

Money Can't Buy Happiness...But Can It Buy Ag Climate Solutions?



Jennifer Zwagerman,
Director, Drake Agricultural Law Center

Corporate Actions to Drive Change

- Direct Funding
- Sustainability Pledges
- Partnerships
- Supply Chain Focus

Danone

- Danone is committed to regenerative agriculture and soil health research, restoring water to natural sources, supporting farmer livelihoods, and fostering biodiversity by building pollinator habitats.
- \$6 million commitment to soil health research programs to better guide and support its farmers.
- At the year three of soil health research program, had 82,000 acres enrolled across various regions. That is expected to rise to 100,000 acres at the end of 2021. The program does annual monitoring on how different soil health practices work on farms. It focuses on biodiversity and economic resilience.
- Natural climate solution investments also take place through voluntary carbon markets.
- Danone receives grants from the U.S. Department of Agriculture to support the farms in its system. These grants would match the money the company spends on supporting farms. Over the last three years, \$3 million has been matched in coalition with the National Fish & Wildlife Foundation to build soil health systems on Danone's farms. Danone plans to use the data from the farms receiving these grants to present as case studies to other farms across the country. It has also invested in manure management techniques to learn more and share information with others.

Nestle

NESTLÉ'S NET ZERO ROADMAP

Our path to regeneration for future generations

Solving the problem means identifying the problem. We found Nestlé emitted 92 million tonnes of greenhouse gas emissions in 2018*. Now we know the extent, we know the road ahead.

*Total GHG emissions were 113 million tonnes (CO₂ equivalent) in 2018, 92 of which are in scope of our UN 1.5°C pledge.

Companies and their emissions grow over time. That's why we're promising to be net zero based on our 2018 baseline, no matter how much our company grows.

— Path to zero emissions by 2050
- - Business as usual

Emissions by operation
(million tonnes of CO₂e, 2018)

65.6	Sourcing our ingredients
7.0	Manufacturing our products
11.0	Packaging our products
7.5	Managing logistics
0.8	Travel and employee commuting

Moving faster

We're excited to hit the soil running. We're accelerating our work in manufacturing, packaging and carbon-neutral brands. We're also investing CHF 1.2 billion to help spark regenerative agriculture across our supply chain, as part of a total investment of CHF 3.2 billion by 2025.

Our milestones

- 100% deforestation free for primary supply chain by 2022
- Switch our global car fleet to lower emission options by 2022
- 100% certified sustainable palm oil by 2023
- 100% renewable electricity in all our sites by 2025
- 100% of our packaging recyclable or reusable by 2025
- Source 20% of key ingredients through regenerative agricultural methods by 2025
- Plant 20 million trees a year
- 100% certified sustainable cocoa and coffee by 2025
- Cut virgin plastic in our packaging by a third by 2025
- Nestlé Waters becomes carbon neutral by 2025

By 2025, we will reduce our emissions by 20%

Scaling up

Further down the greener path, we will invest in new technologies and fundamental changes to our products and businesses around the globe.

- Use more renewable thermal energy in our manufacturing
- Source 50% of key ingredients through regenerative agricultural methods by 2030
- Plant 200 million trees by 2030

By 2030, we will reduce our emissions by 50%

Delivering our promise

Advanced agricultural techniques will deliver a regenerative food system at scale, supported by zero emission logistics and company operations. We will balance any remaining emissions through high-quality natural climate solutions that benefit people and the planet.

By 2050, we will reach

net zero

2018

2021

2025

2030

2050

Nestle

- Focus on Natural Climate Solutions (NCS)—conservation, restoration and land management improvement—crucial to reduce land sector emissions
- How make business case for the aggressive actions that are needed?
 - Real and sustainable systemic change will require deep engagement with communities, suppliers and industry peers
 - Cannot hit 1.5C target unless companies invest in conservation and restoration urgently and at scale
- Companies must be incentivized to invest beyond the farm, in the sourcing landscape, and know those investments will count toward science-based targets

Tyson

- Goals:
 - 30% GHG emissions reduction by 2030
 - Net Zero by 2050
- Updating the baseline for emissions to align with limiting global temperature rise to 1.5°C, consistent with the Paris Agreement, by the end of 2023.
- Establishing pathway to using 50% renewable energy across domestic operations by 2030.
- Completing initial land stewardship target of engaging [2 million feed acres](#) and expanding total acres by 2025, including total target of 100% of feed purchased by 2030.
- Expanding company's current [5 million acre grazing lands](#) target for sustainable beef production practices by 2025.
- Continuing work to eliminate [deforestation](#) risk throughout global supply chain by 2030.
- Supporting climate action policies through advocacy groups such as the [Net Zero Business Alliance](#).

