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GROWTH LEVELS IN THE C&E INDUSTRY

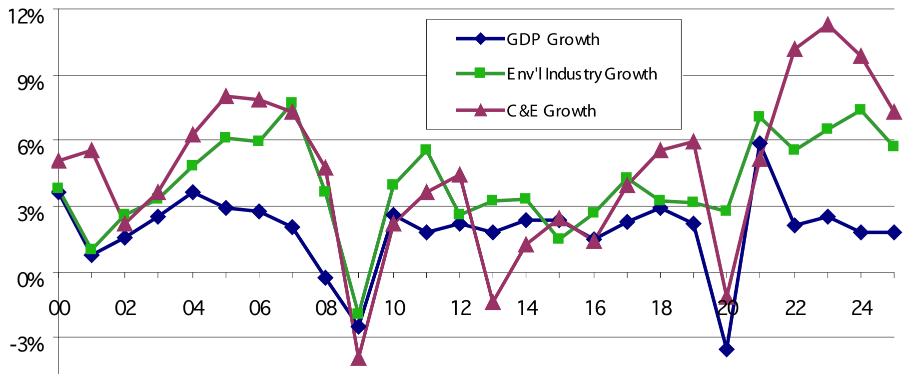
After a historic 2022–23 boom, environmental industry growth in 2025 has downshifted to a more sustainable mid-single-digit pace. Infrastructure and water-driven work remain strong; policy whiplash and higher rates are slowing some clean-energy and green-building segments; PFAS and compliance remain durable but less 'emergency-driven'; and M&A is doing a lot of the work to keep the largest firms' top lines growing faster than the market.

Seen through that lens, 2025 looks less like a turning point and more like a normalization. The industry is still growing, but the broad, synchronized surge of the post-COVID, BIL, IRA period has faded. Instead of across-the-board double-digit gains, most firms are now in a band of modest, steady expansion. The market has effectively rebalanced from an exceptional boom back toward its long-term pattern of mid-single-digit growth—with significant variations by segment and business model.

One of the strongest continuing supports is capital spending on infrastructure. Money authorized under the infrastructure bill is still flowing into water, transportation, grid, resilience and 'mission-critical' projects, and similar programs are in motion in other advanced economies. Utility programs, municipal upgrades, stormwater and flood projects, and large energy-infrastructure investments keep design, permitting, and construction-phase services in demand. For many firms, this work has become the reliable backbone of their portfolio: not spectacular, but persistent, visible, and funded — with AI digital applications constantly in consideration.

At the same time, the policy environment around climate and clean energy has reversed. Some of the flagship tax credits, grants, and loan programs that powered the early IRA wave are being revisited,

Annual Growth in C&E vs the Environmental Industry & GDP



Source: Environmental Business Journal's annual models of the U.S. environmental industry

Inside EBJ: **Environmental Consulting & Engineering 2025**

C&E Growth Cycles: 1994-2026

Looking at the C&E size and growth series from 1994–2026, a pattern of five distinct cycles emerges in environmental consulting & engineering (C&E).

1. Mid-90s a flat maturation period (1994–2000): The industry bumped along in the mid-teens (about $15–17B). Growth was positive but modest in most years (generally 0–5%), with an outright decline in 1996 (-1.9%) and only a couple of mid-single-digit years at the end of the decade. Over the full 1994–2000 span, the market only grew by about **14%**. This could be characterized as a maturation phase after the Superfund/Clean Air build-out: work is steady, but competition and client sophistication grew with no real big new driver.

2. Pre-crisis expansion (2001–2007): From 2001 onward, growth runs stronger, peaking at 8.0% in 2005, 7.9% in 2006 and 7.4% in 2007. Revenues climb from $18.4B to $27.1B in six years—a 40% expansion, and a true "up-cycle" where growth is consistently above the already strong GDP, boosted by increasing property values, government spending and oil & gas prices.

