

BRIDGING THE DISCONNECT

WHY NATURE-BASED CARBON
PROJECTS STRUGGLE TO
ACCESS CAPITAL



HAMERKOP
CLIMATE CHANGE & FINANCE



iNovaland



Foreword

The Art of Forests was created in a spirit of friendship and reciprocity to bring people closer together: connecting those who work alone on the ground and in the midst of many growing environmental changes with those who need to understand the challenges that operators and developers face, in order to support them.

It has been said that finance is ready to come to nature, yet it doesn't appear able to reach it; certainly not to the level and extent that are needed so urgently by those dedicated to its restoration and regeneration.

Degraded land restoration is primarily a socio-economic challenge, and that human element is often missing from the wider dialogue. We hope the report highlights the human element and that it shows what the Art of Forests can do by providing a platform and amplifying the voices of the communities and people working to develop projects and raise finance to make a difference.

Nature is messy, people are human, and as people we won't survive without nature. So, let's figure out ways to help her, even if it takes us outside our comfort zones. Changing what we know and the way we do things is never comfortable when we do it alone. It's a lot easier when we try to do it together.

If you want to see more resilient community-led forest and land restoration projects, please support the Art of Forests. Further details can be found on our website.

The Art of Forests Secretariat



The Art of Forests (AOF) is a global community of practice for operators and project developers in the field of Afforestation, Reforestation and Revegetation (ARR). Our activities respond to the emergent needs of our members as they design, implement, and scale nature-based solutions.

Through dialogue and problem-solving sessions, common challenges can be quickly discerned. The patterns examined and explored in this report were identified early and often by AOF members seeking to operate in voluntary carbon markets. By collaborating on this report, their shared pain points transform into insightful, comparable case studies that shine a light on the challenges experienced by developers around the world.

In advocating for our members, AOF wants their stories to be told in their own voices; for themselves, and for the sector as a whole. The on-the-ground experience of developers offers vast, untapped value to investors and industry stakeholders as this area evolves.



HAMERKOP was formed in 2018 to be a market enabler, driving climate impact with a focus on quality at a global scale. We do this by providing our clients with support and advice across project development, markets, and policy. As such, we are one of the few truly independent consultancies in this sector that has a 360-degree perspective on the realities of carbon asset development and management, investment fundamentals, and policy direction.

We are practitioners; several of us have first-hand knowledge of forestry and conservation project development, and our Managing Director has worked with a number of successful forestry investment funds that have been operating for decades. This practical experience is backed up by a strong scientific skillset covering the multifaceted elements required to support the development and appraisal of high-integrity NbS projects.

So much of what we have found whilst developing this report resonates with our own experience and observations whilst assisting clients with technical due diligence and navigating their projects' often circuitous route to certification and beyond. We repeatedly encounter challenges, opportunities, and lessons from which we can all learn and move forward. We often find ourselves bridging the investor–project developer journey through technical and commercial diligence, and we care deeply about the impacts that are the keystone of these projects' very existence.

This report has provided us with an opportunity to support dialogue between financial markets and project developers in what is a fast-evolving market fraught with uncertainty and, therefore, risk. Ultimately, what is it that is being bought and sold? In doing so, we hope we have presented an account of real experiences, honest reflections, and hard-won lessons for project developers and investors alike, from which we can all learn.



The production of this report has been sponsored by iNovaland, a global private organisation working since 2020 to restore degraded landscapes for people and planet. Through its work in project origination, project management, carbon certification, and stakeholder engagement, iNovaland is developing large-scale nature-based carbon projects in Ghana and Brazil.

As a project developer, iNovaland has experienced many of the challenges explored in this report firsthand: the long development timelines, the complexity of the carbon certification process, the difficulties of securing finance, and the realities of building projects that deliver lasting benefits for both communities and ecosystems.

iNovaland supported this report because it believes that a better understanding of these realities is essential if nature-based carbon markets are to scale effectively. At a time of growing climate and nature challenges, we must continue raising standards while ensuring that the pursuit of perfection does not become the enemy of meaningful progress. We hope this report helps contribute to a more informed and constructive dialogue between project developers, investors, buyers, and standard setters.



Executive summary

What emerges from these conversations is a broader disconnect between how nature-based carbon projects develop in practice and how investment is currently structured, deployed, and evaluated.

Nature-based carbon markets are at an inflection point. Demand for high-integrity credits is growing, and the case for nature as a serious asset class has rarely felt stronger. And yet some of the most carefully designed, ecologically credible, community-rooted projects in this market cannot find the capital they need. This report asks why, through the project developer lens.

Drawing on conversations with NbS project developers across four continents, this report explores what building a nature-based carbon project involves in practice. This includes assembling multidisciplinary teams, building long-term community relationships, and absorbing significant legal, technical, and certification costs before financing is secured. The report is grounded in real project development experiences across different organisational models and financing contexts.

What emerges from these conversations is a broader disconnect between how nature-based carbon projects develop in practice and how investment is currently structured, deployed, and evaluated. Developers described a market in which significant costs and risks are absorbed long before projects reach commercial maturity, including certification, community engagement, legal structuring, operational scale-up, and investment preparation. Many also pointed to persistent financing challenges during the transition between early-stage development and larger-scale project finance, often referred to as the “missing middle”, where projects may already have substantial operational foundations in place while still struggling to access appropriate forms of capital.

This report examines the dynamics that sustain this gap, such as the scale thresholds that filter out smaller and more complex projects, the due diligence processes that cost developers hundreds of thousands of dollars before deal certainty exists, and the structural catch-22 in which offtake is required to unlock financing and financing is required to secure offtake. This report further finds reasons for cautious optimism. Developers are innovating in how they structure their asks, from building portfolios that cross-subsidise earlier-stage costs to forging partnerships that allow investor and developer to approach the market together rather than in sequence. We are seeing networks deepening and collaborative financing structures emerging. The missing middle has not been solved, but it is being navigated.

The structural dynamics this report describes are not inevitable. They are the product of specific choices, but they can be made differently. This report aims to make the available pathways more visible, and in doing so, contribute to a more grounded conversation about what those choices could look like in practice.

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1.0

INTRODUCTION: WHY THIS REPORT, WHY NOW

1.1 Context and framing

The NbS carbon market is entering a new phase of maturity, where investor and buyer interest in high-integrity nature-based projects continues to grow, alongside increasing scrutiny around project quality and delivery risk. Standards are evolving rapidly, due diligence processes are becoming more sophisticated, and expectations around monitoring, safeguards, and operational capacity are rising across the market.

At the same time, the financing landscape for NbS projects is also changing. Large-scale procurement initiatives such as Frontier, LEAF, and the Symbiosis Coalition are accelerating demand for high-integrity supply, while buyers are increasingly moving away from opportunistic spot purchases toward longer-term offtake structures tied to project delivery and performance. These trends raise important questions around access: which types of developers are realistically positioned to secure this capital, and which may struggle to meet the increasingly complex technical, operational, and commercial expectations attached to it.

