



SILVIATERRA

A Potential Non-timber Source of Income: Carbon Payments

NCAPX 2021C

May 26 2021

US South Forestry www.forestryimpacts.net

- \$251 billion in total economic output
- More than 1.1 million jobs
- \$53.9 billion in labor income
- \$14 billion in exports
- 209 million acres of timberlands
- Over 5 million private forest landowners
- 57% of timber harvest volume in US



Forest Landowners in Arkansas

Forest Landowners Association:

- 15 million acres private forests
- Growth is 2X more wood than harvested
- \$1.5B salaries and wages
- Private forests capture emissions of 2.6 million cars annually
- \$30B impact on Arkansas economy
- Forestry supports 64,000 jobs

Carbon Forestry Projects:

- Began in early 1990s
- Some early failures and some early success
- Bottom line – 50% of dry weight of wood is carbon
- Forest landowners can be paid for carbon capture in standing trees as this will reduce some impacts from climate change



Natural Climate Solutions

Current forest carbon efforts:

- California Air Resource Board (CARB)
- Afforestation and reforestation (AFF & TNC)
- Wood based construction – lumber, CLT, mass timber
- Reduced impact logging
- Reduction in deforestation REDD+
- Harvest deferral

Future natural climate solutions:

- Water quality and quantity
- Forest health
- Wildlife habitat
- Reduction in fire risk
- Endangered species habitats
- Invasive species



Definitions

Additionality : Business as usual (BAU) does not create real climate impact. Forest carbon capture above BAU is the additional in additionality.

Leakage: This occurs when harvesting activity is “leaking” from areas of restricted harvesting onto surrounding forests. The solution to leakage is to provide every land owner and every acre with access to forest carbon programs.

Permanence: We use the term durable which is an impact that lasts as long as the purchaser chooses. One ton of carbon captured for 100 years has same climate impact as 17 tons captured for one year. Doing more sooner is > doing less later.



Forest carbon buyers requirements

Immediate:

- Little delay between action and impact
- Climate impact in this decade
- Attainment of durable impact
- Support local communities

Scalable:

- Ecological capacity
- Low barrier to participation for all landowners
- Empower landowners with small holdings

Efficient:

- Low present cost to present benefit
- Finds lowest cost carbon on landscape





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The Natural Capital Exchange (NCAPX)

NCAPX 2021C

Agenda

Overview:

- The story of Silvia Terra
- Natural Capital Exchange (NCAPX)
- What makes NCAPX unique?

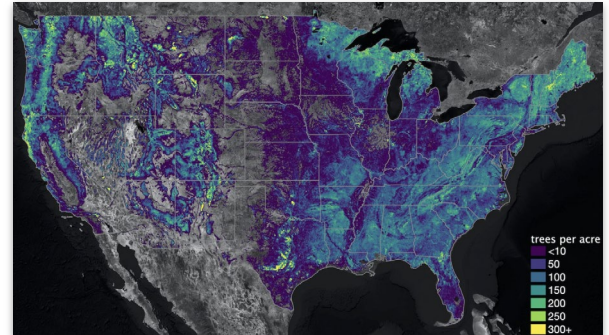
Frequently asked questions:

- How much might a landowner get paid?
- What are length and obligations of contract?
- Other FAQs



The story of SilviaTerra

- Co-founded in 2010 by Zack Parisa and Max Nova at Yale School of Forestry.
- Initial emphasis on “precision forestry” to help large landowners improve forest management.
- In 2018 we partnered with Microsoft to develop Basemap, the first ever high resolution map of the contiguous US.
- Basemap is updated annually. We measure every acre every year



Natural Capital Exchange (NCAPX)

- Our long-term goal is to create a market for **all** landowners to be paid for **all** of the natural capital on their land. We're starting in 2021 with forest carbon. We will facilitate quarterly cycles.
- Leveraging Basemap and additional datasets to assess the business-as-usual (BAU) harvest activity baseline for a property.
Landowners are selling a commitment to defer timber harvest
- Buyers are paying for carbon offsets that are generated harvest deferral. **Deferred harvest = retained carbon on the landscape**
- Successful pilot program in Pennsylvania in 2019/2020, now operating in 16 states and will be in all of the contiguous states by end of 2021



What makes NCAPX unique?