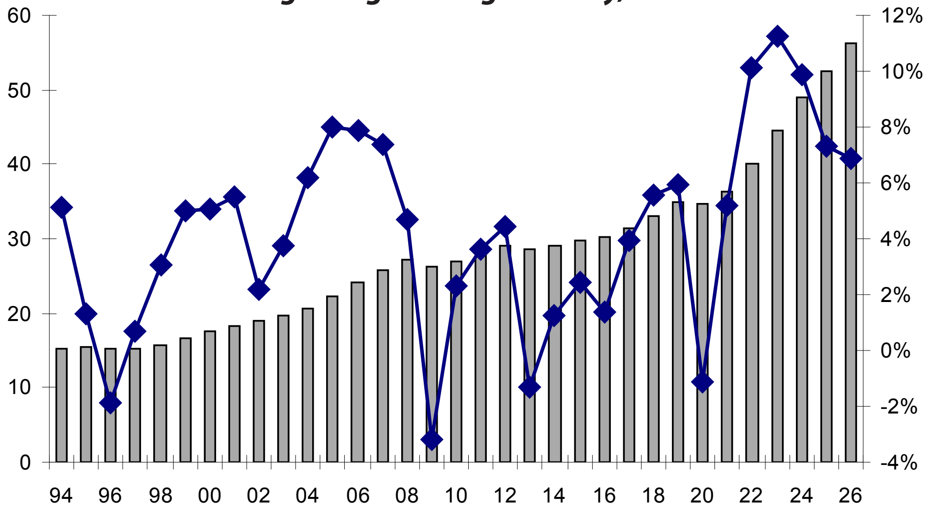
3. Global financial crisis and hangover (2008–2010): The 2008–10 period shows the impact of the financial crisis. 2008 still posts a decent +4.7%, but 2009 drops -3.2%. 2010 recovers to +2.3%, but over the three-year window the market is basically flat to slightly down (revenues in 2010 are just below 2008 in real terms): A classic "step down and slow claw-back" one would expect around a macro shock.

4. Low-gear plateau (2011–2019): The industry settles into a low-to-mid single-digit pattern, with a couple of stronger years (2017–18 at 5.6–5.9%) and two dips (2013 at -1.3% and 2019 at -1.1%). Revenues rise from $27.8B to $34.6B over eight years—or a 26% gain, respectable but not spectacular given the time span. This could be called a "slow grind" era: stable demand, more competition, and no real, single disruptive funding wave.

5. COVID dip and unprecedented boom (2020–2026): The COVID year **2020** shows another brief contraction (**-1.1%**), but what follows is unlike anything in the series. From 2021 on, growth is consistently high: +5.2% in 2021, then 10.1% in 2022, 11.3% in 2023, 9.9% in 2024, and still a very strong 7.3% and 6.9% in the 2025–26 projections. Revenues jump from $34.6B in 2020 to $56.2B by 2026—an increase of 62% in six years, by far steepest growth curve on the chart. Historically, the only vaguely comparable run is 2003–07, but the recent period combines higher growth rates with a much larger base, so the absolute dollar expansion is much bigger.

Putting the cycles in context, a typical "normal" for the C&E industry has been around 4–5% annual growth with he late-90s and 2010s a bit below that and a couple of up-cycles, with growth well above the long-term norm. The recent 2021–24 stretch of double-digit or near-double-digit growth at a $35–50B scale is unprecedented, suggesting that the current boom—driven by infrastructure programs, climate/energy transition, PFAS, resilience, and federal funding—is structurally different (and more powerful) than earlier cycles. So, from this table, you can convincingly argue that the industry has gone through three modest expansions, two clear downturns (GFC and COVID), and is now in the strongest and most extended growth cycle in its modern history. ☐

Annual Growth in & Size in $Billions of the U.S. Environmental Consulting & Engineering Industry, 1994-2026



Source: Environmental Business International, Inc. Annual research on the environmental industry by EBI and EBJ derived from surveys, interviews and compilations of secondary data.