This matters because the project developer landscape is far from homogeneous. It includes large commercially structured developers, smaller mission-driven enterprises, NGOs, Indigenous organisations, cooperatives, and community-rooted implementation groups, all operating with very different levels of capital, technical capacity, governance structures, and risk exposure. As financing processes become more demanding, there is a growing possibility that capital and market access become concentrated among a relatively small group of highly resourced developers able to absorb these requirements at scale.

This does not imply that smaller or community-rooted developers are less capable of delivering high-quality projects. However, they may face structurally different barriers in accessing finance, navigating certification systems, or sustaining long development timelines before revenue generation begins.

Against this backdrop, there is increasing value in developing a more grounded understanding of the realities faced by both project developers and investors. Many of the tensions within the market do not arise from fundamentally opposing objectives, but from differing operational constraints, timelines, incentives, and perceptions of risk.

This report aims to contribute to that understanding by foregrounding the project developer perspective. Drawing on interviews with a diverse range of developers operating across geographies, project types, and organisational models, it explores the practical realities of developing NbS carbon projects, the structural challenges developers encounter in accessing finance, and where current market structures may be creating unintended barriers to scale, participation, and long-term project success.

1.2 Acknowledgements

This report was informed by conversations held through the Art of Forests Dialogues for Nature Finance, which created an open and informal space for project developers, investors, and practitioners to explore some of the opportunities and challenges shaping the NbS carbon market today. These discussions were instrumental in shaping many of the reflections presented throughout the report.

We are particularly grateful to the project developers who generously shared their time, experience, and perspectives during the preparation of this report, including Andrew Heald (iNovaland), Andrew MacCormack (Medius Earth), Beau Milliken (Kijani Forestry), Bobby Leacock (Ponterra), Celia Francis (Ponterra), Destin Whitehurst (NatureRe), Sarah Scott (The Kilimanjaro Project), and Tom Skirrow (Tree Aid). We also thank several additional contributors who preferred to remain anonymous.

We would also like to thank iNovaland for supporting the production and design of this report, and the wider Art of Forests community for generously contributing photography and visual material.

2.0

KEY FINDINGS AND REFLECTIONS

2.1 What developers would like to see more of from investors and offtakers

Developers repeatedly emphasised that many of these challenges arise from current financing structures, risk allocation, and investment processes rather than being inevitable features of NbS carbon markets. While perspectives differed across developer types and geographies, several recurring themes emerged around what forms of investor engagement would better support long-term project success.

I. More flexible engagement for earlier stage projects. Across the market, there is no shortage of interest in fully operational, de-risked projects with secured offtakes and strong delivery visibility. The greater challenge lies earlier in the project lifecycle, when developers are still building the technical, legal, operational, and organisational foundations required for project delivery and investment readiness, often years before meaningful revenues are generated. As a result, earlier-stage projects can struggle to access the capital needed to reach the level of maturity, operational capacity, and investment readiness required by larger investors and financiers. More flexible approaches to deployment, including phased financing, catalytic capital, low-cost loans, and bridge facilities, could help extend investor reach into parts of the market that remain difficult to finance under conventional models.

II. New approaches to financing smaller and emerging projects. Many developers highlighted that access to capital is often constrained not only by project maturity, but also by project scale. Due diligence and transaction structuring involve significant fixed costs, making smaller transactions less attractive for many investors despite their potential climate, biodiversity, and community value. As a result, smaller projects can struggle to access capital even where projects are technically robust. Aggregation models, pooled investment vehicles,

simplified due diligence pathways, and financing structures designed for smaller ticket sizes could help unlock capital for projects that currently fall below the thresholds of conventional investment models.

III. Financing structures better aligned with how NbS projects actually develop. Developers repeatedly pointed to the need for investors to better understand the operational realities that shape NbS projects. Ecological cycles, planting seasons, certification processes, and community engagement do not always align neatly with conventional investment timelines yet delays in any of these areas can have material consequences for project delivery. A stronger appreciation of on-the-ground project dynamics could help investors design financing structures, milestones, and expectations that are better aligned with the realities of project development.

IV. More proportionate and transparent due diligence processes. Many developers recognised the importance of rigorous due diligence and stronger integrity standards. At the same time, several questioned whether current processes are always calibrated appropriately for project stage, geography, or organisational context. Greater clarity around timelines, decision-making criteria, and minimum requirements at the outset of engagement was repeatedly identified as one of the simplest ways investors could reduce unnecessary costs and uncertainty for developers.

V. More collaborative partnership models. A recurring theme was the potential value of moving away from purely binary “investment committee” style interactions toward more collaborative engagement earlier in project development. In practice, this could involve investors or buyers working alongside developers to shape financing structures, operational milestones, certification pathways, or even jointly approaching the market to secure long-term offtake agreements, rather than evaluating projects only once they are expected to appear fully investment ready.

VI. A more explicit recognition of social integrity costs. Community engagement, participatory governance, capacity strengthening, and long-term benefit-sharing mechanisms are now widely recognised as essential components of high-integrity NbS projects. However, developers noted that these costs are still not always reflected adequately in carbon pricing, return expectations, or financing structures. As a result, projects can face pressure to simplify or delay activities that are critical to long-term resilience but difficult to monetise directly.

2.2 Lessons learnt from the field and boardroom

The conversations and case studies that informed this report also surfaced a number of recurring practical lessons for project developers navigating the NbS carbon market, which are summarised below.

I. Be clear about who you are as an organisation.

In today's market, investors are rarely assessing the project alone. They are assessing the team, governance structure, operational capacity, and institutional maturity behind it. Community-rooted organisations, mission-driven SMEs, and commercially structured developers each bring different strengths and constraints to the table. The more clearly a developer understands and communicates its own model, the easier it becomes to have realistic conversations about financing, timelines, and risk.

II. Building a project increasingly means building an institution around it. Ecological expertise and implementation capacity remain fundamental, but they are no longer enough on their own. High-integrity NbS projects now require legal, technical, financial, commercial, and reporting capabilities that many organisations have had to develop gradually over time. In practice, the projects that progress most smoothly are often those that manage to combine operational, technical, and commercial expertise within the same team, or at least within the same partnership structure.

III. Treat investment readiness as its own workstream. Preparing for financing takes far longer, and costs far more, than many developers initially expect. Legal structuring, preparing financial models, populating complete data rooms, finalising certification documentation, and due diligence processes all require significant time and specialist input before there is any certainty a transaction will close.

