

Carbon Offsetting for the Built Environment? Risks and Best Practices

Melissa Lindsay Emsurge



John Lang Net Zero Tracker



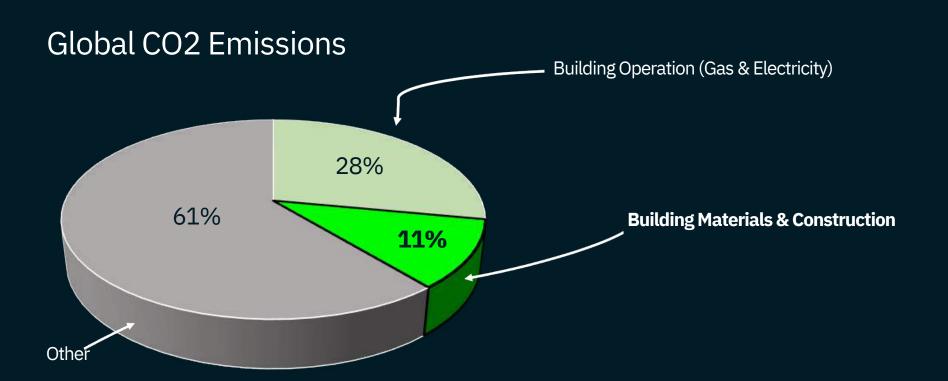
Richard Storrow Sylvera





The Problem









Consistent embodied carbon verification & reporting

The Problem



Why are construction emissions hidden?

Poor understanding



Inconsistent assessments



Little or no reporting



The Solution



You can't offset without measuring.

Training



Verification



Reporting



The Solution



You can't offset without measuring.

Training



Verification



Reporting



Benefits



Carbon Assessors (Consultants)



- Access to projects
- Training
- Simple solution to verification requirements

Developers



- Credible carbon reporting
- Protection from accusations of greenwashing
- Access to cheaper funding

Investment / Asset Managers



- Meet reporting requirements
- Consistency of reports
- Improved ESG credentials



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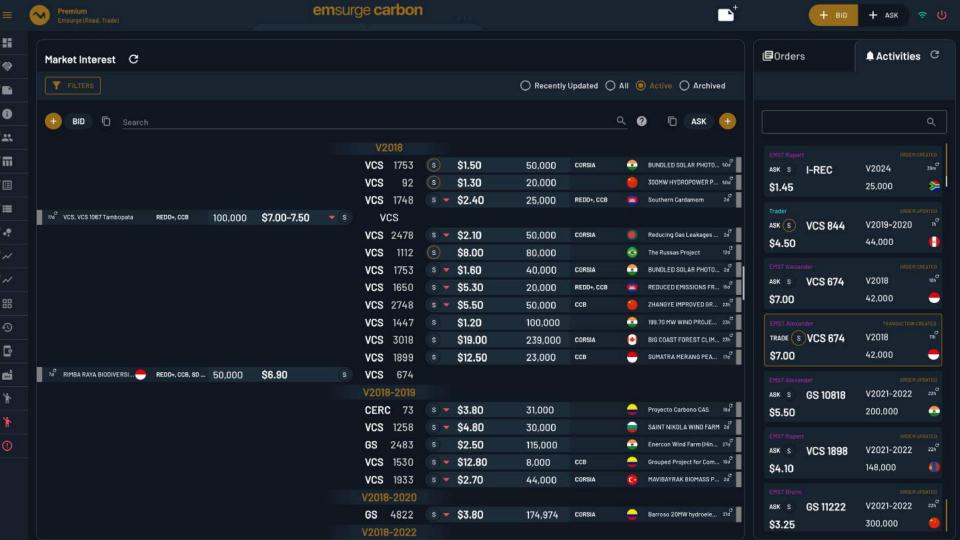
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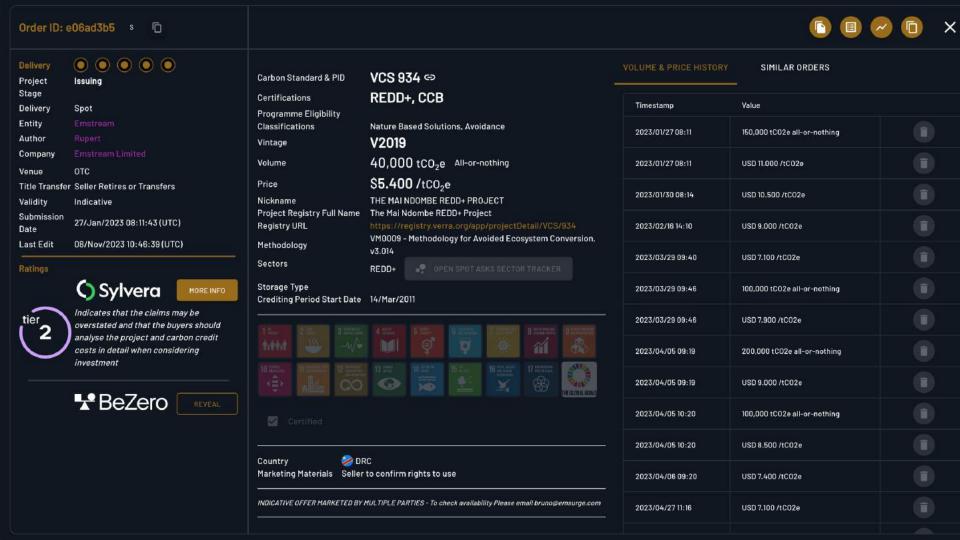