Coca-Cola - PSA

- **Environment and Ecosystems**
 - Agriculture and livestock production should be resilient, environmentally sustainable, cause minimal damage, and, where possible, be restorative to the surrounding environment in all areas and activities on the farm.

- **Areas of focus:**
 - Water Management
 - Energy Management/GHG Reduction
 - Climate change resilience
 - Waste Management
 - Conservation of Forests
 - Conservation of Natural Habitats, Biodiversity, Ecosystems
 - Soil Management
 - Agrochemical Management

PSA Cont...

- Also:
 - Human & Workplace Rights
 - The Human and Workplace Rights principles apply to all workers on the farm, industrial processes associated or transport services. All direct suppliers, intermediary processors, producing farms and labor agencies are expected to respect human rights and the below principles in line with international Human Rights principles and The Coca-Cola Company Supplier Guiding Principles.

PSA cont...

– Animal Health and Welfare

- Animal health and welfare principles apply to all animals on a farm, including animals used for harvest or transport work, or as livestock to produce agricultural ingredients or products for the Coca-Cola Company.

– Farm Management Systems

- Management systems are in place and records maintained to help ensure: the health, safety and integrity of all products and ingredients; and the business integrity and economic sustainability of the farm system.

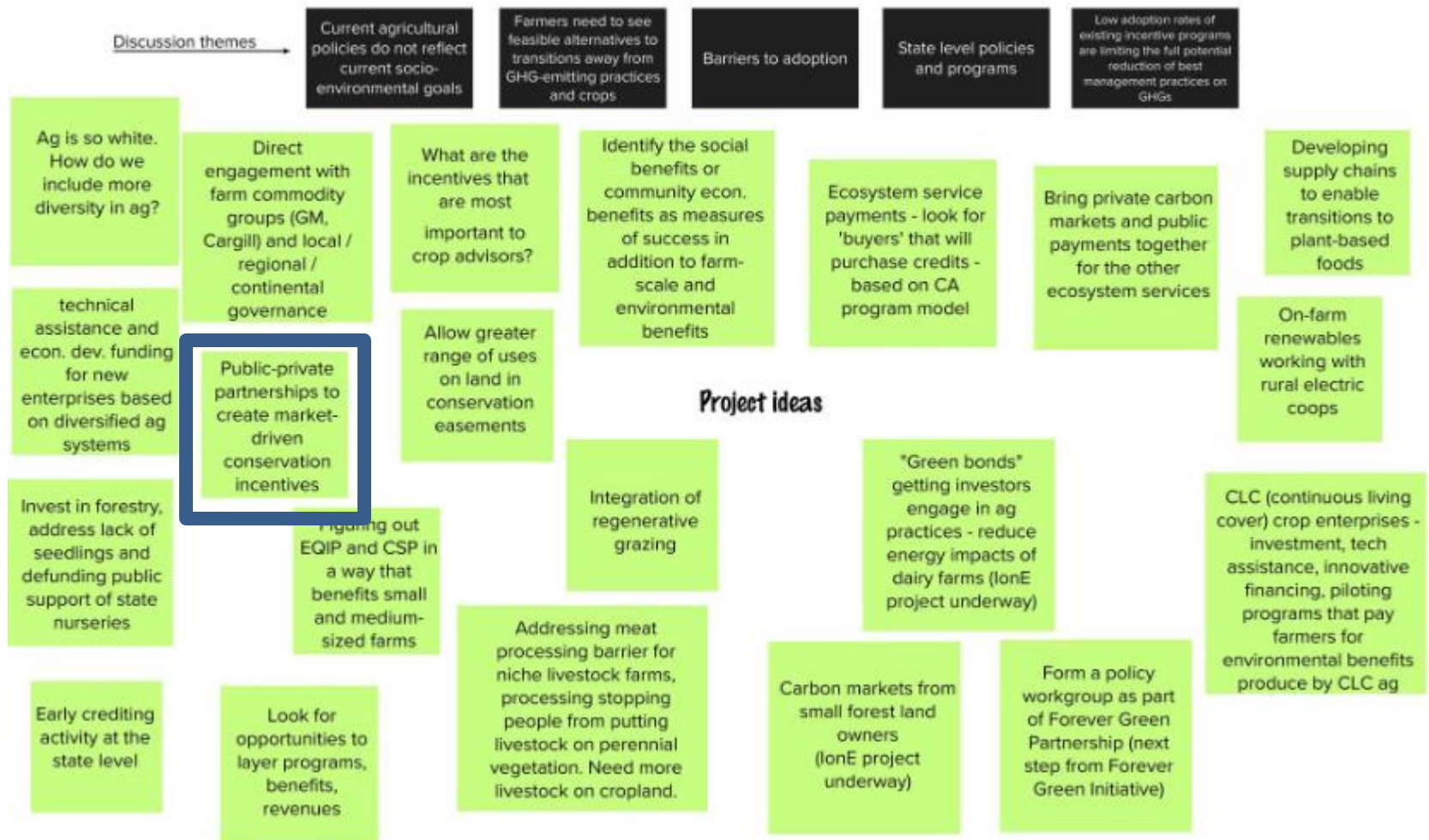
Carbon Markets

- Private Markets
- Growing Climate Solutions Act
 - mandates no emissions cuts or any new regulations
 - directs USDA to “develop a program to reduce barriers to entry for farmers, ranchers, and private forest landowners” to voluntary private carbon markets
- Effective?
 - One study: Significant overestimation carbon-sequestration rates for some forest-based projects that have drawn \$1.8 billion worth of credits in CA

Partnerships & Creative Collaboration

- [Minnesota Agricultural Climate Solutions 5-part Workshop](#)
 - Farmers and representatives from the private sector, government, NGOs, and academia
 - Identify the challenges of reducing agriculture sector greenhouse gas emissions (GHG) and propose solutions to those challenges