IV. Learning the language of finance matters.

Many developers described a turning point when they became more confident engaging with investor perspectives, whether around IRRs, ticket sizes, risk allocation, or financing timelines. Understanding how investors think makes it easier to structure conversations, challenge assumptions where necessary, and identify financing partners whose expectations are actually compatible with the realities of project delivery.

V. Alignment matters more than access to capital.

Several developers reflected that accepting misaligned financing can create problems that are difficult to unwind later. Financing partnerships shape projects over decades. Doing informal "Know Your Investor" checks, speaking to other developers who have worked with a particular fund or buyer, and understanding how counterparties behave during difficult moments can be just as important as the headline terms of a deal.

VI. Relationships matter more than most developers expect.

Across the market, introductions and long-standing professional relationships continue to play a major role in unlocking financing opportunities. Social capital does not only exist at community level; it also exists across the wider financing ecosystem.

Finally **in a market that is still evolving**, with financing structures, standards, and buyer expectations continuing to shift, it is important to remain pragmatic. The organisations that navigate this environment best are rarely those waiting for ideal conditions. More often, they are the ones that adapt, sequence opportunities carefully, and strengthen projects step by step while staying clear about what they will and will not compromise on.





● WeForest



● Carbon Craft - Project Baqhaan



● Terra Global Capital



● West Africa Blue



● West Africa Blue

3.0

THE REALITY FOR PROJECT DEVELOPERS

3.1 Who develops NbS carbon projects

The term “Project developer” can cover a wide range of organisations, operating at very different scales and with very different starting points. Some are small, community-rooted NGOs that have grown out of conservation or restoration programmes. Others are commercially structured developers backed by institutional capital and dedicated technical teams. Many sit somewhere in between.

A number of the developers consulted for this report described entering the carbon market from backgrounds that were not originally designed around commercial project finance. Others entered the sector with a different starting point, established specifically to operate within carbon markets, with investment backing, specialised teams, and commercial capabilities in place from the outset.

These differences matter because they shape how projects are built, financed, and presented to the market. The strengths each brings, whether local relationships, technical expertise, operational experience, or access to capital, are not always visible to the wider market, which often presents these as a homogenous entity.

Table 1. Key developer profiles at a glance¹

Developer type	Typical profile	Relationship to capital
Community-rooted / NGO developers	Local NGOs, cooperatives, or community-based organisations, often with experience in conservation, restoration, or rural livelihoods programmes. Typically operate through locally embedded governance structures and long-term stakeholder relationships.	Often rely on grants, philanthropic funding, or catalytic capital in early stages. May require additional support to build commercial, legal, or technical capacity as projects scale.
Mission-driven SMEs / early-stage developers	Small to mid-sized companies combining technical, operational, and local implementation expertise. Often built incrementally through founder capital, partnerships, and early-stage investment.	Frequently navigating the transition between early development and larger-scale project finance. Capital needs can increase significantly before projects begin generating revenue.
Commercial / equity-backed developers	Professionally structured developers with institutional, venture, or private equity backing. Typically able to deploy specialised teams across technical, legal, commercial, and operational functions.	Generally better positioned to fund early-stage development internally and manage larger or more complex transactions.
Landowner-led / asset-based developers	Private landowners, estates, concession holders, or vertically integrated operators developing projects on controlled land bases.	Clear land tenure and existing assets can simplify financing and project structuring. May partner with external organisations during implementation.

¹ These profiles are illustrative, not definitive. Many developers operate across two or more categories, and organisations evolve between them as projects mature.



3.2 The full cost of becoming a project developer

Regardless of the type of project developer in question, building an NbS carbon project requires far more than ecological expertise or implementation capacity alone. Long before projects generate revenue, developers are often required to build legal, financial, technical, operational, and commercial capabilities capable of supporting financing, certification, and long-term project delivery.

Developers interviewed for this report described spending years assembling the systems, documentation, technical capacity, and operational structures required simply to participate credibly in financing processes. One described legal and contracting costs alone reaching approximately \$250,000 before deal close. Another spent more than four years raising relatively small amounts of capital incrementally in order to reach validation.

The ability to absorb these costs varies considerably across different types of developers. Some commercially structured organisations are able to build specialised technical and commercial teams from the outset, making them more immediately legible to investors and buyers. Others develop these capabilities more gradually through partnerships, phased fundraising, and internal upskilling alongside project delivery itself.



FIELD INSIGHT: NatureRe

NatureRe has deliberately built a team that spans both project delivery and finance. More than half of the organisation is based in LATAM, covering operations, science, and implementation, while the rest of the team focuses on commercial relationships and financing across the US and Europe.

That split was described as essential to reducing reliance on intermediaries and managing increasingly demanding due diligence processes internally, particularly as financing conversations become longer, more technical, and more iterative.

“There are groups doing fantastic work on the ground, but they don’t necessarily have the resources to navigate a complex diligence process. And vice versa.”

Destin Whitehurst, Head of Carbon Investments at NatureRe

3.3 The certification burden in practice

Over the past few years, standards and methodologies have evolved rapidly in response to growing scrutiny around carbon market integrity. Reporting requirements have expanded, monitoring expectations have increased, and methodologies have become significantly more sophisticated. While few developers dispute the need for greater rigour, keeping pace with these changes has become increasingly demanding.

Although some standards, such as Equitable Earth and Isometric, have emerged with a different operating model, taking on more of the carbon quantification and MRV process directly, this is not yet widespread across the market. Meeting the requirements of major international carbon standards, such as Verra's Verified Carbon Standard (VCS) or the Gold Standard, requires significant technical, operational, and reporting capacity that many developers, particularly smaller organisations, do not possess in-house. **For smaller developers, these costs, including certification costs, can present a structural barrier to accessing carbon finance.**

Most NbS projects operate over 30–40-year timeframes, meaning these obligations do not end at validation or first issuance, but must adapt over time as methodologies evolve and market expectations shift over decades. This can create a “moving target”, as financing assumptions made at project inception may need to be revisited later. In some cases, methodological updates can be absorbed through incremental upskilling or adjustments to monitoring systems. In others, they can materially affect project design or even the eligibility of certain activities.

A related challenge lies in the underlying data available to support carbon modelling. In many project geographies, limited scientific data on specific ecosystems or species constrains what developers can demonstrate at early stages. This creates a **tension between what investors expect in terms of analytical rigour and what is realistically achievable given the evidence base.** Developers are often required to invest in improving data quality over time, which raises a question the market has not yet answered clearly: **what constitutes good enough at early stage, and who should bear the cost of reaching higher levels of certainty?**

What developers had to say

One developer described having to rebuild parts of a financial model and project design document after a financing partner requested alignment with a newer methodology version during negotiations. Another explained that changes to leakage and performance benchmark requirements led to additional GIS and technical work that had not been budgeted for at project outset and had material implications on the number of credits generated.