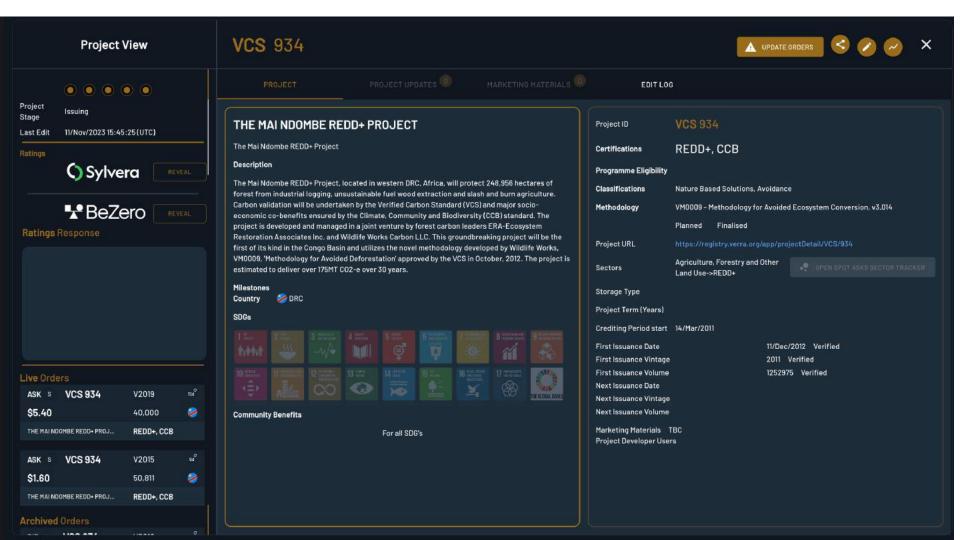


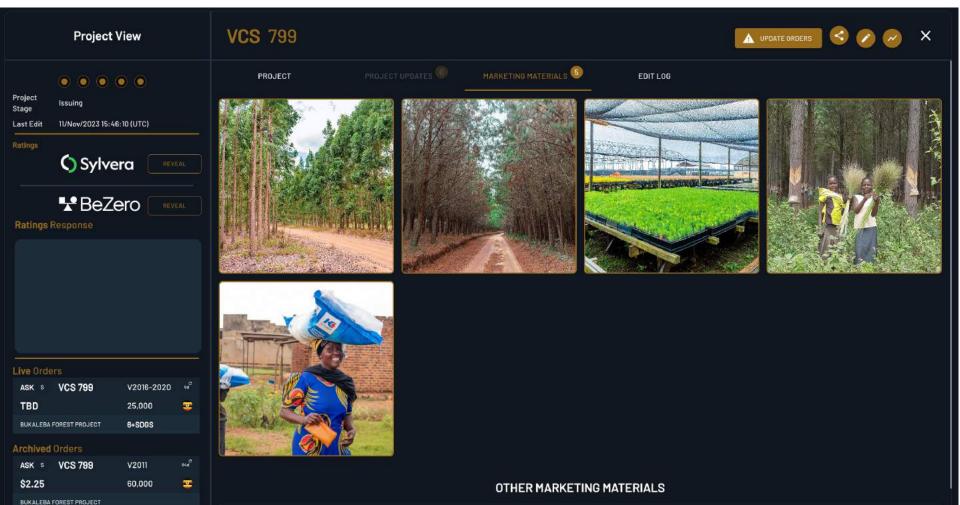
Powering efficient markets











Things to think about...

1. Carbon Standard





























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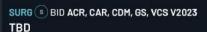
Order Recap





SAVE/POST ORDER

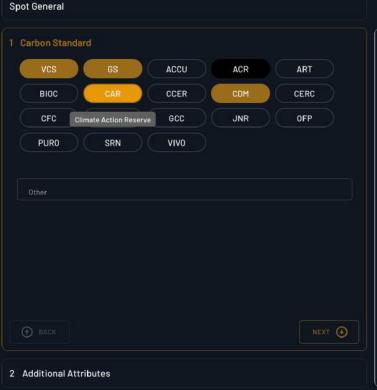


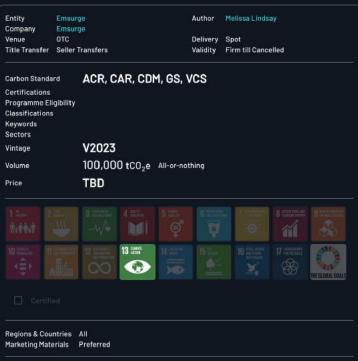


100,000 tC02e All-or-nothing

1 Carbon Standard

- 2 Additional Attributes
- 3 Project Specification
- 4 Regions & Countries
- 5 Vintage, Volume & Price
- 6 Marketing Materials
- 7 Notes
- 8 Delivery
- 9 Venue
- 10 Validity





2. Additional Attributes

Programme Eligibility







CCPs

Article 6

Certifications





3. Project Specification

Sector



Agriculture and Forestry and Other Land Use (AFOLU)

a. Afforestation. Reforestation & Revegetation (ARR)

b. Agriculture

c. Avoided Deforestation

d. Blue Carbon

i. Mangroves

ii. Wetlands, Teal, Seagrass,

e. Improved Forestry Management

f. REDD++

g. Soil Carbon

Chemical Industry

a. N20 Abatement

3. Construction

Energy Demand

a. Cookstoves

b. Water Purifiers

Energy Distribution

6. **Energy Industries** (Renewable / Non - Renewable Sources)

a. Non - Renewable Sources

i. Biomass ii. Gas Power Generation

(CCGT)

b. Renewables

i. Hydro (20MW or greater) ii. Small Hydro (< 20MW)

iv. Wind

and Gas)

Fugitive Emissions from Fuels (Solid, Oil

8. **Fugitive** emissions from **Production and** Consumption of

Halocarbons and Sulphur

Hexafluoride

Manufacturing **Industries**

10.

c. Solar Cookers

11. Solvent

Google Chrome

Mining/ Mineral

Production

Tech Removals a. Biochar

12.

