

Diversity, Equity, and Justice in Voluntary Carbon Markets

Anja Hartge (B.A. Environmental Science '22)

Lingkun Guo (B.S. Earth, Environmental, and Planetary Sciences '23)

Trisha Gupta (B.A. Economics '23)

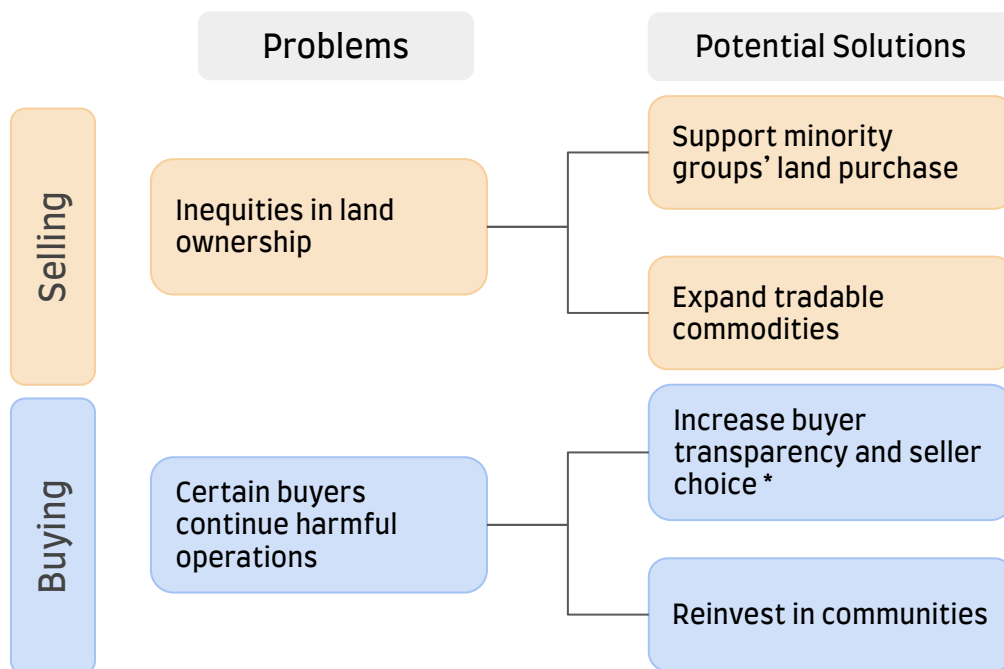
Diego De La Fuente (B.A. Economics '23)

Demand for carbon credits in the voluntary carbon markets is expected to grow exponentially in the next decades¹, with the market projected to reach \$30 billion in transactions by 2030². Because of this projected increase in market scale, it's important to consider who will be able to participate in and financially benefit from the voluntary carbon market and its rapid growth, especially in the area of nature-based soil commodities.

Diversity: Enfranchising people from a range of backgrounds to be participants in the market.

Equity: Ensuring that the processes of carbon credit creation, verification, and sales does not unfairly disadvantage any one group of people.

Justice: Not only the benefits, but also the risks, of creating a carbon market are equitably accessible and distributed across all members of society.



*A more direct solution would be restricting certain carbon credit buyers from the market. However, this solution could limit market growth, slowing CO₂ drawdown.

Problems with Selling

Currently, participation in voluntary soil carbon markets requires land ownership, as soil carbon credit generation requires altering land management practices. However, **96.7% of private agricultural land in the US is owned by white people**³, effectively excluding minority groups from participating in rapidly growing voluntary soil carbon markets. Although discrimination in land ownership and lending is illegal, structural barriers to minority land ownership remain, including the lasting effects of redlining, institutional reliance on credit history, lack of multilingual services, disparate interest rates offered to different races, and differences in treatment and help put forth by bank officials⁴.

Problems with Buying

In the US, 'hyper-polluters'⁵ make up **~5% of all CO₂ emitters, but are responsible for ~75% of CO₂ emissions**⁶. Operating near overburdened communities⁷, their CO₂ emissions are correlated with the emission of dangerous air toxics⁸. Hyper-polluters may offset CO₂ emissions by purchasing credits; however, this allows them to continue releasing air toxics that impact overburdened communities.