- 11 proposals developed...3 top received over \$100,000 in funding so far

Week Two: Policy Solutions



Week Three: Market Strategies

Discussion themes

Issues with carbon and ecosystem service markets

There remain many agronomic and farming culture barriers to change

Countervailing policy barriers

Tension between incremental vs. transformational change and in scale

Connecting with investment

Focus on the demand side

Connect producer to the consumer - willingness to pay a little more?

regional scale strategies of local food systems and climate - water, energy, resilience

reduction of uncertainty on the value of carbon credits

Ecosystem Services Market Consortium pilot project and carbon sequestration endorsement through Minnesota Agricultural Water Quality Certification Program

Crop Insurance Reform - reward conservation performance, allow small-scale farmer participation, allow CLC cropping systems to be eligible

land retirement-type program that provides a small subsidiary to create the insurance protection

Look at Savory Institute model to replicate - Ecological Outcome Verification certification to develop relationships b/w lg companies who want to source products from sustainable farms and the farmers doing it

Municipal drinking water resilience bonds with resilient infrastructure

Project ideas

Who is benefitting? Why? How do we appropriately distribute benefits?

"Pipeline" strategy for ecosystem service benefits/social benefit in organic cluster in vulnerable Drinking Water Supply Management Areas

Identify enabling conditions for capital to flow into the system - mechanisms, policies, investment case, risk assessment, etc

awareness programs/ resiliency plans for farmers -beyond profitability holistic management

scaling up CTC on landscape and market-based activities

small-scale produce production - option for emerging / underserved farmers

public-private interaction to support transitions in practice to more socially-responsible markets

Make investing in ecosystem services "appealing" to a wider pool of investors -- leverage capital, invest in infrastructure (assets)

Bring new crop to market, e.g. camolina

Limitations, equitable outcomes, and environmental impacts of alternative economic models (co-op vs. "traditional" competitive market place)