b. Carbon Capture & Storage

c. Direct Air Capture

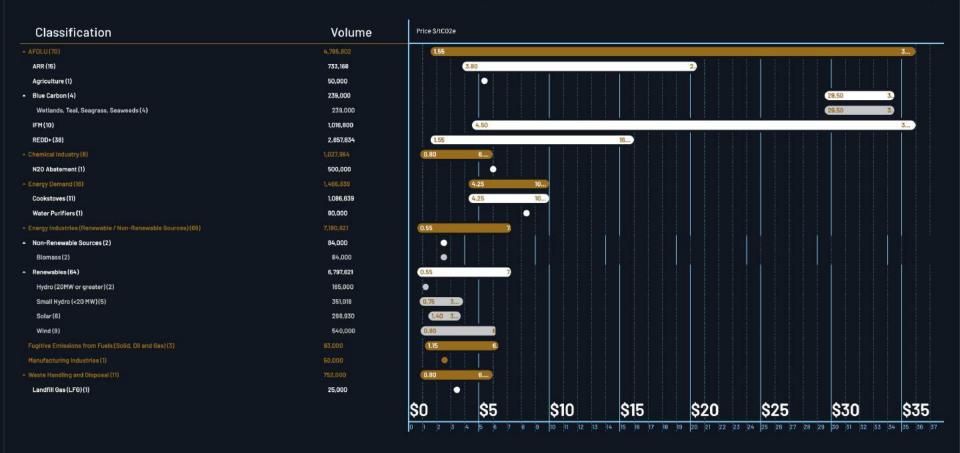
d. Enhanced Weathering

13. **Transport**

12. Waste Handling and Disposal

a. Biogas

b. Landfill Gas (LFG)

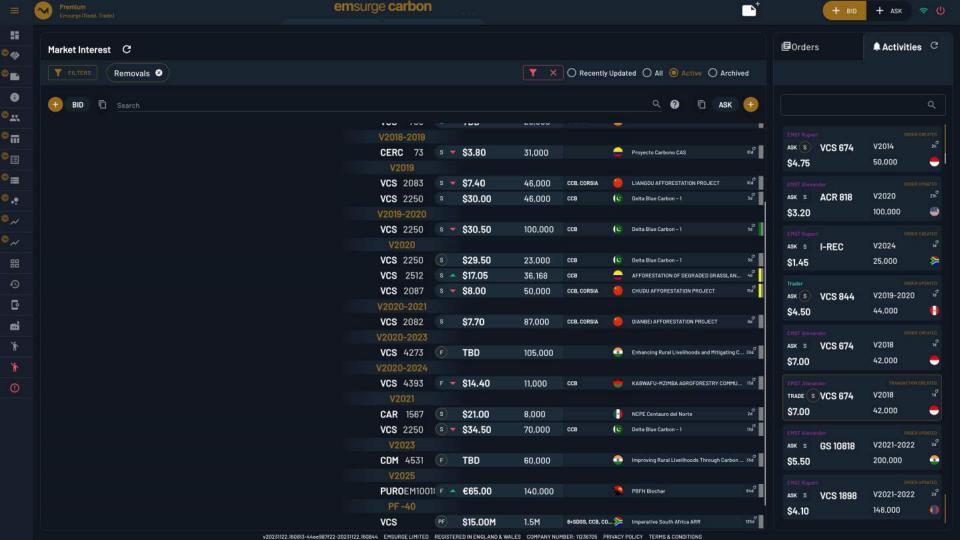


Location



Classification





4. Vintage



5. Quality

6. Volume

7. Marketing Materials

8. Price

9. Delivery

SPOT Verified Credits

FORWARD To be Verified Credits

TERM Multi-Year

Investment

PROJECT FINANCE

10. Payment Terms

11. Venue

Exchanges



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For a demo of the Emsurge platform or help procuring carbon credits email the Emstream commercial team at:

carbon@emstream.co.uk

Powering efficient markets

https://www.emstream.co.uk/



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From intent through integrity to implementation















Indicator

Use of external offset credits

WHO, WHAT, WHY

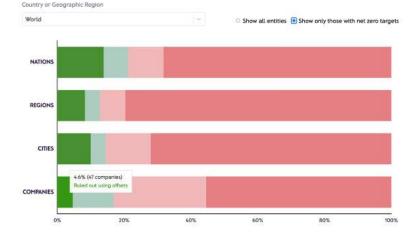


DATA EXPLORER

How are nations doing on net zero targets compared with companies? How many regions and cities have published a plan to get to net zero? How many companies rule out the use of offsets or cover their Scope 3 emissions?