Elsewhere, developers described situations where financing discussions continued while methodologies themselves were still evolving, creating uncertainty around future credit volumes, monitoring requirements, and project economics. In one case, emerging discussions around albedo adjustments had the potential to materially reduce projected credit issuance in dryland restoration landscapes.

Several developers noted that the issue was not the standards themselves, but the difficulty of managing evolving technical expectations while projects were already operational or in active financing processes.

“We had to build the capacity ourselves; internalise the technical side, learn the methodology, and stop depending on consultants for everything. That takes time and money most developers don’t have upfront.”

Tom Skirrow, Chief Executive Officer
at TreeAid

“Even a month’s delay in funding can translate into months of lost work; a reality that is often not understood by investors until they’ve lived through a planting season.”

Beau Milliken, Co-Founder at Kijani Forestry

This sentiment was shared by many developers interviewed for the report, who described how delays in financing during the planting season resulted in missed operational windows and measurable tree mortality. Even relatively short delays have the potential to create knock-on effects that extend well beyond a single season, reducing establishment rates and setting back project implementation timelines by months, even years.

3.4 Ecological, social and political realities

Ecological uncertainty remains a defining feature of the sector, particularly as physical climate risks intensify. Drought, flooding, fire and pest outbreaks can affect project performance and increase reversal risk. More variable climatic conditions also affect planting success, survival rates, and operational planning. In this context, biological timelines matter. Reforestation and restoration activities are tied to seasonal windows and ecosystem dynamics that cannot easily be compressed or rescheduled without consequence.

Furthermore, the underlying economics of nature-based carbon projects vary significantly across geographies. Differences in ecosystem productivity, climatic conditions, land availability and regulatory frameworks mean that **some jurisdictions require materially higher carbon prices to support commercially viable project development than others**. For example, trees will generally grow faster in the tropical forests of Central America than in Sahelian dryland ecosystems, leading to very different carbon removal profiles and project economics. However, lower carbon productivity does not imply lower value. Many lower-yield landscapes remain critically important for restoration, biodiversity recovery, climate adaptation, and community resilience.

These ecological dynamics are also closely connected to social and governance conditions on the ground. Long-term project performance depends heavily on community relationships, land governance arrangements and local institutional capacity, particularly in projects operating over multi-decade time horizons. Strong local participation and governance structures can function as important forms of long-term risk management, although these characteristics are not always reflected in how project risk is assessed or financed.

Political and regulatory uncertainty adds a further layer of complexity. In many jurisdictions, carbon market governance frameworks are still evolving, particularly in relation to Article 6 authorisation procedures, domestic carbon policies, and approval requirements for international transactions. Several developers in this report described projects that were operationally ready but stalled by government approval processes that had no clear timeline. In others, regulatory changes introduced mid-development, such as new domestic carbon levies, altered the financial model without warning. These risks sit outside the direct control of developers and investors alike, but at present they are absorbed almost entirely by the developer.

² For more information on Article 6 authorisation procedures see: UNFCCC (2025). Decision 4/CMA.6 Matters relating to cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement, I. Authorisation and Sylvera (2025). Article 6 Authorizations & Corresponding Adjustments: 10 FAQs.



iNovaland

BUILDING THE TEAM BEHIND THE TREES

Forest restoration is usually measured in numbers: trees planted, hectares restored, carbon captured. Those metrics matter, but they don't tell you much about the team and expertise required to make a project work over 20 or 30 years!

A high integrity restoration project draws on a wide range of people. Community engagement specialists build trust with farmers and local landowners. Nursery teams raise the seedlings. Ecologists and forest managers guide what gets planted, where, and how. Once carbon finance enters the picture, you also need carbon modellers, GIS specialists, Project Design Document writers, and finance professionals who understand how the whole system fits together.

What makes this genuinely difficult is that all of this expertise is needed years before any revenue arrives. Carbon certification is a long process, and throughout it the timelines are largely out of a developer's hands, depending on bodies like Verra and the availability of qualified auditors.

When iNovaland started building projects in Ghana and Brazil, we could have relied entirely on external consultants as the easier approach. But we kept returning to the same question: how do you build something meant to last decades if the core knowledge lives somewhere else?

So, we built our own team instead, slowly and deliberately. When our ecologists, carbon modellers and community team sit together, they understand each other's constraints in a way that would have been hard to replicate externally. Things move faster, problems get caught earlier, and we can respond quickly when challenges arise.

We are designing projects to positively impact climate, biodiversity and communities for decades.

Andrew Heald, Chair and Co-founder of iNovaland

Case study

4.0

SOCIAL CAPITAL: A CORE DETERMINANT OF PROJECT VIABILITY

Every NbS carbon project is, at its foundation, a social project. The land that hosts it is managed by, or adjacent to, communities whose cooperation, trust, and active participation shape whether the project survives. This operational reality has direct implications for credit integrity, reversal risk, and long-term delivery, but often underestimated at early-stage project development or financing stage.

4.1 Social capital as a condition for success

In the context of NbS carbon projects, social capital refers to the quality of the relationships, governance structures, and local institutions that underpin a project over time. It includes everything from community trust and land-use agreements to benefit-sharing arrangements, local leadership, and the ability to resolve conflicts and grievances as they arise. It is built gradually through repeated engagement, transparent communication, and the credibility that comes from delivering on commitments over long timeframes.

These factors are often discussed as “community benefits” or safeguards, but in practice they shape core aspects of project performance. Weak consultation processes, unresolved land-use tensions, or shifts in community support can affect project viability just as materially as biophysical risks. The reasons for this are clear: communities that trust a project are more likely to protect it from encroachment, illegal harvesting, or competing land-use pressures, some of the most significant sources of reversal risk in NbS projects. They are also more likely to remain engaged through the long-time horizons that NbS projects require.

At the same time, projects operating on community or Indigenous lands are often perceived as carrying greater complexity and execution risk than projects developed on privately controlled land. In some cases, these concerns reflect genuine operational challenges, including more complex governance arrangements, land tenure considerations, longer consultation processes, and, in certain geographies, elevated political or regulatory uncertainty. However, these same projects may also benefit from stronger local participation, social legitimacy, and governance structures that can contribute significantly to long-term project continuity and resilience over time. In practice, this can create additional financing barriers for projects where social and ecological value are closely tied to more complex operating environments and governance structures.

“The social infrastructure is what makes the credits real. Investors who don’t see that are underwriting a project they don’t fully understand.”

**Sarah Scott, Founder & Executive Director
of The Kilimanjaro Project**

“There is an old quote that forestry isn’t about trees, it is about people, and it is about trees only insofar as trees can serve the needs of people – that is just as true for a timber plantation as it is for a carbon project. Local communities need to be involved as early as possible, not just as a tick box for FPIC or certification requirement but as an essential partner in the project.”