1-year terms



No fees for
landowners
to participate



No acreage
minimums



Go to www.silviaterra.com/ncapx/landowners

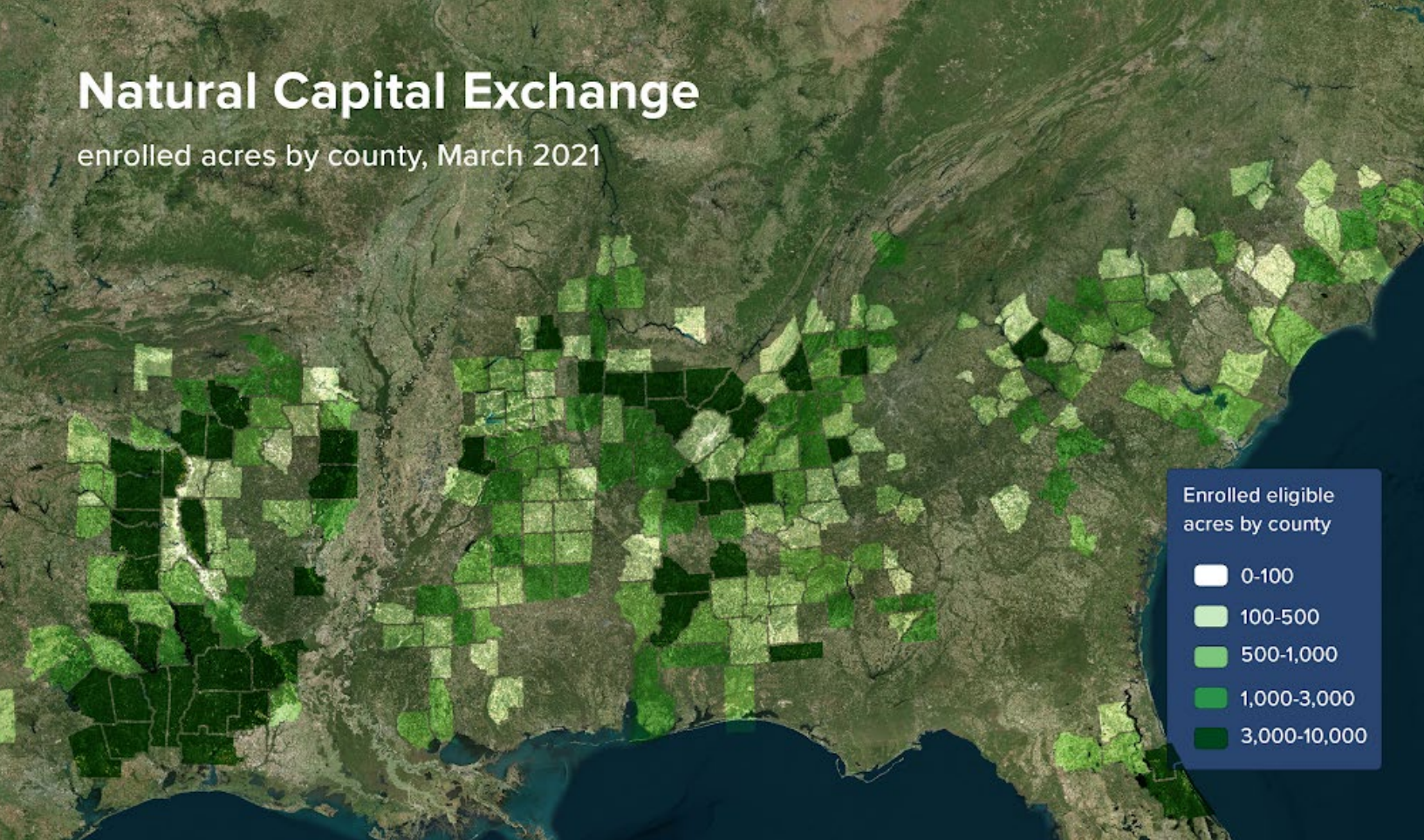
How does NCAPX actually work?