Entity Type

Explore aggregated data across the 4,073 entities in our database.



NATIONS, REGIONS, CITIES



COMPANIES



NAME †	COUNTRY † All	SECTOR ↑↓ All	ANNUAL REVENUE	TARGET YEAR T. All	TARGET TYPE ↑ All ✓	END TARGET STATUS	INTERIM TARGET T ₊ All ~	DETAILED PLAN †↓	REPORTING MECHANISM 1	SCOPE 3 COVERAGE	CARBON CREDITS
Walmart	USA	Retail	\$559bn	2040	Net zero	In corporate strategy	2025	•	•	•	•
Apple	USA	Retail	\$379bn	2030	Carbon neutral(ity)	In corporate strategy		•	•	•	•
<u>UnitedHealth</u>	USA	Services	\$298bn	2035	Net zero	Declaration / pledge	2030	•	•	•	•
Amazon	USA	Retail	\$296bn	2040	Net zero	In corporate strategy	2025	•	•	•	•
PetroChina Co	CHN	Fossil Fuels	\$281bn	2050	Other	Declaration / pledge	2025	•	•	•	•
Exxon Mobil	USA	Fossil Fuels	\$281bn	2050	Net zero	In corporate strategy	2030	•	•	•	•
<u>Toyota</u> <u>Motor</u>	JPN	Manufacturing	\$281bn	2050	Carbon neutral(ity)	In corporate strategy	2025	•	•	•	•
ВР	GBR	Fossil Fuels	\$272bn	2050	Net zero	In corporate	2025	•	•		



INTEGRITY INDICATORS



COVERAGE

END TARGET YEAR?

INTERIM YEAR(S)?

STATUS OF TARGET

TYPE OF TARGET?

WHICH GASES?

CONSUMPTION EMISSIONS?

HISTORICAL EMISSIONS?

AVIATION + SHIPPING?

SCOPE 1 + 2?

SCOPE 3?



DECENT PLAN?

EQUITY CONSIDERED?

REPORTING MECHANISM?

FORMAL ACCOUNTABILITY?



CARBON CREDITS & SINKS

USING OFFSET CREDITS?

ANY CONDITIONS APPLIED?

CARBON REMOVALS?

SEPARATE TARGETS FOR REDUCTIONS AND REMOVALS?



NET ZERO & OFFSET CREDITS

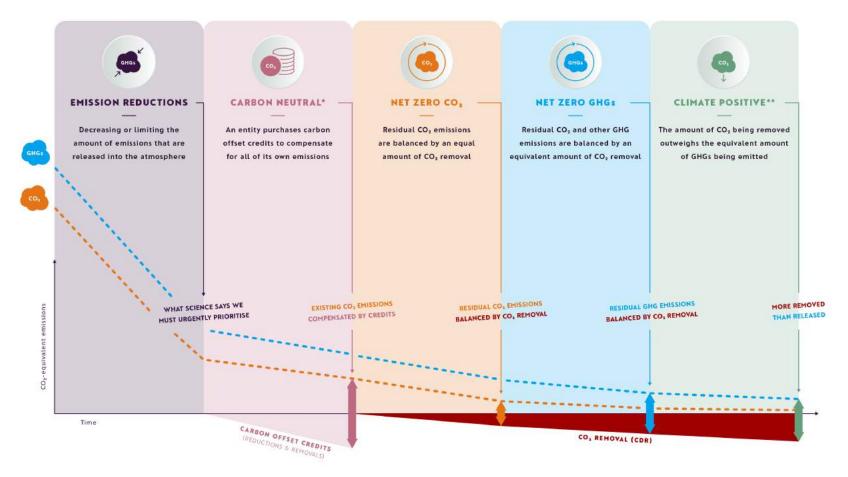
Of the 1,017 companies with net zero targets:

Rule out using offset credits:
 5% (46)

Using credits, but with conditions:
 12% (126)

Using credits, no conditions:
 28% (281)

*Not specifying either way:*55% (500+)



Note: GHG = Greenhouse gas. * Carbon neutral and net zero CO_a are scientifically synonymous, being a 'state of balance between the CO_a emitted into the atmosphere and the CO_a removed from it. In practice, many companies and other entities claim carbon neutrality for their products, or even for their entire operations, by buying carbon offset credits to (theoretically) compensate for the GHGs emitted. But offset credits can be of varying and dubious quality, and can come from projects involving reduction, avoidance, or removal of GHGs. **Climate Positive is also referred to by the terms 'Carbon Negative' and 'Net Negative Emissions.'





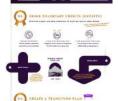


UN: 'GOOD NET ZERO'













2. Set targets quickly + fully

3. Use offset credits sparingly

4. Create a detailed transition plan

5. Commit to phase out fossil fuels

6. Align on lobbying + advocacy

7. Consider people + nature

8. Increase transparency + accountability

9. Invest in just transitions

10. Accelerate the 'Road to Regulation'

MRACE TO ZERO

- 1. Pledge
- 2. Plan
- 3. Proceed
- 4. Publish
- 5. Persuade





UN HIGH-LEVEL EXPERT GROUP'S

NET ZERO GUIDELINES
PUTTING A RED LINE THROUGH -GREENWASHING-



USING VOLUNTARY CREDITS (OFFSETS)

Prioritise urgent and deep reductions of emissions across value chains



Cannot be counted toward interim emissions reductions required by net zero pathways



Instead, use for beyond value chain mitigation; that is, action or investments that fall outside one's value chain



A high-quality carbon credit should. at a minimum, fit the criteria of additionality and permanence



THE MITIGATION ACTIVITY WOULD NOT HAVE HAPPENED WITHOUT THE INCENTIVE CREATED BY THE CARBON CREDIT





NOT FIRST

IF OFFSETS ARE
TO SUBSTITUTE
FOR RESIDUAL
(HARD-TO-ELIMINATE)
EMISSIONS, THEY
SHOULD NOT
BE REVERSIBLE



NET ZERO-ALIGNED OFFSETTING

- Mitigation hierarchy:
 - a) Slash your value chain carbon emissions
 - b) Use only high-quality offsets, limit use before 2030
 - c) Revise offset strategy as best practice evolves...
- Shift: From reduction to removal offsets over time
- Mindset shift: From compensation to contribution
- Transparency: Tell the world what you're doing!



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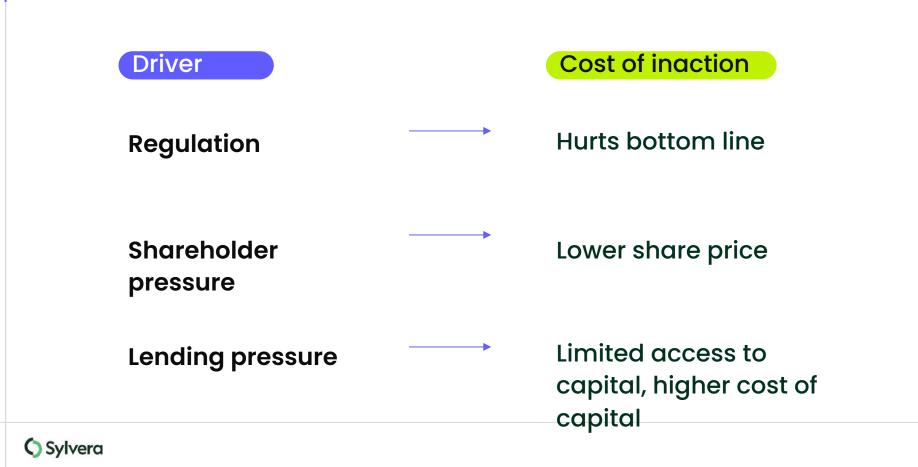


Net Zero is here to stay.