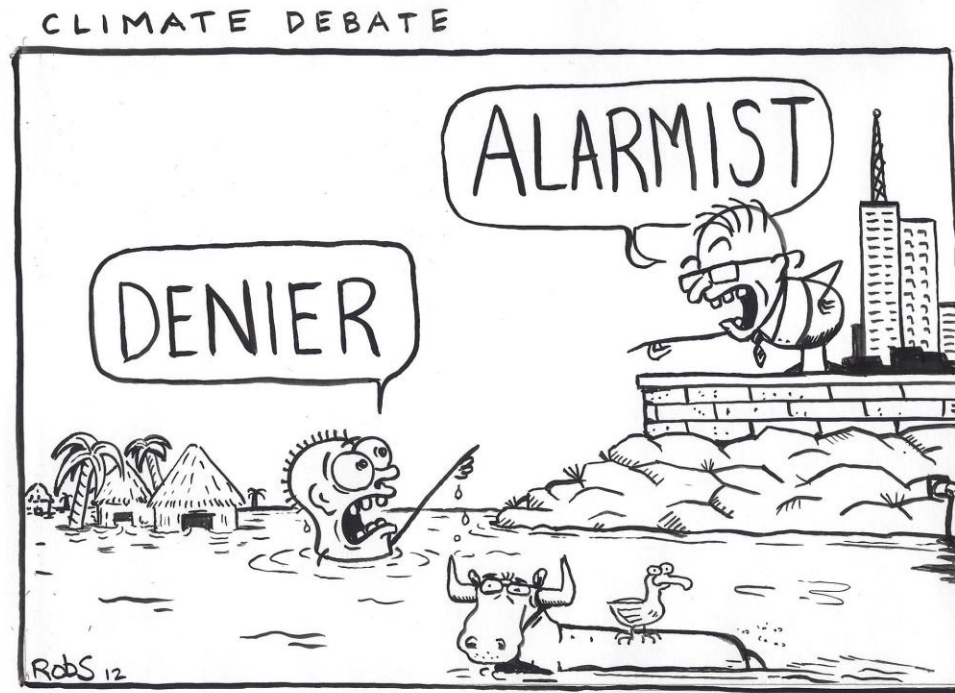
Distributing market benefits across the landscape - not just concentrate wealth and scale further - that would be the wrong direction

Create market approaches that don't just pay polluters for reductions - create incentives that work for everyone to have payments for environmental certs (similar to MAWQCP)

using renewable hydrogen and ammonia and storage facilities for intermittent wind and solar power

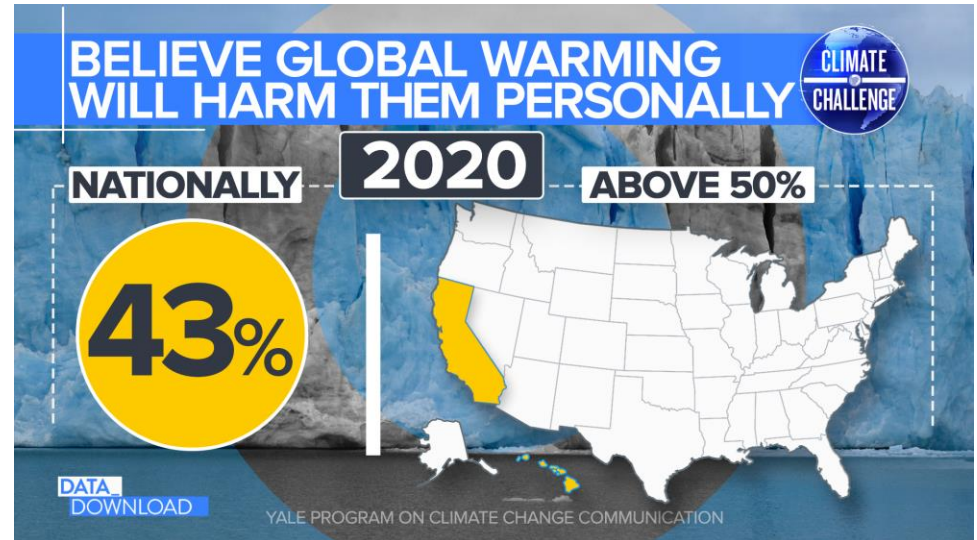
opportunity and intersection between farming /forestry / residential impacts of carbon offsets

Is there another side to consider?



NO.

Challenges



Not all Corporate Action is Positive




'Miseducation': Journalist Katie Worth on climate education and corporate influences

November 16, 2021

By [Jonathan Chang](#) and [Meghna Chakrabarti](#)



(Michael Loccisano/Getty Images)



The Environmental Partnership is comprised of companies in the U.S. oil and natural gas industry committed to continuously improving the industry's environmental performance. It includes companies of all sizes, including many of the country's major oil and natural gas producers.

Taking action on our environmental performance; building upon our knowledge;
fostering collaboration among stakeholders

Participants in The Environmental Partnership believe that addressing environmental impacts is an important component of securing America's long-term energy future. To that end, The Environmental Partnership's initial focus is on solutions that are technically feasible, commercially proven and will result in significant emissions reductions. The Environmental Partnership will provide a forum for participants to share information, and analyze best practices and technological breakthroughs in order to help improve our understanding of emissions and how best to reduce them.