Andrew Heald, Chair and Co-founder of iNovaland



4.2 Cost, complexity, and the economics of social integrity

Building and maintaining strong community relationships is resource-intensive work, partly because trust takes time to establish, but also because high-integrity NbS carbon projects require formal social governance processes from the earliest stages of development to comply with certification standard rules.

While the exact rules will differ by standard, certification standards increasingly require NbS carbon projects to:

- identify relevant stakeholders, rights holders and affected groups, and undertake participatory mapping and rights assessments;
- develop and implement stakeholder engagement plans, conducting stakeholder consultations, and formalise Free, Prior and Informed Consent (FPIC) processes where required;
- establish participatory governance and decision-making structures, including developing and maintaining grievance redress mechanisms and benefit-sharing arrangements;
- maintain ongoing engagement, communication and reporting processes throughout the life of the project.

Delivering these processes credibly requires time, specialist expertise, facilitation capacity, legal input, local institutional engagement, and long-term operational funding. These costs are frequently underestimated at project outset, especially with less experienced project developers, and not always fully reflected in early financial models or financing discussions.

“Investors sometimes ask why we spend so much time on community engagement. The answer is that a project will succeed or fail by how much the land custodians are brought into the centre of the operation. Without their cooperation, skill and commitment, a project cannot hope to deliver effective long term restoration.”

Tom Skirrow, Chief Executive Officer at TreeAid



4.3 Building social capital under uncertainty

One of the challenges developers face when building social capital is that much of these activities occur between project feasibility and early-stage development, long before the project is certified. This has significant financial implications, as costs are incurred before there is any certainty in whether the project will be certified and its ability to generate carbon credits, but also significant social implications.

In practice, land-use commitments are made, and community expectations are set, long before project economics are confirmed. If financing takes longer than anticipated, if a methodology change alters the credit volume, or if an offtake negotiation stalls, the commitments made to communities can no longer be honoured on the original timeline. In some cases, projects may not proceed at all due to funding constraints, certification barriers, or limited implementation capacity. Where this happens after communities have already invested time, trust, and expectations into a project, the consequences can extend well beyond a single initiative, creating frustration, eroding trust, and making future engagement around carbon projects more difficult.

FIELD INSIGHT: BUILDING TRUST BEFORE FINANCING CERTAINTY

In Rajasthan, **Medius Earth's** approach to project development began not with capital, but with community. Working on communal land governed by local Grand Panchayats, traditional governance structures with authority over degraded land, the team spent years building the relationships and institutional trust that carbon finance alone cannot buy. Long before VM0047 registration was in sight, before an offtake was agreed, before any external investor had committed, Medius Earth was meeting with village councils, partnering with local NGOs with two decades of planting experience, and negotiating letters of undertaking covering hundreds of hectares of land.

When an early pilot disappointed on account of high seedling mortality owing to severe monsoon conditions, that investment proved its worth. It was the relationships built that made recovery possible. The local partners understood the land and local governance structures managed encroachment risk and, critically, the trust built with communities remained intact. Rather than walking away after an early setback, communities remained engaged and willing to continue working alongside the project team.

Andrew MacCormack, CIO of Medius Earth reflected on how the social foundation is often built at the developer's expense, long before any investor arrives to share the risk. It should not be seen as a co-benefit; it is a precondition.

Sarah Scott, from The Kilimanjaro Project (also known as Kijani Pamoja) works with smallholder farmers in Tanzania through a restoration and regenerative agriculture model, similarly described social capital as a core form of long-term risk management rather than simply a safeguard requirement. The project relies heavily on farmer participation, local trust, and long-term relationship building across fragmented landholdings and governance structures.

“By investing in communities and building that social capital – not just a once-off FPIC checklist, but real relationships – you help de-risk the project in the long term.”

Sarah Scott, Founder & Executive Director at The Kilimanjaro Project

5.0 THE FINANCING LANDSCAPE

5.1 Different paths to financing

As explained earlier in the report, the type of capital available to developers will vary significantly from one project developer to another. Financing pathways differ not only between developer models, but also across stages of project development. It is common for capital to be sequential and blended, with different forms of financing becoming available as projects mature and risk profiles change

Recent findings from Carbon Capital Lab's 2025 survey of 74 nature-based carbon project developers illustrate this progression clearly. Early-stage projects were significantly more reliant on organisational balance sheets, grants, and philanthropic capital, while more mature projects had access to a broader range of financing instruments, including project-level equity, debt, and pre-purchase agreements.

