within our focal geographies**



# United States

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The goal of our U.S. Initiative is to reduce net GHG emissions from U.S. agriculture by 20% by 2020 from the current 450 mmt CO<sub>2</sub>e (~90 mmt), thereby demonstrating technical feasibility of mitigation options to other major agricultural nations by:

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Creating a model system within the United States for reducing agricultural GHG emissions and enhancing carbon sequestration through federal and state policies and private-sector purchasing policies



THE CLIMATE AND LAND USE ALLIANCE:

# United States Initiative

Greenhouse gas emissions (GHG) associated with agriculture account for roughly half of total global land use emissions. Agricultural GHG emissions are mainly from non-CO<sub>2</sub> sources including soil fertilization and disturbance (nitrous oxide), enteric fermentation (methane), manure management (methane and nitrous oxide) and rice cultivation (methane). Agricultural GHG emissions are projected to grow by nearly 30% between 2005 and 2030 due to population growth and a worldwide increase in meat consumption. Agricultural soils also offer the potential for sequestering substantial amounts of carbon through cropland and grazing land management.

The United States is the fifth largest source of land use GHG emissions and, since U.S. forest area is increasing, these emissions are primarily associated with agriculture. U.S. agricultural emissions, amounting to about 450 million metric tons (mmt) CO<sub>2</sub>e annually, have remained relatively constant over the past decade and are split between livestock (60%) and croplands (40%), with the largest sub-categories being nitrous oxide emissions from soil management (fertilizers and crop biological fixation) and methane emissions from livestock digestion (enteric fermentation).

Opportunities appear to exist to reduce agricultural emissions at very low or even negative costs. Even in a country with relatively efficient fertilizer use like the United States, farmers tend to apply more fertilizer than is economically optimal in most cropping systems. More precise application (in terms of amount and timing) could increase farmers' profits, while reducing GHG emissions. Similarly, other changes in management practices, such as the installation of methane digesters to produce power from manure in livestock and dairy operations, can be profitable for farmers while reducing emissions.

The goal of the U.S. Initiative is to reduce net GHG emissions from US agriculture by 20% by 2020 from the current 450 mmt CO<sub>2</sub>e (~90 mmt), thereby demonstrating technical feasibility of mitigation options to other major agricultural nations.

**1 Our objective is to create a model system within the U.S. for reducing agricultural GHG emissions and enhancing carbon sequestration through federal and state policies and private-sector purchasing policies.**

We believe that this can be achieved through three basic changes that we describe in more detail below: providing the tools for monitoring and measuring emissions, changing policies to provide incentives for agriculture emission reductions, and changing purchasing practices in the private sector to create a demand for reduced agricultural emissions.

**The first change needed is the development of credible and rigorous methodologies and protocols for monitoring, measuring, and verifying agricultural emission reductions and carbon sequestration.**





## CLUA UNITED STATES INITIATIVE – OBJECTIVE 1

**Create a model system within the United States for reducing agricultural greenhouse gas emissions and enhancing carbon sequestration through federal and state policies and private-sector purchasing policies**

### CHANGES NEEDED

- ▶ Develop credible and rigorous methodologies for monitoring, measuring, and verifying agricultural emission reductions and carbon sequestration
- ▶ Incorporate incentives for agriculture emission reductions into federal and state policies and regulations and remove disincentives
- ▶ Include requirements for agricultural emission reductions in the purchasing policies of major retailers

### IMPLEMENTING STRATEGIES

- ▶ Identify agricultural practices for which sufficient information exists to quantify emission reductions
- ▶ Develop methodologies and protocols for measuring emission reductions through multi-stakeholder processes
- ▶ Support multi-stakeholder groups to develop principles and policy recommendations for agricultural emissions
- ▶ Provide recommendations and technical assistance to facilitate the incorporation of agricultural offsets in AB-32 implementation
- ▶ Support advocacy and education to inform Federal and California state policies affecting agricultural emissions
- ▶ Support education and advocacy to encourage retailers to reduce agricultural emissions in their supply chains
- ▶ Support voluntary agricultural emissions reporting that's associated with agricultural products in supply chains
- ▶ Provide technical assistance that can enable retailer commitments to be translated into changes in farmer practices with measurable emission reductions

A problem that has bedeviled work to reduce agricultural emissions has been the relative difficulty in measuring emissions and carbon sequestration. Without cost-effective and rigorous methodologies, market mechanisms such as carbon-offset programs cannot be applied to agricultural emissions, and it is similarly difficult to judge the value and impact of regulatory or incentive-based programs to reduce emissions. To address this problem, CLUA has been the primary donor supporting work to identify the most promising methodologies for reducing agricultural emissions and to develop methodologies and protocols for measuring and monitoring emission reductions.

**The second change needed is to incorporate incentives for agriculture emission reductions into federal and state policies and regulations and to remove disincentives from policies and regulation.**

Within California, this work has primarily focused on implementation of the State’s Global Warming Solutions Act (AB-32). More specifically, CLUA is supporting a multi-faceted strategy involving research, technical input, advocacy, education, stakeholder dialogues, farmer outreach, and private-sector investments all aimed at ensuring that agricultural emission reductions can be included as “offsets” under the cap-and-trade systems launched in 2013.

At the federal level, a number of existing policies provide both incentives and disincentives for agricultural GHG emissions. For example, within the Farm Bill, programs that encourage farmers to establish and use nutrient management plans, or that protect grasslands or other habitats from conversion to agriculture, result in lower emissions from agriculture. In contrast, programs such as subsidized crop insurance lead to greater expansion of agriculture than would otherwise be the case and, consequently, greater emissions as habitats are converted to agriculture. In the face of the need to reduce federal spending, many farm bill programs that are beneficial for reducing emissions are facing cuts and CLUA has supported education, research and advocacy to protect those programs, while encouraging the elimination of programs that increase emissions.

**The third change needed is for major buyers of agricultural products to include requirements for agricultural emission reductions in their purchasing policies.**

Federal and state agricultural policies have historically used only incentive-based approaches, rather than regulatory approaches, to encourage improved conservation stewardship on agricultural lands, and this arrangement is unlikely to change in the next decade. A useful complement to these incentive-based approaches could be the creation of an actual “demand-side” driver for reduced emissions. By way of analogy, it has long been known that significant and cost-effective opportunities exist for improved energy efficiency in the manufacturing sector. Many of those opportunities, however, were not pursued by the firms involved until major buyers, such as Walmart, started to require their suppliers to take steps to increase their energy efficiency. The result was good for the firms involved (reduced operating costs), good for the retailers (cheaper products), and good for the environment.

Through our CLUA strategy, we are supporting work to develop these demand-side drivers for agricultural emission reductions in the United States. An important first step is to bring greater transparency to the actual emissions associated with agricultural products in the supply chain. CLUA has supported work to establish public reporting mechanisms in agricultural supply chains so that buyers can better understand the emissions associated with agricultural products. In addition, we are supporting organizations that provide technical assistance to private firms interested in exploring how they might be able to reduce emissions associated with their agricultural supply chains. Finally, as firms make commitments for emission reductions (for example, Walmart has committed to reducing GHG emissions from its supply chain by 20 mmt), CLUA supports non-governmental organizations working with farmers to help meet those commitments.





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