2020 Environmental Performance Highlights



Leak Detection and Repair

- More than 85,000 sites surveyed
- More than 430,000 surveys conducted
- More than 235 million component inspections performed
- 0.04% leak occurrence rate, or less than 1 component leaking in two thousand

Pipeline Blowdown

- More than 400 emission reduction methods implemented during pipeline blowdowns

Compressor Program

- Rod packings changed on more than 2,000 reciprocating compressors
- Approved emission reduction practices on more than 320 compressors



Manual Liquids Unloading

- Emissions minimized by monitoring more than 44,000 manual liquids unloading events



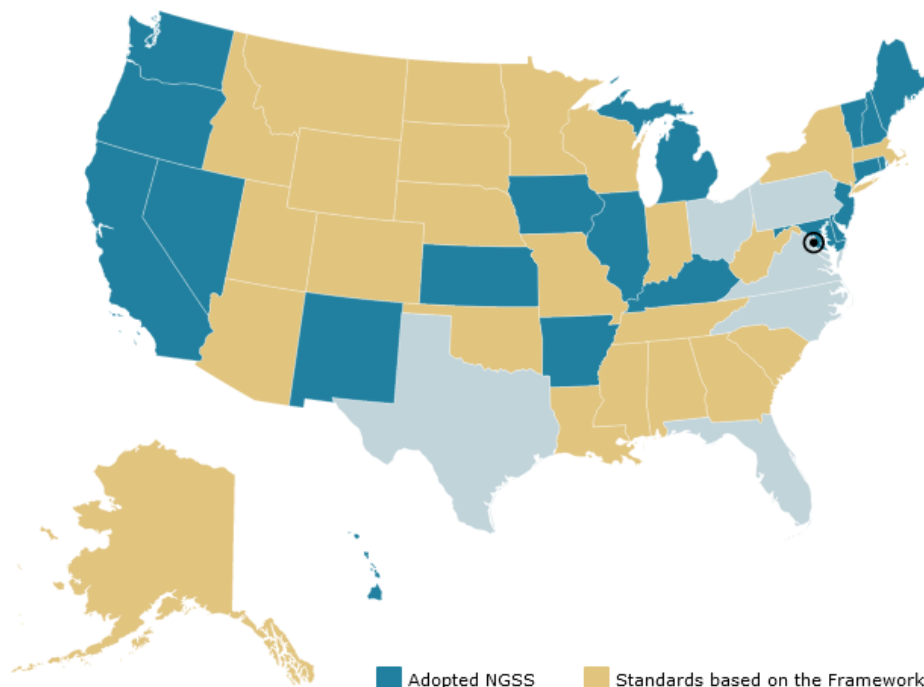
Pneumatic Controllers

- More than 9,200 additional gas driven controllers replaced or removed from service
- More than 970 high-bleed pneumatic controllers replaced, retrofitted, or removed from service
- More than 2,700 zero-emission pneumatic controllers installed at new sites
- 54 participating companies no longer have high-bleed pneumatic controllers in their operations

Middle School Standard

ESS3.D: Global Climate Change

i Human activities, such as the release of greenhouse gases from burning fossil fuels, are major factors in the current rise in Earth's mean surface temperature (global warming). Reducing the level of climate change and reducing human vulnerability to whatever climate changes do occur depend on the understanding of climate science, engineering capabilities, and other kinds of knowledge, such as understanding of human behavior and on applying that knowledge wisely in decisions and activities. (MS-ESS3-5)



Forty-four states (representing 71% of U.S. students) have education standards influenced by the *Framework for K-12 Science Education* and/or the *Next Generation Science Standards*.

