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MORE THAN ORGANIC™

STRATEGIC MARKET INTELLIGENCE

Total Addressable Market: The Scope 3 Carbon-Removal Opportunity

Sizing institutional demand for high-integrity, nature-based durable carbon removal — and mOrganic's Regenerative Carbon Removal Units (RCRUs) — across sovereigns, corporates, financial institutions, and natural-capital investors.

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mOrganic™ Holdings, LLC
ʻĀina Ulu Estate · Hawaiʻi
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EXECUTIVE SUMMARY

A Market Inflecting from Voluntary to Non-Negotiable

The market for carbon removal is crossing from discretionary corporate philanthropy into mandated, balance-sheet-level financial obligation. Three forces are converging: binding regulation now attaches a real, rising cost to unabated emissions; the science-based standards that govern corporate climate targets increasingly require permanent removals rather than cheap avoidance; and the physical build-out of artificial intelligence is adding vast new energy demand that must be neutralized with durable, verifiable units. Together these forces are transforming carbon removal from a reputational nicety into a procurement category with dedicated budgets, multi-year offtake contracts, and named executive owners.

The voluntary carbon market is projected to grow from roughly USD 15.8 billion in 2025 to more than USD 120 billion by 2030, a compound annual growth rate near 50 percent, with removal units — not avoidance credits — expanding fastest. Layered on top of this voluntary demand is a far larger pool of compliance, sovereign, and supply-chain "insetting" spend that is only beginning to mobilize. mOrganic estimates the total addressable annual spend across the four institutional buyer pillars relevant to Regenerative Carbon Removal Units at approximately USD 53 billion to USD 120 billion by 2030, scaling toward the hundreds of billions per year by mid-century as net-zero deadlines mature.

> **THE MORGANIC POSITION**
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> Between low-integrity avoidance credits priced near USD 5–24 per tonne and engineered removals such as Direct Air Capture priced from USD 125 to over USD 1,000, there is a widening gap for high-durability, nature-based removals that carry real permanence and measurable co-benefits. mOrganic's Regenerative Carbon Removal Units (RCRUs) are engineered to occupy precisely this premium-quality, defensible middle — the tier institutional buyers are moving toward as scrutiny of credit quality intensifies.

SECTION 1

The Scope 3 Imperative

For the overwhelming majority of large enterprises, the emissions that matter most are not their own. Scope 3 — the indirect emissions embedded in supply chains, purchased goods, logistics, and product use — typically represents the large majority of a company's total carbon footprint, commonly cited at roughly 70 percent and exceeding 90 percent in consumer goods, food, apparel, and heavy industry. These emissions are the hardest to abate directly, because they sit outside the reporting company's operational control. That structural reality is what creates durable, recurring demand for high-quality removals: where a company cannot yet eliminate an emission at source, it must neutralize the residual with a credible unit.

Regulation is converting ambition into obligation

The regulatory architecture that makes removals mandatory rather than optional is now live. The European Union's Carbon Border Adjustment Mechanism (CBAM) entered its definitive period on 1 January 2026, placing a carbon price on imports of carbon-intensive goods — iron and steel, aluminium, cement, fertilizers, hydrogen, and electricity — with free allowances phasing out through 2034. In parallel, the Science Based Targets initiative (SBTi), whose validated targets governed thousands of companies and saw a roughly 40 percent surge in 2025, is tightening its treatment of Scope 3 and residual emissions, steering corporates toward permanent removals for the emissions they cannot cut. At the sovereign level, Article 6 of the Paris Agreement is operationalizing government-to-government trades that let nations meet Nationally Determined Contributions with high-integrity units.

WHY THIS MATTERS FOR DEMAND

Each of these mechanisms converts a soft, reputational incentive into a hard, priced liability. A liability with a rising price and a compliance deadline behaves like debt — it must be funded, hedged, and retired on a schedule. That is the demand engine beneath the carbon-removal TAM.

SECTION 2

Market Size & Trajectory

Two distinct but connected markets define the opportunity. The broad voluntary carbon market covers the full spectrum from cheap avoidance credits to premium engineered removals; the narrower durable carbon-dioxide-removal (CDR) market covers only permanent removals and is where the fastest capital formation and the highest prices are concentrated.

The voluntary carbon market

Independent market analysts size the voluntary carbon market at approximately USD 15.8 billion in 2025, with projections reaching roughly USD 120 billion by 2030 — a compound annual growth rate on the order of 50 percent. Critically, removal credits, though still a minority of today's volume at roughly 30 percent, are the fastest-growing segment, expanding at a materially higher rate than avoidance credits as buyers flee low-quality, non-permanent units. The direction of travel is unambiguous: quality and permanence command a rising share of a rapidly enlarging market.

Durable carbon removal: small, concentrated, and accelerating

The durable CDR market is younger and smaller but growing explosively. Contracted volumes reached roughly 30 million tonnes in 2025, an increase of nearly 300 percent year over year, and the price points are an order of magnitude above nature-based avoidance. This market is also highly concentrated: a single buyer — Microsoft, which contracted approximately 45 million tonnes across 2025 — has represented on the order of 80 to 90 percent of durable offtakes, while the number of serious buyers outside it grew by roughly 73 percent and around twenty new entrants joined in 2025. Concentration this extreme signals a market at the very beginning of its demand curve, not a mature one — the buyer base is set to broaden dramatically as regulation bites.