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TERRA GLOBAL CAPITAL SEES RAPID ADVANCE IN AI SUPPORTING MEASUREMENT, REPORTING & VERIFICATION AND ENABLING INVESTMENT & CLIMATE FINANCE FOR NbS & VERRs

Founded in 2006, **Terra Global Capital** is a woman-founded, woman-run company of 41 team members globally located from its headquarters in California to Nairobi, Kenya. Since founding 19 years ago, Terra Global has been dedicated to attracting private sector capital to Nature-based Solutions for climate, community and biodiversity impacts. Terra Global has two complementary business lines, 1) Climate Finance Investment Management and 2) Greenhouse Gas (GHG) and Natural Resource Management Technical Advisory. The Climate Finance Iteam builds the investment readiness of NbS projects and programs, deploys climate finance investment capital, and provides ongoing support to build investees' business management capacity to deliver financial and impact returns. The GHG and Natural Resource Management Technical Team supports local partners and investees in implementing activities on-the-ground, leveraging participatory local monitoring, and performing the work under the GHG and impact market standards to generate high-quality, multiple-benefit verified emission reductions and removals (VERRs). Having worked in over 40 countries, Terra Global has designed and supported the implementation and financing of NbS projects from the local to national scale.

David Montoya, Director, Remote Sensing/GIS, Team Lead. Mr. Montoya brings eight years of extensive experience in Remote Sensing and GIS. He has worked with multiple Colombian government entities. Him and his team delivers pragmatic and innovative software and tools that meet carbon market and impact standards and support community-based geospatial community monitoring.

EBJ: How would you describe the role AI is currently playing in shaping climate-related investments—and how quickly is that role expanding?

David Montoya: Artificial intelligence is increasingly becoming an accelerator for climate-related finance. It is dramatically reducing the time and cost of monitoring ecosystems, automating due diligence processes, and generating insights that were previously too expensive or complex to obtain. This has a direct impact on three fronts: lowering the cost of measurement, reporting, verification (MRV), which makes smaller projects financially viable; producing more timely and granular insights that enable investors to make decisions within months rather than years; and improving risk modeling by integrating climate hazards, land-use dynamics, and financial performance.

The expansion is happening very quickly. Since last few years, the rapid adoption of AI across industries has spilled into climate-tech, and while overall funding for climate solutions has fluctuated, the intersection of AI and climate has remained particularly attractive because of its leverage potential.

EBJ: Are you seeing increased interest from investors specifically looking to fund AI-enhanced climate solutions? If so, what sectors or themes are they targeting most?

Montoya: There is a clear increase in investor interest in solutions that combine AI and environmental outcomes. The most active areas in AI today include carbon quantification and measurement, reporting, verification (MRV), where AI models are applied to satellite, radar, and LiDAR data can verify carbon emissions. ESG or Environmental, Social, and Governance reporting and compliance is another strong focus, since AI can integrate disparate datasets to streamline disclosures and audits.

Biodiversity monitoring is also emerging, supported by machine learning applied to acoustic sensors and camera traps. Agriculture and soil health have become particularly relevant too, with investors looking at AI-enabled tools that estimate soil organic carbon, predict yields, and support regenerative practices. In short, investors are moving toward AI solutions that not only promise environmental impact but also reduce market frictions and create more reliable financial products.

AI is transforming nature-based solutions from largely philanthropic or voluntary efforts into structured investment opportunities with predictable risk-return profiles.

EBJ: Could you describe a use case where AI directly improved the ROI of one of your investments?

Montoya: One example comes from a JNR Chocó Avoided Deforestation and Degradation Project in Colombia that initially relied on costly, labor-intensive field surveys and manual verification. By integrating satellite imagery and ML-based biomass estimation, calibrating periodically with LiDAR flights, and running automated systems to detect disturbances, the project cut MRV expenses by more than half.

This not only reduced operating costs but also accelerated the issuance of credits by providing near-continuous monitoring, which improved cash flow. At the same time, the increased precision of the estimates reduced uncertainty and therefore the discount rate applied by buyers, allowing the credits to fetch higher prices. The combination of reduced costs and improved revenues produced a measurable boost in ROI.

EBJ: What are the most exciting advances you're seeing in AI-enabled MRV (measurement, reporting, verification) for ecosystem services, and how are they changing the risk/reward profile for investors?