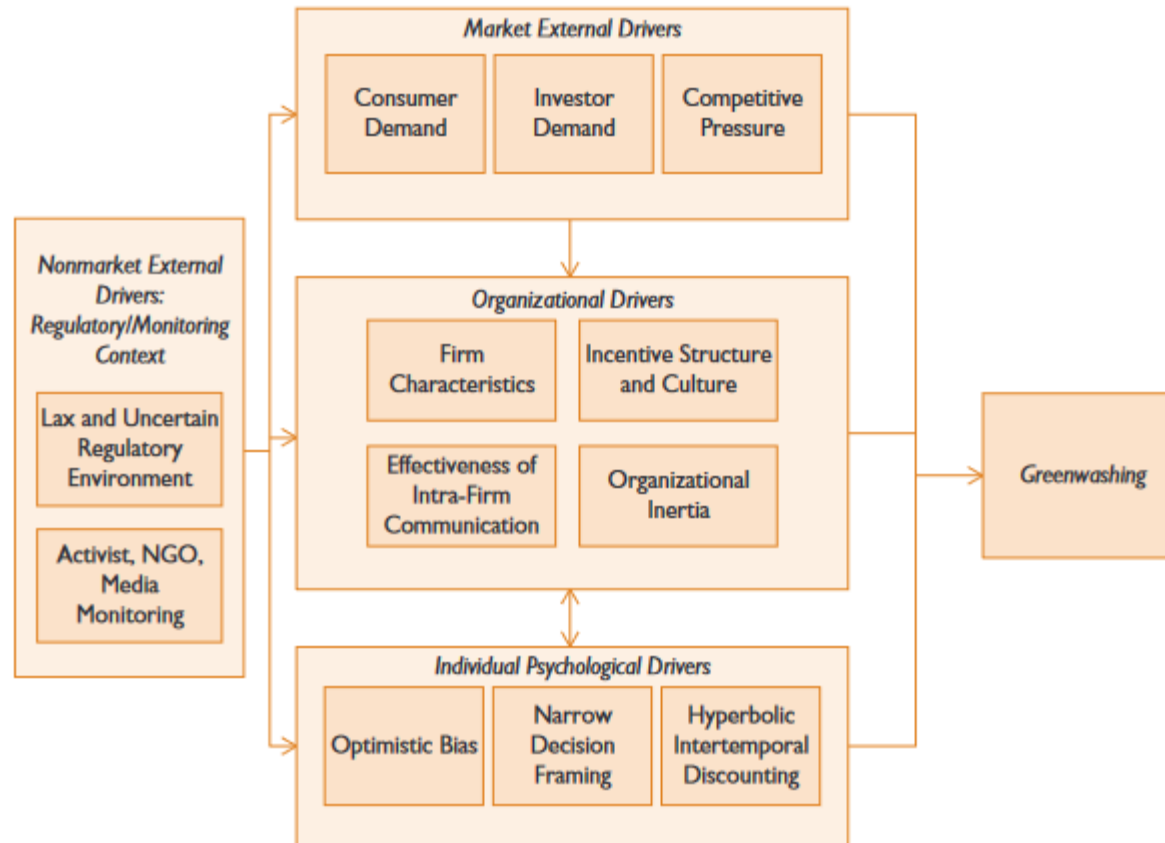
■ Twenty states and the District of Columbia (representing over 36% of U.S. students) have adopted the Next Generation Science Standards (NGSS). The 20 states are Arkansas, California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maine, Maryland, Michigan, Nevada, New Hampshire, New Jersey, New Mexico, Oregon, Rhode Island, Vermont and Washington.

■ Twenty-four states (representing 35% of U.S. students) have developed their own standards based on recommendations in the NRC *Framework for K-12 Science Education*. The 24 states are Alabama, Alaska, Arizona, Colorado, Georgia, Idaho, Indiana, Louisiana, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, New York, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, West Virginia, Wisconsin, and Wyoming.