READ-THROUGH

A market where demand is real and prices are high but the buyer base is still narrow is the definition of early-stage opportunity. The suppliers and unit types that establish credibility and offtake relationships now will hold the advantaged position as the next several hundred corporate and sovereign buyers enter.

SECTION 3

The Price & Quality Spectrum

Carbon units are not fungible. Price tracks permanence, verifiability, and co-benefits — and the spread between the cheapest and most expensive units exceeds two orders of magnitude. The table below summarizes representative 2025–26 pricing by method, and locates where mOrganic's RCRUs are engineered to sit.

Method	Class	Typical 2025–26 Price / tonne	Durability
Avoided deforestation (REDD+)	Avoidance	~ $6	Non-permanent

Method	Class	Typical 2025–26 Price / tonne	Durability
Nature-based avoidance	Avoidance	~ $5–24	Non-permanent
Improved Forest Management	Mixed	~ $15	Decades
Afforestation / Reforestation (ARR)	Nature removal	~ $22–24	Decades–century
Regenerative agroforestry (RCRU tier)	Durable nature removal	Premium to ARR	Long-lived + co-benefits
Biochar	Durable removal	~ $177 ($170–270)	Centuries+
Enhanced rock weathering	Durable removal	$200+	Millennia
BECCS	Durable removal	~ $389	Millennia
Direct Air Capture (DAC)	Engineered removal	$125–1,000+	Millennia

WHERE RCRUS WIN

mOrganic's Regenerative Carbon Removal Units combine the durability and integrity buyers increasingly demand with the biodiversity, soil-restoration, water, and community co-benefits that engineered removals cannot offer — at a cost structure well below Direct Air Capture. As quality standards tighten and cheap avoidance credits lose buyer confidence, this high-integrity nature-based tier is the segment capturing share.

SECTION 4

Total Addressable Market: Four Institutional Pillars

mOrganic frames the addressable market as annual spend — the capital that sovereigns, corporates, banks, and institutional investors deploy each year to mitigate Scope 3 and enterprise carbon liabilities. The four pillars below are additive and, by 2030, represent an estimated USD 53 billion to USD 120 billion or more in annual demand for high-integrity removals and insetting. Figures are directional synthesis estimates blending voluntary removals, compliance offtakes, and supply-chain insetting; they are intended for strategic scale, not point precision.

Institutional Pillar	Est. Annual Spend (2030)	Primary Demand Driver
1. Sovereign nations & compliance jurisdictions	$15B – $35B	CBAM, Paris Article 6, NDC reserves
2. Corporate off-takers & hyperscalers	$18B – $40B	Scope 3 neutralization, SBTi, AI power growth
3. Global systemically important banks (G-SIBs)	$10B – $25B	Financed emissions, trading desks, underwriting
4. Institutional natural capital & private equity	$10B – $20B	Carbon streaming, project equity, portfolios
Total estimated annual TAM	~ $53B – $120B+	Converging regulatory & voluntary demand

Pillar 1 — Sovereign nations & compliance jurisdictions

Nations subject to international climate mandates are becoming direct buyers. The EU's CBAM forces trading partners to account for embedded supply-chain carbon; Paris Agreement Article 6 enables bilateral sovereign trades that let governments meet their Nationally Determined Contributions; and forward-looking states — from Gulf sovereign-wealth economies to Japan and Singapore — are establishing carbon-credit reserve pools to shield domestic industry from escalating carbon taxes. Sovereign demand is characterized by large tickets, long horizons, and a strong preference for high-integrity, verifiable removals.

Pillar 2 — Corporate off-takers & hyperscalers

Multinational corporations procuring durable removals and nature-based solutions for Scope 1, 2, and Scope 3 supply-chain insetting form the deepest near-term pool. Within it, the AI and hyperscale data-center operators are the marginal price-setters: their surging electricity demand requires permanent, verifiable neutralization at scale, and coalitions such as Frontier — whose advance market commitments now exceed roughly USD 1.9 billion, combining an original circa USD 1 billion pledge with a further USD 915 million in 2025–26 from members including Alphabet, Stripe, Shopify, Meta, McKinsey, and others — are pre-funding the supply curve. Consumer-goods and agri-food conglomerates add a second wave of demand focused specifically on agricultural insetting, soil health, and agroforestry, directly adjacent to what mOrganic produces.

Pillar 3 — Global systemically important banks (G-SIBs)

Tier-one banks are entering carbon removal from three directions at once: as principals neutralizing their own financed emissions to avoid regulatory capital penalties; as trading desks building inventory of high-integrity units for liquidity and structured products; and as underwriters pre-funding projects and packaging long-term purchase agreements into green bonds and project finance. Institutions active across these functions include

J.P. Morgan, Goldman Sachs, Bank of America, Barclays, BNP Paribas, and Standard Chartered. Their participation converts carbon removal from a spot purchase into a financeable, investable asset class — deepening and stabilizing demand.