Montoya: Some of the most exciting advances in AI-enabled MRV involve the fusion of multiple data sources — optical, radar, LiDAR, and ground data — to generate more accurate and transparent measurements of land-use change, carbon and biomass. Others include near-real-time monitoring, which allows for early detection of fires, pests, or illegal activities, and probabilistic models that provide not just estimates but confidence intervals that can be priced into contracts. The integration of in situ data such as soil sensors, bioacoustics with Earth Observation further extends MRV into areas beyond carbon, making it possible to measure biodiversity, soil health, and water services with increasing reliability. For investors, this shifts the risk-reward balance: lower uncertainty and better verification reduce downside risk, increase trust, and make it possible to structure more sophisticated, performance-based financial products.

EBJ: What are the biggest blind spots investors still have when it comes to funding AI-powered environmental solutions? And what should they be looking for?

Montoya: Many investors still overestimate the value and reliability of AI models that have not been validated in local contexts, where ecological and social conditions can diverge from training data. Others underestimate the full cost of deploying AI, which includes data acquisition, model maintenance, and specialized expertise. Data governance is another underappreciated issue: the quality, licensing, and ownership of datasets can pose risks. There is also the danger of vendor lock-in, with proprietary systems that limit transparency and portability, as well as the uncertainty created by the lack of universally accepted MRV standards. Investors would be wise to look for solutions with independent validation, transparent reporting of uncertainty, open standards for data, clear cost models, and explicit alignment with regulators and buyers.

EBJ: Could AI help unlock new categories of ecosystem services as investable asset classes—not just carbon credits, but water credits, soil health, pollinator metrics?

Montoya: AI has the potential to transform not only GHG quantification and carbon markets but also new asset classes such as water credits, soil health metrics, and pollinator services. Machine learning models can now integrate remote sensing with hydrological modeling to quantify and attribute water savings or aquifer recharge. Soil organic carbon can be estimated through combinations of multispectral imagery and agronomic data, opening the door to contracts that reward regenerative practices.

Even pollinator activity can be detected through acoustic and image recognition models, potentially translating ecological services into measurable, tradable credits. The limiting factor is less about technical feasibility and more about institutional readiness — namely, whether markets and regulators are prepared to accept these new categories of MRV. AI lowers the technical barrier, making it easier to imagine these services as investable asset classes.

EBJ: Which areas of AI innovation do you think will have the greatest transformative impact on climate finance and sustainable land use in the next 3–5 years?

Montoya: Looking ahead, several areas of AI innovation seem poised to transform climate finance and sustainable land use. Automated and auditable MRV systems that combine Earth Observation with transparent Machine Learning pipelines will be critical to scaling nature-based markets. Integrated climate risk models that connect physical hazards with financial exposure will redefine how insurers, lenders, and asset managers price risk.

In agriculture, AI will drive performance-based finance by linking regenerative practices to soil carbon and yield outcomes. Agentic AI workflows will streamline due diligence, compliance, and reporting, reducing transaction costs. And anomaly-detection systems will help identify fraud in carbon and biodiversity markets, restoring credibility. Together, these innovations promise to reduce uncertainty, expand liquidity, and enable institutional-grade investment.

EBJ: Are you tracking any early-stage startups or breakthroughs that could become game changers for AI in the environmental finance space?

Montoya: We are already seeing startups pushing the frontier. Pachama and CTrees, for instance, applies satellite and ML models to improve forest MRV and has become a reference in voluntary carbon markets. Others are focusing on the integration of LiDAR and ML for biomass quantification, soil carbon monitoring that fuses remote sensing with agronomic field data, and blockchain-linked MRV systems that enhance transparency and traceability. The ecosystem is evolving quickly, and new entrants are likely to become game changers within just a few years.

EBJ: How do you envision AI reshaping investment in nature-based solutions?

Montoya: The biggest shift AI will bring to nature-based solutions is making them more transparent and bankable. By reducing the cost and time-lags of MRV, it will allow smaller and more diverse projects to access financing. Continuous and automated validation of outcomes will make performance-based contracts feasible, while improved spatial modeling will help investors identify the highest-impact interventions. AI will also make permanence and risk more transparent by enabling early-warning systems for threats such as fire or illegal deforestation. In short, AI is transforming nature-based solutions from largely philanthropic or voluntary efforts into structured investment opportunities with predictable risk-return profiles. ☐

The integration of in situ data such as soil sensors, bioacoustics with Earth Observation further extends MRV into areas beyond carbon, making it possible to measure biodiversity, soil health, and water services.