



# CARBON MARKETS

January 2021

Exploring the Realities and Asking the Right Questions



## Agricultural Ecosystem Services

Through sustainable land management, farmers and ranchers can provide ecosystem services, including –

- **Carbon sequestration**
- **Soil conservation**
- **Water quality**
- **Water quantity**
- **Air quality**
- **Wildlife habitat**

However, implementing climate stewardship practices can have hefty initial implementation costs.



## Payments for Ecosystem Services

Programs to reward farmers and ranchers for their improvement or maintenance of ecosystem services include –

- **Direct payments**
- **Tax incentives**
- **Certification programs**
- **Ecosystem service markets**



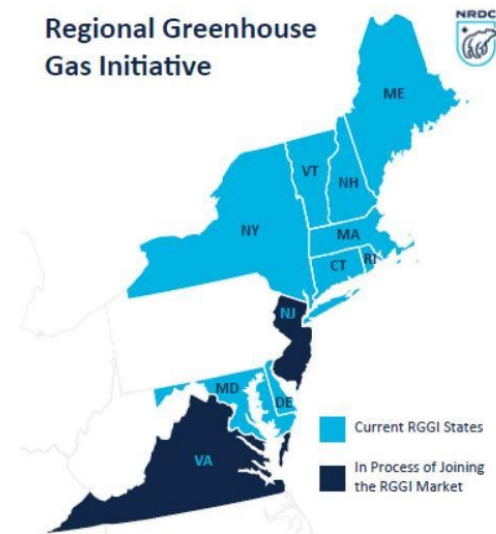
# Ecosystem Service Markets


- Credits are created, valued, and exchanged
- Buyers and sellers
- Coordinating organization
- Detrimental and beneficial environment impact defined
- Assessment criteria
- Verification process to ensure there is an actual positive environmental impact
- Process for determining value

# Carbon Markets

Different types of markets in existence:

- **Cap and trade**
  - California cap and trade program
  - Regional Greenhouse Gas Initiative
- **Voluntary markets**
  - Indigo
  - Ecosystem Service Market Consortium





## 2008 Farm Bill – Section 2709

### Environmental Services Markets

In order to facilitate participation of farmers, ranchers, and foresters in carbon markets, USDA required to establish guidelines for –

1. **Procedures to measure ecosystem services**
2. **Protocol to report ecosystem services**
3. **Registry to collect and record ecosystem service benefits**

Including guidelines for 3rd party independent verifiers.

You can learn more by visiting the Office on Environmental Markets website:  
<https://www.oem.usda.gov/>



## Conservation Innovation Grants (part of EQIP)

Major push for CIGs that develop offset markets for carbon and other ecosystem services

Starting in 2009 – e.g.:

- North Dakota Prairie Pothole Project (*DU*)
- Palouse Soil Carbon Project (*Applied Ecological Services, The Earth Partners, EKO Asset Management, Shepherd's Grain*)
- Bringing Greenhouse Gas Benefits to Market (*Delta Institute, NWF, AFT, EKO Asset Management*)



## Climate Legislation History

- The U.S. House of Representatives passed the American Clean Energy and Security Act of 2009.
- The legislation, written by Reps. Henry Waxman (D-Calif.) and Edward Markey (D-Mass.), would have established an **economy-wide greenhouse gas cap-and-trade system** and critical complementary measures. It also allowed for **2 billion tons of carbon offset markets**.
- Agriculture and forestry were not capped under this bill.
- Special agriculture offset program included 5-year credit period for newly adopted climate stewardship practices.
- This bill never made it out of the Senate, though.



## Agriculture in Biden's Climate Plan

The Biden-Harris Administration will focus on decarbonizing the food and agriculture sector and leveraging agriculture to remove carbon dioxide from the air and store it in the ground.

Centerpiece is to “**dramatically expand and fortify the pioneering Conservation Stewardship Program** to support farm income through payments based on farmers’ practices to protect the environment, including carbon sequestration.”