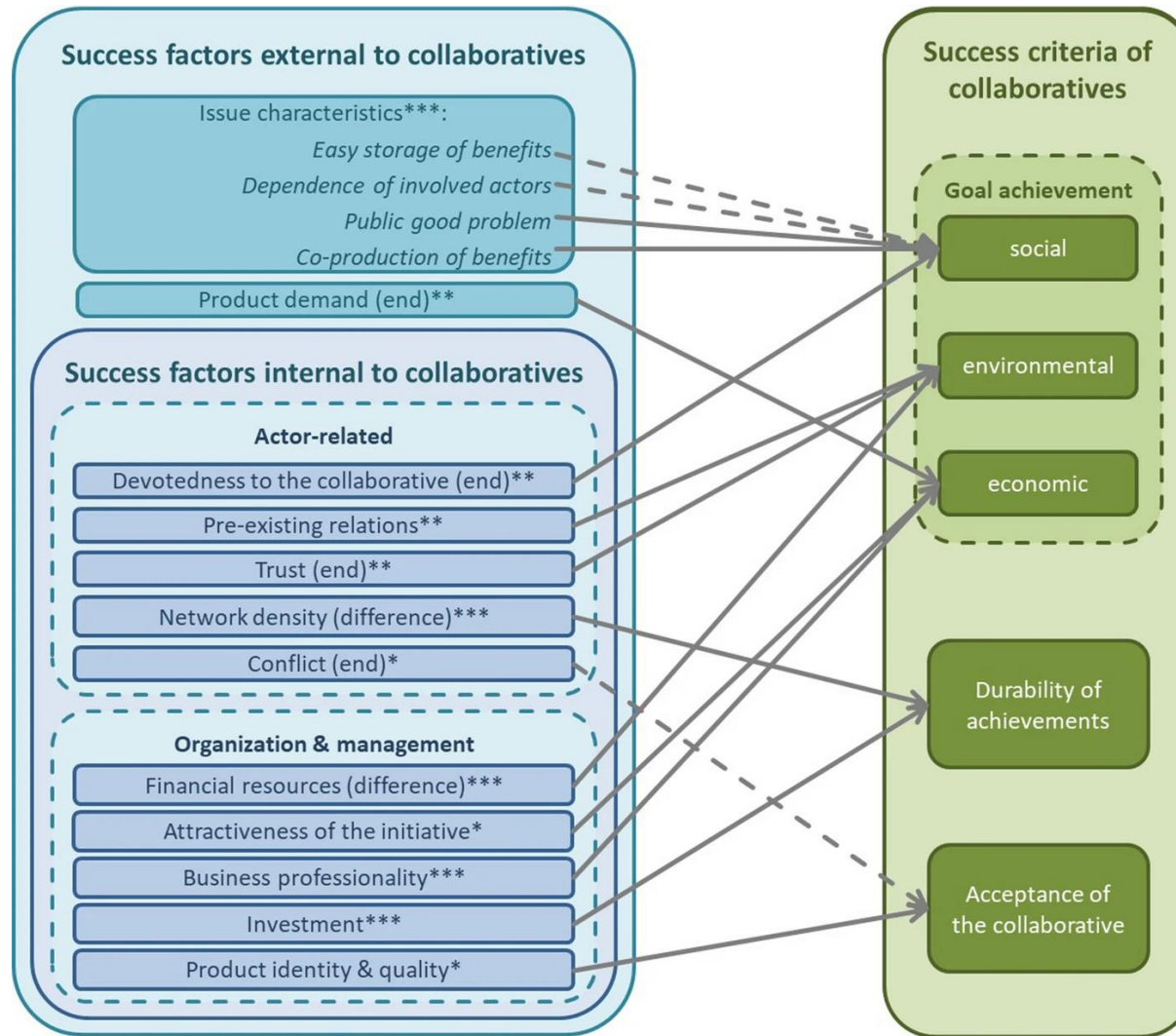
Looking ahead

- Ecolabels on products - no standards
- How to we quantify and qualify capture or other impacts of targeted practices -- need metrics, caps and standards
- Consider the farmer -- costs, return on investment, need for support
- Carbon is not the ONLY answer
- Livestock needs to be included in programs
- Be creative, flexible, and adaptable
- Greenwashing -

Drivers of Greenwashing



What is Success?



B Corps to Save the World?

- Act in ways that benefit society as a whole.
 - Believe the purpose of a company is not just profits, but also social and environmental good.
- “Meet the highest standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose.”
- Verified performance
- Legal Accountability
- Public Transparency
- Example: [Larry’s Coffee \(Raleigh, NC\)](#)

B Corps Model



The only Iowa B Corps



BLK & Bold...

Specialty Coffees, Specialty Teas, Wholesaler
Location: Des Moines, Iowa, United States



Raining Rose Inc.

All-natural body products like lip balms and
soaps
Location: Cedar Rapids, Iowa, United States



Eco Lips, Inc.

Lip Balm
Location: Marion, Iowa, United States

COP26

- **Glasgow Food and Climate Declaration**
 - States global food systems account for roughly a third of greenhouse gases and “are at the heart of many of the world’s major challenges today including biodiversity loss, enduring hunger and malnutrition, and an escalating public health crisis.” The signatories then agree to weave food policies into their climate strategies, calling on their counterparts nationally, and at the state level, for support.

COP26

We, ten global companies with a combined annual revenue of almost 500 billion USD and a major global market share in key commodities such as soy, palm oil, cocoa and cattle, have a shared commitment to halting forest loss associated with agricultural commodity production and trade.