1. The forest landowner submits information for all of the property under their ownership. **This is free and zero-commitment**
1. SilviaTerra **remotely** assesses the harvest risk across all acres on that property and returns an “eligible carbon volume” to the landowner
1. Landowner determines how much harvest they are willing to defer in order to retain some or all of the eligible carbon on their property, and at what price. “Bids” are submitted with the NCAPX Seller Agreement
1. SilviaTerra matches bids with buyers and returns counter-signed NCAPX Seller Agreement to landowner. 1-year deferral period begins.
1. At end of deferral period, SilviaTerra verifies deferral commitments were made and pays landowners per the Seller Agreement bids



Natural Capital Exchange

enrolled acres by county, March 2021



2021B is the largest forest carbon project ever in the US by acreage. 119 landowners and 1.17M acres under contract

21B Size of forest landownership.

Category	Number of participants	Total acreage represented (approx)	Harvest Deferral Credits (HDCs) sourced (approx)
Small (<750 acres total area)		17,600	
Medium (750-5,000 acres)		55,200	
Large (>5,000 acres total area)		1,096,800	116,500
Total			

137,200 HDCs is approximately 3.4 million tons green weight



Update on NCAPX 21B

Forest carbon supply

- US\$17 per harvest deferral credit (HDC) or about one truck load of 25 green tons
- Molpus enrolled 468,000 acres (WSJ April 20, 2021)
- Smallest participant was 37 acres
- 42% of properties under 500 acres
- Payments after one year to NIPFs range from \$85 to >\$25,000

Buyers of harvest deferral credits (WSJ April 20, 2021)

- Microsoft Inc.
- Royal Dutch Shell PLC
- South Pole



How does a landowner enroll?

1. Eligible landowners should visit ncapx.silviaterra.com and create their free landowner account
1. Landowners will be asked to provide basic contact information and basic property information
1. Landowners submit boundaries for **all** of the property under their ownership, review enrollment documents, and submit their request for eligible carbon assessment.
1. Eligibility Reports will be delivered weekly from April 17 through June 1. **Assessment is entirely remote and no management plans are required.**



Important dates for NCAPX 2021C

Today: Landowners are able to submit properties and enroll

April 13th: The first batch of Eligibility Reports were sent to landowners. Reports will be delivered every Thursday through June 4th

June 1st: Enrollment closes for NCAPX 2021C

June 7th: Bid submissions are due

Week of June 7th: SilviaTerra matches buyers with sellers

July 1st: Harvest deferral period begins for participating landowners

June-July, 2022: SilviaTerra verifies and pays landowner + affiliates



Frequently asked questions

How much will a landowner get paid per acre?

This is difficult to know without a landowner submitting their property information. Many factors influence financial potential, including:

- Rotation age, species mix, and historical harvest activity
- Local timber economics
- Other commitments (ex. conservation easements)

Submitting property information and requesting an eligible carbon assessment is free and no commitment. Eligibility reports will be delivered weekly. This is the fastest way to get an accurate estimate.

In 21B, landowners with merchantable timber will be paid \$15 to \$70 per acre on eligible acres at the end of the one year contract.



Frequently asked questions

How much should a landowner charge for their deferral credits?

- By completing a bid in the NcapX Seller Agreement, landowners choose the prices at which they are willing to supply carbon to the market. The bid submission form allows for bids between \$1-\$30
- Landowners can choose to submit multiple volume + price pairings when completing the Seller Agreement. Only one pairing will be accepted. **Sold HDCs represent a commitment to reduce harvest below the BAU scenario**
- Research papers from Mississippi State University can help provide guidance to landowners on what they should bid based on various scenarios. **This guidance will be provided closer to the June 1 bid submission date.**



Frequently asked questions

Who are the buyers?

- Strong demand from Fortune 100 and Fortune 500 companies with big sustainability targets
- US-based firms, voluntary market
- Microsoft has announced major commitment for 2021C
- Certification is important next step.
- Verra Carbon Standard Concept Note Approval (May 7 2021)



Frequently asked questions

How does the program handle natural disasters?

- If a natural disturbance occurs during the one-year performance period and this results in a landowner not meeting their deferral commitments, no payments would be made for the associated HDCs.
- Landowners **will not** be penalized further and will not be barred from future participation in NCAPX cycles



Q & A

www.silviaterra.com/ncapx/landowners

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