



# Carbon Markets and the Soil and Water Outcomes Fund

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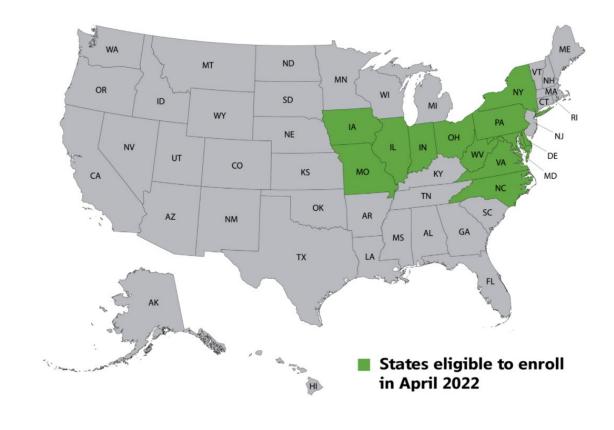


## **About the Soil and Water Outcomes Fund**



We provide financial incentives to farmers to implement new conservation practices and sell the resulting verified carbon and water quality environmental outcomes to public and private entities that benefit from them.

Operated by AgOutcomes (a subsidiary of the Iowa Soybean Association) and ReHarvest Partners









# **Carbon Programs/Markets**

















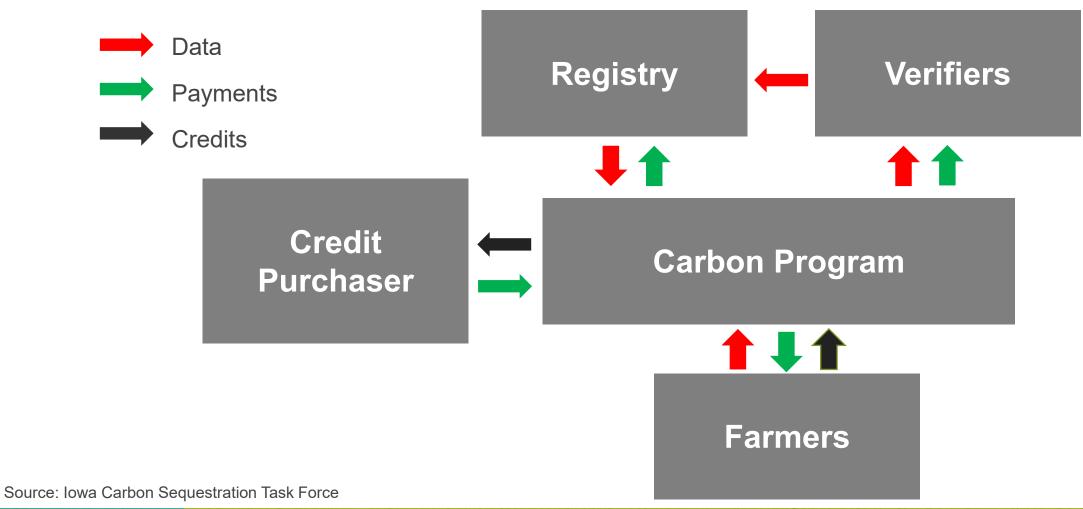








# **Carbon Market Structure**



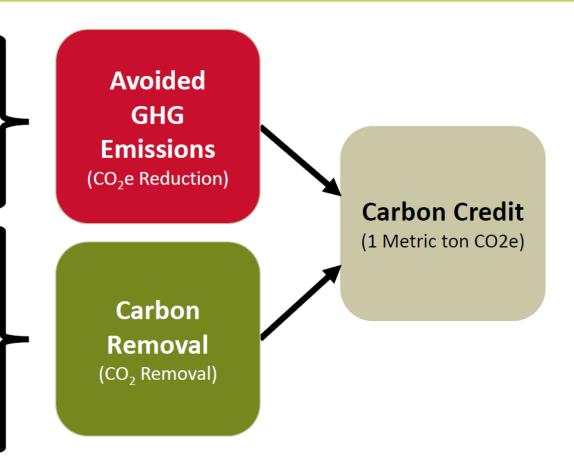






#### What is a Carbon Credit

- Energy, materials conservation
- Switching to low CO<sub>2</sub>e energy (wind, solar, renewable fuels), materials (electrochemical synthesis of ammonia, hydrogen)
- Avoided land use change
- Carbon farming, soil storage
- Grassland, forest restoration
- Pyrolysis to biochar
- Capturing, using or sequestering waste streams
- Bioenergy with Carbon Capture, Sequestration (BECCS)
- Microbial carbonate precipitation
- Direct Air Capture



Source: Iowa Carbon Sequestration Task Force







#### Not all Carbon Credits are the same

#### **Inset Credit:**

A carbon credit secured through investment within the supply chain of an entity.