By COP 27 we will lay out a shared roadmap for enhanced supply chain action consistent with a 1.5 degrees Celsius pathway, that supports achievement of our goals, and increases collaboration and implementation in areas including: enabling policy environments, transparency on scope 3 emissions and indirect supply chains, and improving livelihoods for farmers.

Signatories:

- Mr. Juan Luciano, ADM
- Mr. Judiney Carvalho, Amaggi
- Mr. Gregory Heckman, Bunge
- Mr. David MacLennan, Cargill
- Mr. Wei Dong, COFCO International
- Mr. Franky Oesman Widjaja, Golden Agri-Resources
- Mr. Gilberto Tomazoni, JBS S.A
- Mr. Michael Gelchie, Louis Dreyfus Company B.V.
- Mr. Marcos Mulina, Marfrig
- Mr. Sunny Verghese, Olam International
- Mr. David Mattiske, Viterro
- Mr Kuok Khoon Hong, Wilmar International

Cop26: Funding for protecting nature and shift to sustainable farming

Coalition of countries pledges movement on loss of forests, soil damage and ecosystems

© Sat, Nov 6, 2021, 15:14

Kevin O'Sullivan Environment & Science Editor



The UK is to spend £500m help protect five million hectares of rainforests from deforestation, 'an area equivalent to over 3.5 million football pitches'. File photograph: Getty

AIM For Climate

- Already, nearly 80 countries and non-government partners have joined in support and AIM for Climate has garnered \$4 billion in increased investment in climate-smart agriculture and food systems innovation, with the U.S. mobilizing \$1 billion over the next five years.

AIM for Climate

- Three primary objectives:
 - Collective commitment to significantly increase investment in agricultural innovation for climate-smart agriculture and food systems over five years;
 - Support frameworks & structures to enable technical discussions and promotion of expertise, knowledge, and priorities across international and national levels of innovation to amplify impact of investments; and
 - Establish structures for exchanges between stakeholders as key focal points and champions for cooperation on climate-related agricultural innovation, to engender greater co-creation and cooperation on shared research priorities.

AIM for Climate

- Scientific breakthroughs via basic agricultural research through national-level government and academic research institutions;
- Public & private applied research, including support to international research centers, institutions, and laboratory networks; and
- Development, demonstration, and deployment of practical, actionable, and innovative products, services, and knowledge to producers and other market participants, including through national agricultural research extension systems.

	Bill and Melinda Gates Foundation		Food and Agriculture Organization		Foundation for Food & Agriculture Research (FFAR)		United Nations Foundation
	Ralph Lauren Corporate Foundation		CropLife International		ClimateAi		FONTAGRO
	BASF		Syngenta Foundation for Sustainable Agriculture		World Economic Forum		Agriculture & Food Systems Institute
	CGIAR		Elanco		U.S. Farmers & Ranchers in Action		PepsiCo
	Bayer		Innovation Center for U.S. Dairy		Group on Earth Observations Global Agriculture Monitoring Initiative (GEOGLAM)		Global Research Alliance on Agricultural Greenhouse Gases
	Inter-American Institute for Cooperation on Agriculture (IICA)		The Henry Ford		Michigan State University Global IDEAS		The Adaptation of African Agriculture (AAA) Initiative
	Volcani International Partnerships		University of California, Davis – Feed the Future Innovation Lab for Markets		University of Edinburgh – Edinburgh Climate Change Institute		Virginia Tech – Integrated Pest Management Innovation Lab
	Penn State University - USAID Current and Emerging Threats to Crops Innovation Lab		Arizona State University LightWorks		Global Dairy Platform		Sylvera
	Good Food Institute		AGROGREA		Farm Journal Foundation		Agricultural Model Intercomparison and Improvement Project (AgMIP)
	Biotechnology Innovation Organization (BIO)		The Henry L. Stimson Center's The Alliance for a Climate Resilient Earth (ACRE)		SAS		The Chicago Council on Global Affairs
	Australian Olive Association		Verisk Analytics		MUN Impact		Climate Advisers
	Supporters of Agricultural Research (SoAR) Foundation		Syngenta		SOMA MATER		Atolla Tech
	FMC Corporation						

Climate Smart Agriculture and Forestry Partnership Initiative

- First announced during U.N. Climate Week in September.
- Initiative will connect agricultural producers who are implementing climate-smart practices with retailers, companies and consumers demanding low-carbon agricultural commodities