Pillar 4 — Institutional natural capital & private equity

A dedicated pool of institutional capital now targets natural capital and carbon as an investable theme. TPG's Rise Climate platform closed its first fund at USD 7.3 billion and is raising a next generation targeting roughly USD 10 billion, including an anchor commitment of USD 1.5 billion from ALTÉRRA. Alongside it, funds and vehicles such as Rubicon Carbon, Climate Asset Management, and large asset managers deploy capital through carbon streaming and royalty agreements, project equity, and high-integrity credit portfolios — providing upfront capital in exchange for guaranteed future delivery of premium units. For a supplier like mOrganic, this pillar is both a source of demand and a source of project-level financing.

SECTION 5

Vertical Market Demand

Cutting across the institutional pillars, four vertical sectors drive the concrete, recurring demand for Regenerative Carbon Removal Units.

Vertical Sector	Primary Demand Driver	Representative Buyers
AI & hyperscale data centers	Surging power demand requiring permanent, verifiable neutralization	Microsoft, Google, Amazon, Meta
Agri-food, CPG & supply chain	Scope 3 (FLAG) insetting, soil health, agroforestry transition	Nestlé, Mondelēz, Cargill, Unilever
Aviation, energy & heavy industry	Hard-to-abate compliance, CBAM cost arbitrage	Shell, BP, TotalEnergies, airlines
Financial & natural-capital investors	Streaming, structured finance, high-integrity portfolios	J.P. Morgan, Goldman, TPG Rise, Brookfield

SECTION 6

mOrganic's Addressable Wedge

mOrganic does not need a majority of this market — only a defensible share of its highest-quality tier. As buyer scrutiny shifts decisively toward permanence, additionality, and verifiable co-benefits, the units that clear at premium prices are exactly those mOrganic is built to produce: regenerative agroforestry removals from a working Hawai'i estate, measured and verified to institutional standards, and carrying biodiversity, soil-restoration, water, and community benefits that engineered removals cannot match.

Positioned above commodity avoidance credits and below the cost of Direct Air Capture, RCRUs are designed for the buyers who must retire real removals — sovereigns hedging CBAM exposure, hyperscalers neutralizing AI-driven power growth, agri-food conglomerates insetting their agricultural supply chains, and banks and funds seeking financeable, high-integrity carbon assets. Even a low-single-digit share of a USD 53–120 billion annual market represents a multi-hundred-million-dollar recurring opportunity, anchored by multi-year offtake agreements of the kind already reshaping the durable-removal market.

STRATEGIC CONCLUSION

The carbon-removal market is inflecting from voluntary to mandated, from avoidance to permanence, and from a handful of buyers to hundreds. High-integrity, nature-based durable removal is the segment gaining share within a market compounding near 50 percent a year. mOrganic's RCRUs are engineered for precisely that segment — and the window to establish credibility and offtake relationships is open now, while the buyer base is still forming.

APPENDIX A

Methodology & Key Assumptions

- **Scope.** This analysis sizes annual institutional spend on carbon removal and Scope 3 insetting relevant to high-integrity, nature-based durable units. It excludes pure compliance-market allowance trading (e.g., EU ETS allowances) except where those mechanisms drive removal demand.
- **TAM construction.** Pillar estimates are directional syntheses that blend three demand streams — voluntary removals, compliance-driven offtakes, and corporate supply-chain insetting — triangulated from published market-sizing, transaction data, and disclosed corporate and fund commitments. Ranges express uncertainty; they are intended to convey scale and structure, not point forecasts.
- **Market figures.** Voluntary-market size and growth reflect third-party analyst projections (approximately USD 15.8B in 2025 to USD 120B by 2030 at a roughly 50 percent CAGR). Durable-CDR volumes, concentration, and growth reflect specialist tracking of contracted offtakes. Prices reflect 2025–26 published benchmarks by method.
- **Forward-looking nature.** All 2030 and later figures are projections dependent on the pace of regulation (CBAM, SBTi, Article 6), technology cost curves, and macroeconomic conditions. Actual outcomes will vary.
- **Integrity standard.** Consistent with mOrganic policy, this report distinguishes removals from avoidance, favors defensible ranges over single-point claims, and does not overstate market size or mOrganic's position within it.

Appendix B — Selected Sources

Market sizing and pricing in this report draw on publicly available third-party research and disclosures, including: independent voluntary-carbon-market analyses (market size and CAGR); specialist durable-CDR market tracking (contracted volumes, buyer concentration, year-over-year growth); published 2025–26 carbon-credit pricing benchmarks by method; disclosed advance market commitments (Frontier coalition); corporate removal-procurement disclosures (including Microsoft's contracted volumes); the European Commission's CBAM implementation timeline; the Science Based Targets initiative's corporate net-zero standard and target statistics; and disclosed climate-fund commitments (including TPG Rise Climate). Figures were current as of July 2026 and are cited at the level of scale and direction rather than as audited data.

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