Carbon Farming — Why carbon markets won’t work for farmers and the climate

March 23, 2022
How to ask questions during the seminar

Ask questions by clicking "Q&A" in the menu bar and typing in the box that appears.
The webinar is being presented in three languages:

Select your preferred language: English | French | German
The **Institute for Agriculture and Trade Policy** is a research and advocacy organization working at the intersection of policy and practice to ensure just food, farm and trade systems that respect planetary boundaries.

The **European Coordination of Via Campesina** is a European grassroots organization currently representing 31 national and regional farmer, farm worker and rural organizations based in 21 European countries, promoting food sovereignty and diverse and sustainable family and peasant farming.
Agenda

15.00 – 15.10  Introduction – Shefali Sharma, IATP

15.10 – 15.35  The science, the state of carbon credits & implications for farmers
Freya Chay, Carbonplan
Darrin Qualman, National Farmers Union Canada

15.35 – 16.30  Panel discussion
Ben Lilliston, Institute for Agriculture and Trade Policy
John Peck, Family Farm Defenders
Myrto Tilianaki, CCFD-Terre Solidaire
Attila Szocs, EcoRuralis/European Coordination Via Campesina
Benoit Biteau, MEP Greens/EFA in AGRI Committee
Maria Noichl, MEP S&D in AGRI Committee

16.30 – 17.00  Open floor for questions
Soil carbon in carbon markets

FREYA CHAY
MARCH 23 2022
Not all credits are created equal.

- Carbon credits nominally represent 1tCO₂

- Markets do not currently differentiate carbon credits based on:
  - duration of the climate benefit represented
  - interaction with the carbon cycle (carbon removal versus avoided emissions)

- If carbon credits are used to justify ongoing emissions, the claim being made is that the climate benefit represented by the credits “cancels out” the climate harm of the emissions.
CO2 emissions impact climate outcomes for millenia.

(See Joos et al. 2013)
Can carbon removal justify ongoing emissions?

- **Permanent carbon removal**
  - approximately equivalent to ongoing emissions (see Zickfeld et al. 2021)
  - extremely limited supply in existing carbon markets (see Joppa et al. 2021)

- **Temporary carbon removal**
  - not equivalent to ongoing CO$_2$ emissions
  - not equivalent to permanent CO$_2$ storage
  - can have positive value, but less than 100% of permanent removal
  - needs but lacks robust framework for climate benefit valuation

- **High quality carbon removal has an important but limited role in net-zero frameworks**
  - emission reductions must be prioritized (see Allen et al. 2020)
What is high quality soil carbon removal?

- **Permanence**: explicit discount-factors for non-permanence critical for soil carbon which is highly responsive to management and environmental factors

- **Rigorous MRV**: carbon credit must represent something that actually happened for soil carbon, must include rigorous soil sampling, which can be costly

- **Additionality**: carbon payments must enable behavior changes that lead to new climate benefits very difficult to establish for agricultural interventions

- **Safeguards**: need to consider local environmental impacts, co-benefits, unintended consequences critical but complex in agricultural contexts
Soil carbon — quality challenges

- Short contract duration (often <20 years)
- Significant variation in MRV rigor: some protocols require robust sampling, others none at all
- Weak additionality standards
- See Zelikova et al. (2021)
Takeaways

- Private sector has not resolved soil carbon quality issues
  - hard to achieve standards that are “simple yet robust”
  - weak standards don't mean all projects are bad, but does enable race-to-the-bottom
  - resulting low price point makes it difficult to support real changes to management practices

- Relying on carbon market mechanism creates competing goals
  - supporting & rewarding positive practices
  - ensuring system as a whole is a net-positive for the climate
  - managing for soil carbon versus broader goals
About me

Freya Chay
- Program Associate at CarbonPlan
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CarbonPlan
- Research nonprofit focused on transparency and integrity of climate solutions
- Website: carbonplan.org
- Soil protocol analysis: carbonplan.org/research/soil-protocols
- Funding (disclosure Microsoft): carbonplan.org/funding
References


Zelikova et al. (2021), A buyer’s guide to soil carbon offsets, CarbonPlan, https://carbonplan.org/research/soil-protocols

Zickfeld et al. (2021), Asymmetry in the climate-carbon cycle response to positive and negative CO2 emissions, Nature Climate Change 11: 613-17, https://doi.org/10.1038/s41558-021-01061-2
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Why Carbon Markets Won't Work for Farmers and the Climate
IATP & ECVC  March 23, 2022
Darrin Qualman, NFU

Strong Communities. Sound Policies. Sustainable Farms.
Part 1 of 4: Climate impacts
Canadian & EU climate ag impacts

Despite important and ongoing progress, as we now stand ... the 2015 Paris Agreement and subsequent commitments ...
put us on track for a global temperature increase this century ... not of 1.5 degrees Celsius ... and not 2 degrees C. ....

We’re on track to warm 2.7 degrees.
Canadian & EU climate ag impacts

2.7 degrees is very bad news for Earth, but even worse news for much of Earth's agricultural land.

