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CE-EM

Nature Investment Intelligence Reports

Digital Pathways: How Technology is Shaping Nature & Carbon Markets

Table of Contents

	Editorial Note	**3**
	Executive Summary	**4**
	Introduction: What if technology never showed up?	**6**
01	**Measuring the Environment**	**8**
02	**The Environmental Technology Stack**	**14**
03	**The Future of Measurement**	**20**
	Q&A Spotlight	
	Can blockchains make biodiversity credits reliable? Terrasos	**28**
	How do we measure nature at scale? Space Intelligence	**31**
	Can AI turn data into better decisions? Gaia	**35**
	What makes environmental data manageable and trustworthy? BlueLayer	**38**
04	**Standards, Ratings and Market Trust**	**41**
05	**From Data to Delivery**	**45**
	Q&A Spotlight	
	If capital exists, why do nature projects still struggle to get funded? Gordian Knot Strategies	**53**
06	**Protecting Nature Assets**	**57**
	Q&A Spotlight	
	If we can measure nature, can we also insure it? AXA Climate	**61**
	Conclusion	**64**
	References	**67**



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Editorial Note

Technology is rapidly reshaping nature markets. Across forestry, carbon and biodiversity, new tools are transforming how projects are designed, measured, monitored and verified. The result is faster delivery, lower costs, stronger reporting and, ultimately, greater market integrity.

But the existence of technology is not enough. Understanding how it works and what tools to use to optimise workflow at different levels is equally important. An insurance company in the nature market has different technology needs from a standards body, which again has different needs than an investor and so on. Without understanding how to apply technology effectively, it risks becoming another layer of complexity rather than the driver of efficiency it was intended to be.

That is why we have produced this report.

Across the following pages, we explore the technologies currently being deployed across forestry, carbon and biodiversity markets, from remote sensing and AI to monitoring platforms, digital MRV and data infrastructure. We examine how organisations are using these tools today, the challenges they continue to face and where the next wave of innovation is likely to emerge.

Our objective is practical. Rather than simply showcasing innovation, this report is designed to help you understand where technology can deliver the greatest value and how it can be applied to achieve better outcomes.

Nature markets are entering a phase where data quality, transparency and scalability will define success, with technology at the heart of this progress. We hope this report helps you navigate that transition with greater clarity and confidence.

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Executive Summary

Is nature tech up to the job? A survey of developers and investors looks at how it is used, and where it may still fall short

Are current technologies enough to meet environmental targets? 43% of our project developers said no.

Nature markets are defined by two relationships: capital moving from investors to project developers, and data moving in the opposite direction. Technology sits at the intersection. Digital tools for measurement, reporting and verification (dMRV) are reshaping how nature-based credits are created, evaluated and financed.

This report draws on a survey of 30+ technology providers, project developers, investors and corporates, combining multiple-choice questions with longer open-ended responses, alongside 10+ in-depth interviews, both on and off the record, conducted over the past year. Unless otherwise stated, all survey data and findings referenced throughout this report are drawn from this research.

Are current technologies enough to meet environmental targets? 43% of our project developers said no.

The market increasingly depends on digital tools, but continues to grapple with challenges around cost, interoperability and access.

The two sides of the market also experience technology very differently. Investors rely on it to assess risk, conduct due diligence and monitor outcomes. Project developers use it to manage operations, generate evidence and meet growing reporting requirements.

Inside the report

The report traces the history of technology, sets out the tech that exists today at every level of the supply chain in nature and captures how users, buyers and providers experience it and what questions they have.

1 **Measuring the Environment**
The story of scale

2 **The Environmental Technology Stack**
The technology enabling scale

3 **The Future of Measurement**
Turning scale into credibility

4 **Standards, Ratings and Market Trust**
How technology is strengthening integrity, transparency and confidence

5 **From Data to Delivery**
How developers and investors are using technology to build and manage nature projects

6 **Protecting Nature Assets**
Insurance, climate risk and financial resilience

Technology now shapes how nature-based credits are created, evaluated and financed, and nature markets increasingly depend on it. Investors and project developers use it for different ends, and the market continues to grapple with challenges around cost, interoperability and access. The question this report puts to the market is whether today's tools are enough to meet environmental targets. By tracing where nature technology has come from, setting out what exists today at every level of the supply chain and recording the experiences and questions of users, buyers and providers, the report gives the market a clearer basis for deciding what to build, buy and trust next.