References:

1. [McKinsey](#)
2. [Trove Intelligence](#)
3. [USDA](#)
4. [Brookings Institution](#)
5. [Washington Post](#)
6. [Collins et al. \(2016\)](#)
7. [EPA](#)
8. [Lejano et al. \(2020\)](#)

Support Minority Groups in Purchasing Land

We propose aiding and amplifying the missions of initiatives such as minority-led investment funds and groups fighting lending discrimination practices.

Examples of minority-led investment funds include the Black Farmer's Fund. Examples of groups fighting lending discrimination include the National Community Reinvestment Coalition.



Black Farmer's Fund



United States Department of Agriculture



National Community Reinvestment Fund

Expand Tradable Commodities

Expanding tradable commodities that sequester carbon and/or reduce emissions and generate carbon credits increases market accessibility and diversity.

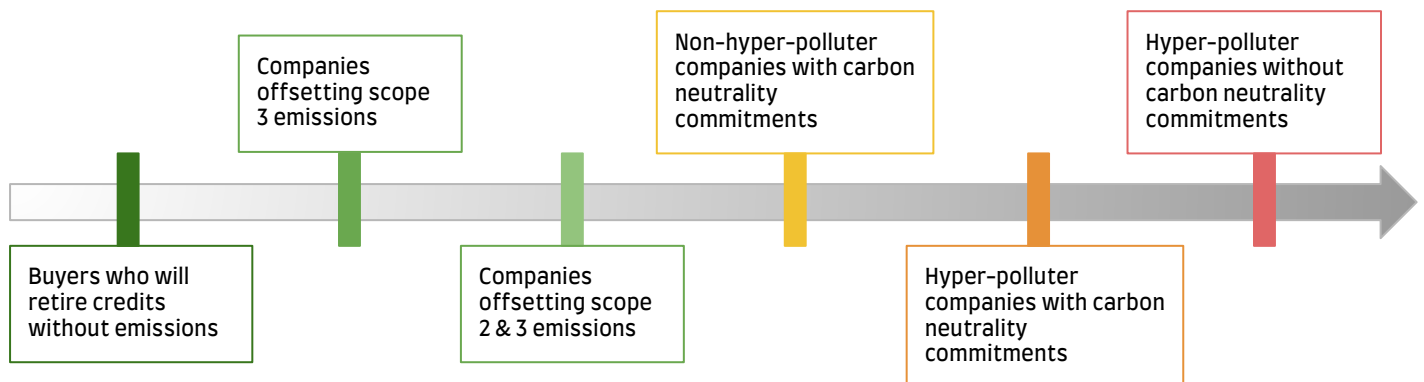
These include:

- Green Roofs*
- Green Retrofitting*
- Urban Afforestation
- Urban Agriculture
- Pocket Prairies
- Composting*
- Biochar*
- Hydroponic Agriculture
- Pocket Prairies*
- Bicycle Infrastructure

*Bundling: When individuals participating in tradable commodities can not produce entire carbon credits, partial carbon credits can be pooled. This requires a formal organizing entity (i.e. local governments or homeowners' associations) who can then reinvest the revenue back into the community.

Further research is required to quantify the amount of carbon sequestration or emission reductions that can result from each of the tradable commodities mentioned above.

'Credit Rating' System Based on Buyer Characteristics:



Scope 1 emissions: direct emissions from sources owned/controlled by the company

Scope 2 emissions: indirect emissions from sources owned/controlled by the company

Scope 3 emissions: other indirect emissions from sources not owned/controlled by the company, but related to company activities

Give Sellers Choice in Buyer Characteristics

Several buyers may be hyper-polluters. In response to this, we propose a system in which buyers be evaluated and given a public 'credit rating' based on their greenhouse gas emission practices, as shown on the above spectrum.

This gives sellers the ability to choose buyers that meet their preferences of environmental stewardship, encouraging buyers to adapt their practices to receive a more positive rating.

Place Premium on Carbon Prices to Create DEJ Fund

Premiums can be placed on buyers in 2 ways:

1. **Based on buyer's 'credit rating'** (increasing premium moving right on the above spectrum)
2. **Flat premium** applied to all buyers, regardless of their position in the above spectrum

DEJ funds should then be allocated to supporting fenceline communities and/or minority groups in purchasing land.