Because non-coastal areas and northerly latitudes will warm twice as much as the planetary average.

Therefore, Canada's Prairie region—where 85% of our country's food-producing land is located—is on track for 5.4 degrees of warming.
Canadian & EU climate ag impacts

Drought Intensity
- EO: Abnormally dry
- D1: Moderate drought
- D2: Severe drought
- D3: Extreme drought
- D4: Exceptional drought
- D: Drought not analyzed

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Canadian & EU climate ag impacts

Europe is warming faster than the rest of the world and scientists are puzzled
By Teresia Putnam; published November 17, 2021

Europe is already 2.2 degrees Celsius warmer than before the industrial revolution while the Arctic has already warmed up by 3 degrees C.

IPCC: Europe has been warming faster than the global average

UN climate science panel’s full report shows how climate change could pan out differently across the many regions of the world

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Part 2 of 4: Canadian offset schemes
Canada’s offset scheme

Greenhouse Gas Offset Credit System Regulations (Canada)

Statutory authority
Greenhouse Gas Pollution Pricing Act

Sponsoring department
Department of the Environment

REGULATORY IMPACT ANALYSIS STATEMENT
(This statement is not part of the Regulations.)

Issuer

Greenhouse gas (GHG) emissions are primary contributors to climate change. A number of measures to reduce domestic GHG emissions have recently been implemented, including the federal carbon pollution pricing backstop system, in order to help Canada meet its current GHG emissions reduction target under the Paris Agreement and achieve its goal of net-zero GHG emissions by 2050. However, carbon pollution pricing measures do not cover all sources of GHG emissions in Canada.

The Greenhouse Gas Pollution Pricing Act (GPPPA) or the Act received royal assent on June 21, 2018. The Act provides the legal framework and enabling authorities for the federal carbon pollution pricing backstop system in Canada.

Règlement sur le régime canadien de crédits compensatoires concernant les gaz à effet de serre

Fondement législatif
Loi sur la tarification de la pollution causée par les gaz à effet de serre

Ministère responsable
Ministère de l'Environnement

RÉSUMÉ DE L’ÉTUDE D’IMPACT DE LA RÉGLEMENTATION
(Le présent résumé ne fait pas partie du Règlement.)

Enjeux

Les émissions de gaz à effet de serre (GES) sont les principaux éléments qui contribuent aux changements climatiques. Une série de mesures a été mise en œuvre, y compris le mécanisme de tarification du carbone, afin d’aider le Canada à atteindre son objectif d’émissions de GES à zéro d’ici 2050. Toutefois, les mesures de tarification de la pollution par le carbone ne couvrent pas toutes les sources d’émissions de GES au Canada.

La Loi sur la tarification de la pollution causée par les gaz à effet de serre (LTPCC et la Loi) a reçu la sanction royale le 21 juin 2018. La Loi prévoit un cadre juridique et des pouvoirs administratifs pour l’établissement d’un système de
Canada’s offset scheme

Key aspects

1. Strong commitment to additionality. **Good**, but it leaves many farmers disappointed

2. Strong rhetorical commitment to “permanence”

3. “Permanent” in Canada = 100 years. This is both too short, and too long

4. A shorter period in the EU (10-20 years?) creates even greater uncertainty regarding climate benefits

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Canada’s offset scheme

Problems:

1. 100 years of monitoring and reporting? Who is responsible in the long run?

2. Measurement of soil carbon changes?

3. Lock in? Enshrine the best practices of 20 or 100 years ago?

4. Long-term unlimited liability?

5. Warming soils will release carbon
Part 3 of 4: Extremely limited offset capacity
- Agricultural emissions are 84 million tonnes per year; but agricultural sequestration is just 6 million tonnes.
- Agricultural soil carbon sequestration might “offset” 7% of agricultural emissions...
or less than 1% of Canadian emissions.
- Sequestration soon hits saturation limits.
- Sequestration rates are falling.
- The capacity to offset Cdn. or EU emissions via agricultural soils is extremely small.
Part 4 of 4: Pursue real emissions reduction
Conclusion

Governments are tying themselves into knots trying to pretend that soil carbon sequestration can offset fossil fuel emissions

- Soil capacity is too small
- Sequestration is impermanent
- Liability, lock-in, data vulnerability, and other farmer risks are too high
- Offset schemes delay emission reductions & thereby create climate chaos for farmers

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Thank you,
Darrin Qualman
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France’s Label bas carbone
(low carbon standard):

• Failure to reduce GHG emissions
• Doesn’t bring about systemic changes in agricultural practices
Carbon intensity:

Farm No1: produces 2 liters of milk

Farm No2: produces 3 liters of milk

150 kg CO2 + 150 kg CO2 = 300 kg CO2

100 kg CO2 + 100 kg CO2 + 100 kg CO2 = 300 kg CO2
Contact

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Carbon Farming:
A „new business model“… for who?