The Administration will also seek to enable farmers and ranchers with a CSP contract to participate in carbon markets and has indicated wanting to **establish a new voluntary carbon farming market.**



# Agricultural Resilience Act

**HR 5861**

**Who?** Rep. Pingree and 28 co-sponsors

**What?** Comprehensive bill, based on six building blocks:

- improving **soil health**
- increasing **agricultural research**
- ensuring **farmland preservation and viability**
- supporting **pasture-based livestock**
- promoting **on-farm renewable energy**
- reducing **food waste**



# Agricultural Resilience Act

**HR 5861**

**Who?** Rep. Pingree and 28 co-sponsors

**What?** Comprehensive bill, but including:

Amends the Environmental Services Market farm bill authority to direct USDA to –

- establish a Soil Health and Greenhouse Gas Advisory Committee
- evaluate existing outcomes-based measurement systems;
- create a USDA soil health and greenhouse gas emissions inventory; and
- establish criteria for payments, credits, or other incentives



# Growing Climate Solutions Act of 2020

S 3894/HR 7393

## Who?

- Senators Braun (R-IN), Stabenow (D-MI), Graham (R-SC), & Whitehouse (D-RI)
- Representatives Spanberger (D-VA) and Bacon (R-NE) with 20 co-sponsors

## What?

- USDA would publish widely-used industry protocols for greenhouse gas credit markets as their own standards, with the help of an Advisory Committee.
- TA providers and 3<sup>rd</sup> party verifiers, who would need to understand and adhere to those protocols, self-certify with USDA and are listed on a USDA website for farmers and ranchers to make use of.



# Issues

- **Permanence**
- **Additionality**
- **Measurement uncertainty**
- **Geography**
- **Greenwashing**
- **Data control and privacy**



## Considerations

- **Program stability**
  - **Chicago Climate Exchange**
- **Clarity of required practices and verification processes**
- **Cost transparency**
- **Practice implementation or environmental improvement**
- **Return on investment**
- **Length until return**
- **Aggregation**

# Questions to consider when reviewing a contract to participate in a carbon market

- how much money will I receive from these payments?
- how stable are these payments and for how long can I expect to receive them?
- is the credit value guaranteed or subject to volatility?
- what happens if acreage generating credits is destroyed through climate events?
- who assumes the risk if the practices stop or fail?
- who is verifying the practices and the carbon sequestration?
- does participation require expensive monitoring, verification, aggregators, etc..?
- who gets access to the farmland for verification and what will happen to the data collected on my farm - how will it be used?

# Resources

- Legal resources
  - [Drake Law School's Agricultural Law Center](#)
  - [Farm Commons](#)
- NCAT's webinar series on ecosystem service payments
  - [Introduction](#)
  - [Carbon markets and credit stacking](#)
  - [Water quality trading](#)
- Upcoming webinar with emphasis on Midwest farmers and ranchers
  - [Farming for the Future: A Forum Exploring Ecosystem Service Markets](#)
    - February 12, 2021 from 11:30 am to 1:30 pm CST
- Publications
  - [NSAC Blog Series on the Agriculture Resilience Act](#)
  - [Agriculture Resilience Act intends to build resilient farming, food systems](#)
  - [Act offers path toward climate-resilient farming](#)
  - [Payments for Ecosystem Services](#)
  - [Agriculture, Climate Change and Carbon Sequestration](#)
  - [Carbon markets lure farmers, but will benefits be enough to hook them?](#)
  - [Fate of climate payment plans in hands of researchers](#)
  - [Why we need a broader perspective to help farmers meet the climate crisis](#)
  - [Will Indigo Ag's New Private Carbon Market Pay Off for Farmers?](#)



Questions?



Stay in touch!

[czoebisch@sustainableagriculture.net](mailto:czoebisch@sustainableagriculture.net)