VS

#### Offset Credit:

A carbon credit is generated outside of a country or company supply chain to compensate for the country's or company's emissions.



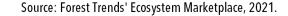




# **Voluntary Carbon Market Traded Volumes**

Market Size by Traded Value of Voluntary Carbon Offsets, pre-2005 to 31 August 2021



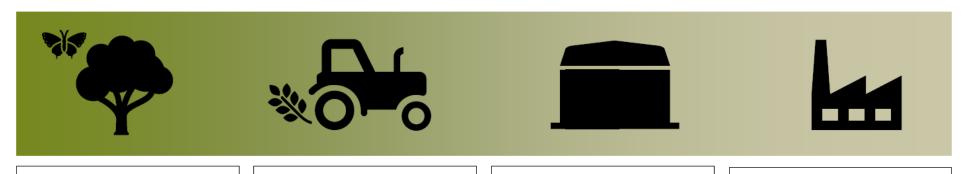








# **Generating Carbon Credits**



Grassland, Forest Restoration Carbon Farming with Soil Carbon Storage

Pyrolysis to Biochar

Microbial Carbonate Precipitation in Soils Anaerobic Digestion of Waste Streams

Sequestration of Biogenic Carbon Dioxide Wastes

Bioenergy with Carbon Capture and Storage Direct Air Capture

Source: Iowa Carbon Sequestration Task Force Adapted from Dan Sanchez, UC-Berkeley







# **Generating Carbon Credits on Farms**

#### Reductions

- Nitrogen Use Efficiency
- Lower Fuel Usage
- Digesters

#### Removals

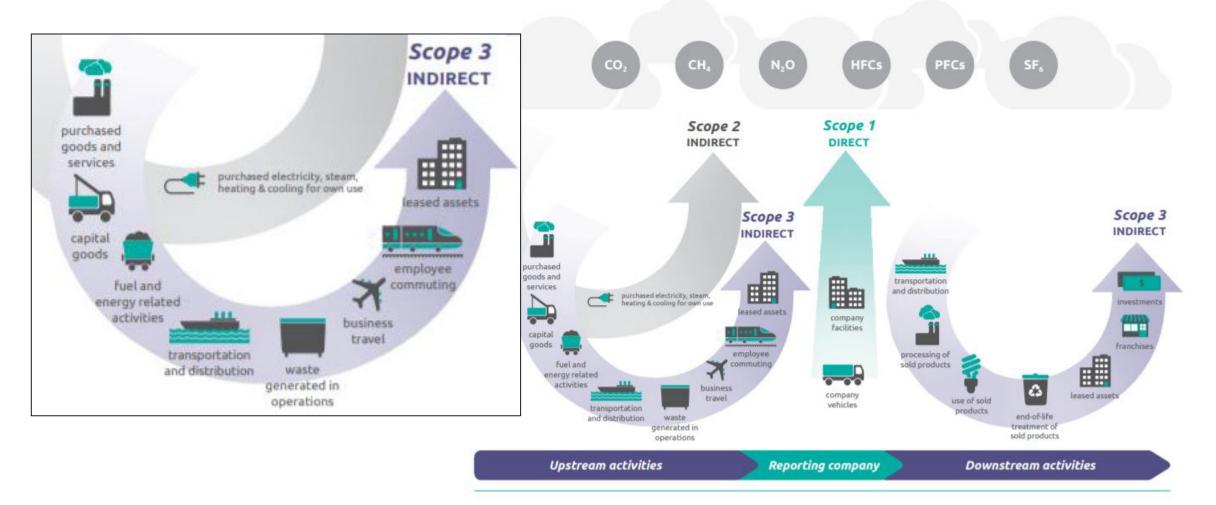
- Cover Crops
- Diverse Crop Rotations
- Reduced Till
- Continuous Cover







# **Corporate GHG Accounting**









# **Corporate Sustainability Commitments**

- Corporate Pressure Points
  - Investor pressure
  - Customer/end-user pressure
  - Internal pressure/employee retention
  - Activism
  - Securities Exchange Commission
- Good and services produced on farms and the associated emissions are included in corporate GHG footprints.
- In some cases, over 80%+ of company GHG emissions are tied to agricultural production







# **Corporate Commitments – Fortune 500**

3M

Alphabet

Amazon.com

American Express

Anthem

Apple

AT&T

Bank of America

**Best Buy** 

Capital One Financial

Cisco Systems

Citigroup

Coca-Cola

**CVS Health** 

Dell Technologies

Delta Air Lines

Dow

Facebook

Ford Motor

**General Motors** 

Goldman Sachs Group

Hewlett Packard Enterprise

HP

Intel

Johnson & Johnson

JPMorgan Chase

Lowe's

MetLife

Microsoft

Mondelez International

Morgan Stanley

Nike

**PepsiCo** 

Pfizer

Philip Morris International

Procter & Gamble

Schlumberger

**Starbucks** 

**Target** 

**Tyson Foods** 

**Verizon Communications** 

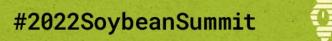
Walmart

Wells Fargo

Source: Visualizing the Climate Targets of Fortune 500 Companies







#### **Government Commitments**

"We're positioning U.S. farmers, ranchers and forest landowners as leaders in addressing climate change, while at the same time creating new market opportunities for them through pilot projects that invest in science, monitoring and verification to measure the benefits of climate-smart production practices. Unlocking these markets will be key to tapping into the incentives needed to adopt climate-smart practices on the ground."

-Sec. Vilsack









# **Government Oversight**

March 28, 2022 12:00 AM | 21 HOURS AGO

# SEC takes 'monumental' step on climate disclosure

Agency's proposed rule would require public firms to reveal climaterelated risks





# Farmer Opportunities & Challenges

- Additionality
- Permanence
- Price of CO2e relative to conservation practices necessary to achieve soil carbon sequestration or nitrous oxide reduction
- Monitoring, reporting and verification
- Contract terms

- Commodity markets, land tenure, government programs, etc.
- Politics and climate change beliefs







## **Carbon Forecast**

- Increased corporate and government focus on agriculture as a climate solution
- Carbon insets will become a greater focus
- More carbon programs will develop, but at some point, winners will rise to the top
- Carbon price will increase due to growing demand and a limited supply
- Farms with quality data will be benefit most
- Demand for low carbon commodities will increase
- Carbon may eventually be incorporated into the price of commodities





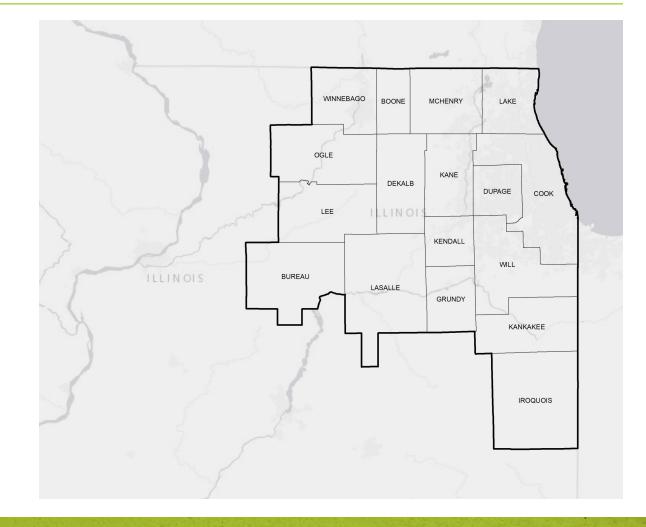


# **Soil and Water Outcomes Fund**



#### Illinois Enrollment 2022

- Seeking up to 50,000 acres of enrollment
- Payment up to \$40 per acre for carbon and water quality
- Carbon inset buyers include PepsiCo, Ingredion and Nutrien
- Water quality outcomes supported by USDA-NRCS
- Visit <u>www.theoutcomesfund.com</u> to begin the enrollment process









# Thank You!

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