As projects mature they have more funding options

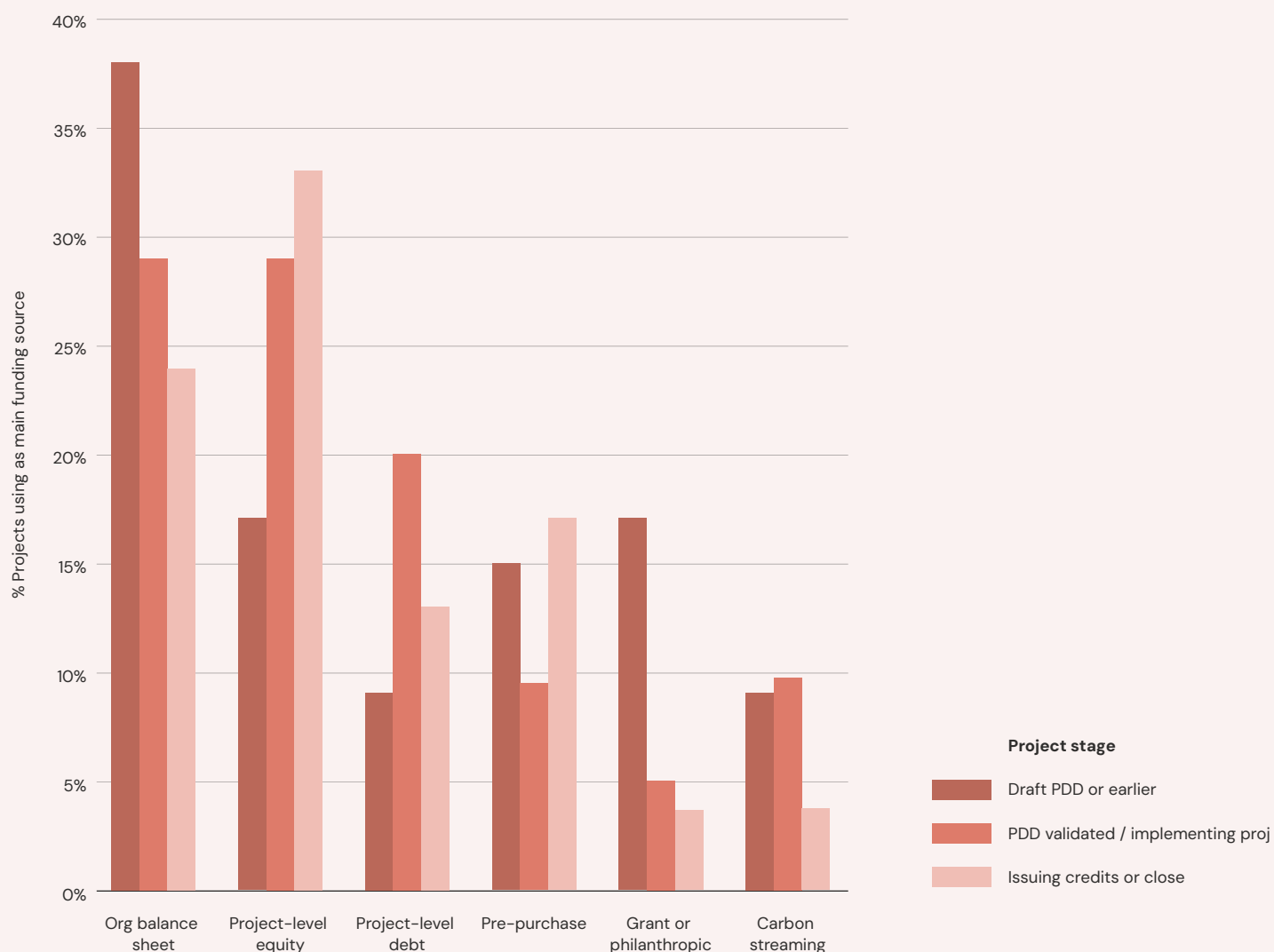


Figure 1. Project funding options by project stage³

³ Margaret Morales, Carbon Capital Lab, Nature-Based Carbon Project Finance Benchmark Report 2025. Available at: <https://carboncapitallab.com/research/nbs2025/>

As projects move toward validation, the capital requirement grows significantly. Developers are spending at scale on certification, consultants, legal structuring, and investor preparation while generating no revenue. The Carbon Capital Lab's 2025 survey of 74 developers confirmed this: early development costs and due diligence timelines were the single greatest barrier to finance, cited more frequently than any other factor, including market uncertainty or absence of an offtake.

Over time, as projects progress in their implementation and, critically, if they secure an offtake agreement, a different set of instruments becomes available: project equity, structured debt, and implementation finance, among others. The irony is that this later-stage capital, more abundant and more familiar to large investors, only becomes accessible after developers have already absorbed the costs and uncertainty of the earlier phases.

How developers described their financing journey

- **Pre-sales as bridge financing:** Several developers used early offtake pre-purchase agreements as a form of informal bridge loan, providing working capital while larger financing structures were being negotiated, rather than as primary revenue.
- **Phased multi-year fundraising:** Some raised capital in tranches over several years, each round unlocking the next stage. This is more common than single-round financing and requires developers to sustain investor relationships over long timeframes with limited certainty about outcomes.
- **Avoiding debt to preserve flexibility:** Another maintained a strict policy against debt throughout its development period, a deliberate choice to protect negotiating independence with future investors. The consequence was slower growth but greater strategic control over deal terms when investor engagement eventually came.



Working Trees

5.2 A typology of investors and offtakers

As is the case with project developers, the capital landscape for financing NbS projects is similarly diverse and fragmented. Within this landscape, it is useful to distinguish between investors and financiers on the one hand, and offtakers on the other. Investors and financiers typically provide capital in exchange for equity, debt, or another form of financial return, either at company level (TopCo financing) or directly at project level through SPV structures. Offtakers, by contrast, commit to purchasing future carbon credits through forward or long-term delivery agreements, often before credits have been issued. Other buyers may participate later through spot market purchases of already issued credits. While these roles can overlap in practice, they involve different risk exposures and incentives and therefore have different implications for project developers.

Even within the categories above, there is significant variation in risk appetite, technical sophistication, investment mandate, and operational approach. These differences influence everything from due diligence requirements and cost of capital to ticket size, reporting expectations, operational oversight, and the stage at which capital providers are willing to engage.

For example, some specialist funds operate with highly technical internal teams and established carbon market experience, allowing them to assess project risk with greater confidence and engage more substantively during development. Others may rely more heavily on external validation, ratings agencies, etc. and therefore apply more conservative financing assumptions, or seek higher returns to compensate for uncertainty.



● We Forest

Table 3. Overview of key capital provider types in the NbS carbon market

Capital provider	Typical motivation	Common instruments
Corporate buyers and offtakers	Secure future credit supply and support climate or net-zero commitments	Long-term offtake agreements, forward purchases, pre-purchase agreements, spot purchases
Carbon traders and intermediaries	Aggregate, structure, and resell carbon credit supply; manage portfolio exposure	Spot purchases, forward purchases, structured offtake arrangements
Specialist carbon and impact funds	Generate financial returns through exposure to carbon and natural capital markets	Project equity, structured debt, pre-purchase agreements, blended finance
Commercial banks and infrastructure lenders	Deploy lower-risk debt into contracted or operational projects	Senior debt, project finance, working capital facilities
DFIs, foundations, and catalytic facilities	Support climate, biodiversity, and development outcomes alongside market creation	Grants, concessional debt, guarantees, technical assistance, blended finance
Family offices	Flexible, long-term, and often mission-aligned capital deployment	Venture equity, private credit, catalytic grants, guarantees



Spot vs. forward

- **Spot market:** Credits purchased after issuance at prevailing market prices. Provides flexibility for buyers, but limited revenue certainty for developers during project development and implementation.
- **Forward / offtake:** Credits contracted before issuance, typically at pre-agreed pricing and delivery terms over a defined period. Can provide greater revenue visibility and, in some structures, access to upfront or milestone-based financing. Increasingly common among larger buyers seeking long-term access to high-integrity supply.

The market is increasingly moving toward longer-term offtake structures rather than relying primarily on spot purchases, particularly for higher-integrity NbS credits where buyers are seeking greater visibility over future supply and delivery. In practice, this means carbon projects are being approached less as one-off commodity purchases and more as long-term supply relationships tied to operational performance over time. For example, announced NbS offtakes more than doubled in the first half of 2025 compared to the same period in 2024 (MSCI, 2025).

Ponterra

LAYERING DIFFERENT FORMS OF CAPITAL

Ponterra's projects illustrate how NbS financing structures become increasingly layered as projects mature. Early-stage development was initially funded through TopCo equity, allowing the company to finance feasibility work, technical teams, nurseries, operational scale-up, and project preparation before long-term revenues were secured.

As projects progressed, additional financing instruments became available. Ponterra's Panama project secured a long-term carbon offtake agreement with Microsoft alongside a streaming agreement with Rubicon Carbon and Microsoft, where upfront milestone-based financing was provided in exchange for a share of future carbon credits. The project is expected to restore 10,000 hectares of degraded land and generate more than 3 million tonnes of removals over 30 years.

More recently, the company announced:

- A biodiversity-credit-backed project finance loan with Fondo Nimbus for its La Esperanza project in Mexico; and
- A catalytic early-stage project finance facility from the Arbor Day Impact Fund designed specifically to support pre-offtake project operations.

The transactions reflect a broader shift toward more blended and specialised financing structures in the NbS market, combining equity, debt, upfront financing, long-term offtakes, and emerging biodiversity-linked instruments within the same project lifecycle.

Case study



6.0 THE INVESTMENT GAP

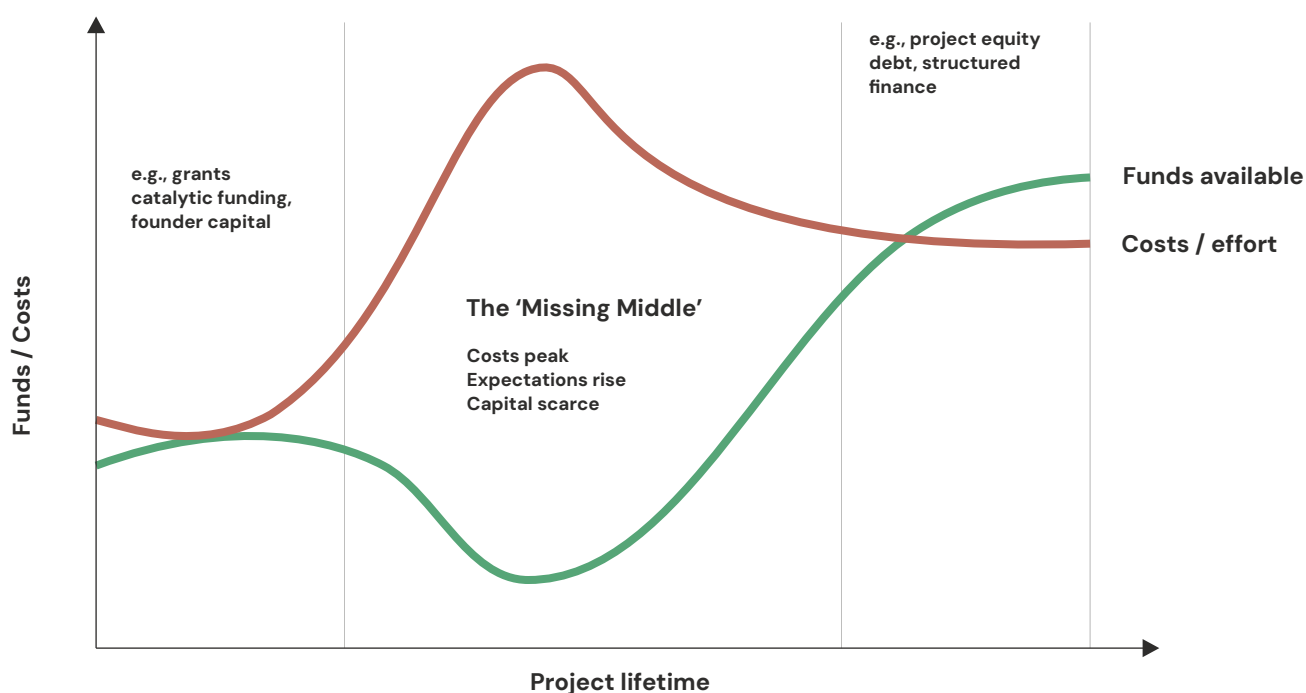
The previous sections have explored the practical realities of developing NbS carbon projects, from the complexities of the certification process, the social and ecological realities of projects, and financing pathways. Taken together, these dynamics help explain why access to capital remains uneven across the market, particularly during the early and intermediate stages of project development. This section examines these structural dynamics in more detail to explain why certain projects are able to access capital, at what stage, and under what conditions.

6.1 The “missing middle” as a structural phase

A recurring challenge across the NbS market is not the absence of capital altogether but rather accessing the right kind of capital at the right stage of project development. The period between early feasibility assessments and larger-scale project finance can be particularly challenging and is often referred to as the “missing middle”. At this stage, projects have moved beyond the pilot and early design phases but have not yet reached the level of maturity or contractual certainty required by most institutional investors or large buyers.

Meeting financing needs at this phase is not straightforward. The sums involved are often too large for grant funding or philanthropy, yet projects may still be considered too early-stage, operationally complex, or insufficiently de-risked for more conventional forms of project finance. In some cases, they also fall below the minimum ticket sizes that larger investors or financing institutions are typically structured to deploy efficiently, despite requiring substantial amounts of capital relative to their stage of development.

A repeated observation across the market was that securing the first \$2–3 million needed to move projects through the “missing middle” can often be harder than raising the much larger \$20–25 million deal that follows.



“Only those with very rich parents can currently afford to work in ARR as independent mission led developers. Otherwise, it’s many years of hand to mouth existence. The missing middle isn’t a funding gap; it’s a structural exclusion.”

Andrew McCormack,
Chief Investment Officer at Medius Earth

6.2 Scale and transaction costs

Undertaking a due diligence is expensive for investors. It requires extensive legal review, technical assessments, site visits, financial modelling, and ongoing negotiation. These costs are largely fixed regardless of deal size, which means they represent a **proportionally larger burden on smaller transactions**. The result is a structural preference for larger deals with more established counterparties.

Developers interviewed for this report described minimum thresholds for attracting serious investor attention ranging from **\$5 million to \$30 million**, with the upper end characterising many of the larger institutional players. Below these thresholds, projects often struggled to gain traction, while in other cases developers were encouraged to pursue financing structures or deployment scales that exceeded their operational readiness.

This creates tension that is seldom acknowledged. From a community perspective, starting at a few hundred hectares and expanding as trust develops is not only practical but socially necessary. Investors tend to focus on the endpoint, the 5,000 or 10,000+ hectares a project might eventually become, rather than the slower road that responsibly leads there. The result is a mismatch between the pace at which community-based projects can credibly scale and the scale at which capital becomes accessible.

6.3 Investability as a moving target

Becoming “investment-ready” is itself a resource-intensive undertaking. While requirements vary by investor, the process generally involves substantial organisational, technical, and financial preparation, all before there is any certainty that a transaction will ultimately proceed.

Financing processes in the NbS market are also typically long and iterative. Developers described diligence periods regularly extending beyond twelve months, during which projects may undergo multiple rounds of technical review and negotiations. In some cases, project structures are revisited mid-process as investor expectations, methodologies, or contracting requirements evolve, placing additional demands on teams already stretched by the operational requirements of running an active project.

Exclusivity arrangements can compound this further. By limiting developers’ ability to pursue parallel financing conversations, they create a dependence on a single transaction process, that if it stalls or fails, leaves developers with little ability to recover the time and capital already committed. The execution risk associated with these processes remains, in practice, almost entirely with the developer.

What makes this particularly acute is that investability is not a fixed threshold. Standards evolve, methodologies update, and investor expectations can shift mid-negotiation. Leaving developers, in effect, running to reach a line that keeps moving.

“We spent over a year in due diligence. Every month we were answering questions, preparing documentation, adjusting models. That is a year we were not scaling the project. And the investor could have walked away at any point.”

Destin Whitehurst, Head of Carbon Investments
at NatureRe



6.4 Capital and risk: the pre-offtake catch-22

One of the central financing challenges in the NbS market is a sequencing problem that developers frequently describe as a catch-22. Securing larger-scale finance increasingly requires an offtake agreement that demonstrates future revenue and provides confidence around returns. Yet reaching the stage where a credible offtake becomes possible requires substantial upfront capital – for certification, staffing, operational scale-up, and project delivery – that is rarely available without financing already in place.

Without an offtake, attracting project finance can be extremely difficult for projects that are pre-revenue and carrying development risk. But securing an offtake without stable financing creates a different exposure risk: long-term delivery agreements often carry obligations tied to future issuance volumes and timelines, meaning that projects facing delays – in implementation, financing, regulatory approvals, or operational scale-up – may struggle to meet contracted commitments. This risk does not disappear; it simply changes shape.

As a result, many developers are required to absorb a substantial share of early-stage risk themselves while working toward the level of maturity needed to unlock both financing and commercial demand. This is the structural position in which most of the developers interviewed for this report found themselves.

6.5 Consequences for project design and delivery

The financing dynamics described above do not only determine whether projects move forward, they shape what those projects look like when they do.

Many investors and buyers increasingly recognise the importance of biodiversity outcomes, community participation, and social co-benefits as indicators of long-term project quality. There are also growing signs that projects with stronger co-benefits are able to achieve price premiums in parts of the market.⁴ However, these premiums are often still insufficient to cover the additional costs associated with delivering and maintaining high-integrity social and ecological outcomes over multi-decade project lifetimes.

In practice, constrained financing conditions can create difficult trade-offs. Activities directly tied to generating and verifying carbon benefits, such as site preparation, planting, MRV, and certification, tend to be prioritised because they underpin future revenue and financing eligibility. By contrast, community benefit-sharing arrangements, capacity-strengthening activities, and broader social programmes are more vulnerable to delay or simplification when funding is constrained. The result is that financial pressure can quietly reshape a project's priorities over time, in ways that may not be visible to investors until much later.

⁴ Forest Trends' Ecosystem Marketplace. 2025. State of the Voluntary Carbon Market 2025. Washington DC: Forest Trends Association.

Kilimanjaro Project

STALLING IN THE MISSING MIDDLE

The Kilimanjaro Project completed its feasibility study in late 2023. This marked the beginning of a three-year effort to secure the \$2 million needed to onboard the first 2,500 smallholder farmers and unlock the larger financing required for full implementation. As Sarah later reflected, raising the first \$2 million proved harder than raising the remaining \$24 million the project ultimately required.

Investors wanted registered PDDs, demonstrated delivery capacity, and projects operating at meaningful scale. Those willing to engage often came with terms that did not fit the realities of a smallholder-based restoration model, nor timelines that matched nature's timelines, including high IRR expectations and minimum ticket sizes well beyond what the project could reasonably absorb at that stage.

By London Climate Week 2025, after several challenging years of fundraising, Sarah was encouraged by another developer to stop approaching the market for bridge / pilot financing and instead seek full project financing directly. The shift changed the trajectory of the project. Within weeks, the team entered discussions with an investor operating on a much longer return horizon. After several months of due diligence, the investor was prepared to move forward but required a pre-offtake agreement before obtaining final investment approval, a familiar financing deadlock in the carbon market.

**Sarah Scott – Founder & Executive
Director of the Kilimanjaro Project**

What changed the dynamic was the decision to approach the market together. Rather than leaving the developer to secure an offtake independently, the investor and project team jointly approached buyers, sharing due diligence processes and helping shape the commercial pathway collaboratively.

Alongside this process, a recoverable grant through FSDA helped cover legal, contracting, and SPV structuring costs that would otherwise have remained unfunded. The project's experience illustrates how the "missing middle" is often navigated not through a single financing breakthrough, but through a combination of persistence, relationship-building, catalytic capital, and financing partners willing to engage earlier and more collaboratively than is still typical across much of the market.



Kilimanjaro Project

Case study

7.0

CLOSING REFLECTIONS

This report set out to centre the perspectives of project developers about what it actually takes to build a nature-based carbon project. It is not a literature review or a market forecast. It is an account of real experiences, honest reflections, and lessons that are sometimes hard won, but too often absent from the conversations that shape how capital flows in this sector.

The dynamics described throughout this report are not isolated cases or project-specific challenges. They reflect broader structural tensions around how NbS projects are financed, how risk is allocated, and what types of projects are currently easiest to support within existing market structures.

Many of the challenges explored in this report arise during the period before projects reach commercial maturity, when developers are still absorbing significant costs related to certification, community engagement, operational scale-up, and investment readiness. The result is that some projects with strong long-term potential can struggle to access capital at the stage where support may be most impactful.

Investors and buyers play an important role in shaping these outcomes through decisions around engagement timing, due diligence processes, ticket sizes, pricing expectations, and financing structures. This report has aimed to make these dynamics more visible and contribute to a more grounded understanding of how project development is experienced in practice.

Three themes warrant deeper exploration beyond what this report addresses. These being (i) financing structures for smaller projects, (ii) the questions raised by aggregation, and (iii) the data gap in ecosystems where scientific baselines remain insufficient.

These are the conversations this report hopes to open.

About the Authors

This report was written by Guy Warren, Tatiana de Liedekerke, and Hazel Herbst on behalf of the Art of Forests and Hamerkop Climate Impacts.

Guy Warren is Managing Director of Hamerkop Climate Impacts UK and has more than 20 years of experience in forestry, conservation, and nature-based carbon projects. He has advised on REDD+, ARR, corporate climate strategies, and carbon market development globally. Drawing on experience across project development and investment appraisal, he brings a practical perspective on the opportunities and challenges facing nature-based carbon projects from both developer and investor viewpoints.

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Hazel Herbst is a Consultant at Hamerkop Climate Impacts with a grounding in both field-based ecological research and carbon market practice. Her work focuses on the early-stage complexities of nature-based carbon project development, with a particular interest in biodiversity, socio-ecological dependencies, and the evolving integrity standards that shape what credible project design looks like in practice.

Report designed by **Jon Norton**

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