This is the new reality. All businesses need to start decarbonizing and changing their operating model today, or they will be left behind.



Why delaying action today will cost you more in the long run



Key challenges in procuring carbon credits

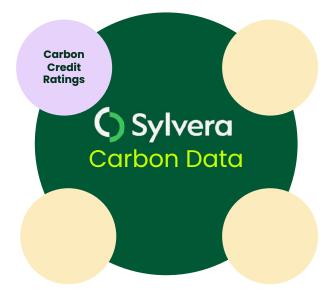
Implications Challenaes Buyers left buying something they Complexity don't understand or spending **hundreds of thousands** on consultants Investigations uncovering use of **low** Reputational risk quality credits can lead to bad press, share price decline, even legal liabilities Impossible to know if you're getting a Lack of pricing fair price for your credits and transaction data



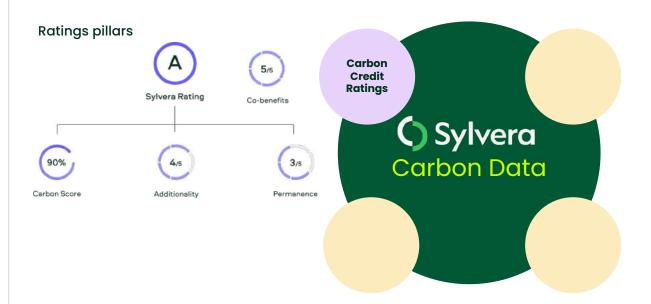








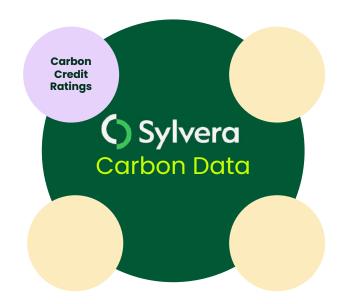






Project-type-specific frameworks



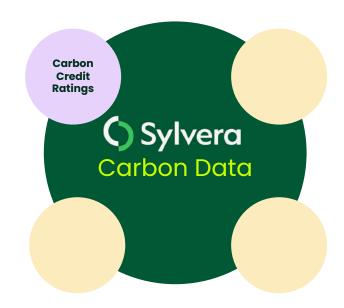




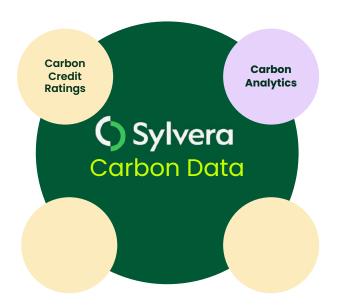
Your access to the most comprehensive carbon data in the market

Geospatial & ML expertise



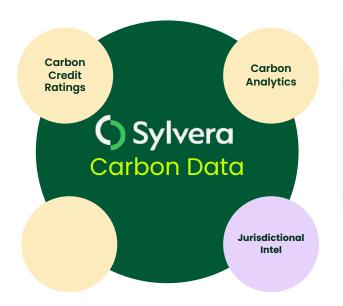






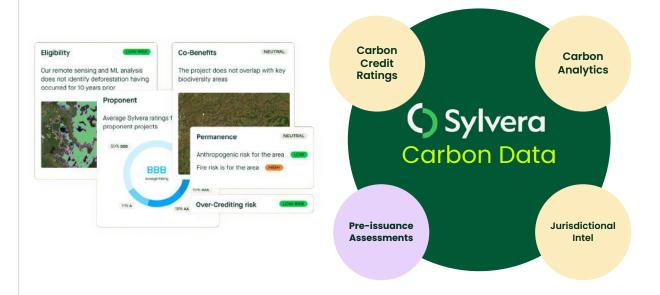














We help global organizations deliver on their net zero commitments.









































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Construction
Carbon LCA
training link
here:

