Design for demand: What actually drives private finance for nature?

What if the problem with conservation finance isn't a lack of capital—but a lack of real demand?

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Introduction: The conservation finance challenge

Interest in innovative financial instruments and market-based mechanisms like environmental credits is growing, driven by a glaring need to increase private finance for nature. The inadequacy of current action on the biodiversity crisis is increasingly obvious to decision-makers. Despite recent progress on a global resource mobilization strategy to deliver the target of $200 billion a year by 2030 set by Parties to the Convention on Biological Diversity, the real challenge lies in execution of that strategy. Meanwhile, meaningful progress has yet to be made on eliminating subsidies harmful to biodiversity, which vastly exceed nature-positive finance flows.

Any significant biodiversity funding agreement will likely include private finance as an important component. Public funding for biodiversity, while growing steadily, remains far below commitments and needs. Meanwhile, private finance for nature has stalled in recent years, despite growing interest from investors and increasing corporate commitments to nature-positive outcomes.
This stagnation has led to a surge of interest in innovative financial instruments and market-based mechanisms—from biodiversity credits to blockchain-enabled environmental markets—that might mobilize private finance for nature. However, many of these innovations struggle to generate meaningful financial flows to on-the-ground conservation projects.

The core challenge is that conservation finance often follows a flawed development path. Projects typically start with worthy ecological goals, then attempt to retrofit market demand, rather than starting with understanding who might pay and why. To overcome this challenge, we need to reframe our thinking. Instead of asking, "How can we fund this important conservation project?" we should ask, "How might we create environmental solutions that deliver enough value for specific customers that they would pay for them?" This shift in mindset requires approaching conservation finance like a startup venture, not a traditional conservation project.

Evidence: Uneven growth in nature-positive markets

Over the last decade, the "nature positive" portion of the economy—business models, financial instruments, and sectors that actively restore and generate nature—has increased its value fivefold, reaching approximately $1.5 trillion in estimated annual economic output. However, this growth has been remarkably uneven across different models and sectors.

Some markets and business models have flourished. The wetland mitigation banking sector in the United States has developed into a robust $3 billion annual industry, supporting businesses ranging from small entrepreneurs to major asset managers. The "restoration economy" in the United States now employs more people than the coal mining industry. The voluntary carbon market, despite recent challenges, remains a significant channel moving private finance to climate mitigation projects in the Global South. In key agricultural industries with historical connections to deforestation,

demand for certified sustainable products is now growing faster than demand for conventional commodities.

Other promising approaches have underperformed expectations. Payments and benefits-sharing for access to genetic resources received considerable attention when introduced but have generated minimal financial flows at scale. The recently established Cali Fund for the Fair and Equitable Sharing of Benefits from the Use of Digital Sequence Information on Genetic Resources represents the latest iteration of this approach. While its objectives align with the Convention on Biological Diversity's three pillars (conservation, sustainable use, and equitable sharing), it follows the pattern of creating mechanisms without first confirming market demand. After three decades of similar approaches since 1992, benefits-sharing mechanisms have so far consistently failed to generate significant funding.

In the middle ground are models like water funds, which pool contributions from public, private, and philanthropic actors to invest in watershed restoration and conservation. While these funds have proliferated since 2010, when it comes to engaging private finance beyond situations with clear operational or reputational benefits for contributing companies, private capital interest has been very limited.

This uneven pattern reflects one core truth: private finance follows demand, not ecological need.



A waterfall that feeds into the watershed of the Paranaense forest in Misiones, Argentina. Credit: Lucia Carolina Larrea.

Diagnosis: Why conservation finance often falls short

The "Field of Dreams" trap

Over the last decade, the "nature positive" portion of the economy—business models, financial instruments, and sectors that actively restore and generate nature—has increased its value fivefold, reaching approximately $1.5 trillion in estimated annual economic output. However, this growth has been remarkably uneven across different models and sectors.

Many conservation finance initiatives fail because they start with worthy ecological goals and then

attempt to retrofit market demand—a "build it and they will come" approach that rarely succeeds in business or conservation.

This trap is particularly seductive in conservation because the ecological need often seems so obvious. When practitioners see degraded watersheds or fragmented habitats, the imperative to act feels clear. They develop sophisticated intervention plans based on ecological science and only afterward try to convince potential beneficiaries to pay. When interest is limited, the project either stalls or requires ongoing subsidies, never achieving financial sustainability.

The practitioners become so focused on the importance of ecological restoration that they fail to understand how other stakeholders perceive the problem—or whether they perceive a problem at all. A water utility may view watershed degradation as a minor operational concern rather than an urgent priority deserving significant investment. A corporation may see biodiversity loss as a distant issue that is disconnected from their core business.

The "Tool in Search of Application" trap

Conservation practitioners can become enamored with particular market mechanisms or tools, trying to force them into situations where they may not be appropriate. This is analogous to a software developer creating an elegant application without first confirming anyone wants to use it.

The current enthusiasm for biodiversity credits exemplifies this risk. Rather than starting with clearly identified willing payors, many initiatives begin with the crediting mechanism itself, assuming demand will materialize as the market develops. The core innovation—standardization of conservation outcomes—assumes that standardization itself solves a problem for potential buyers, a presumption rarely tested through customer discovery.

Similarly, the application of blockchain technology to environmental markets often proceeds without clearly identifying what specific customer problem it solves. Is decentralization addressing a real pain point for market participants? Does the current market truly suffer from transparency or trust issues that blockchain uniquely resolves? These fundamental questions often remain unasked.
This tool-first approach leads to sophisticated mechanisms that struggle to find sufficient demand because they weren't designed around actual customer needs in the first place.

Misreading market signals

A third critical problem in conservation finance is misinterpreting market signals—particularly confusing investor interest with actual customer demand. Investors may express enthusiasm and even make verbal commitments, but many don't write checks until they see evidence of market traction. When they do invest, it's typically because they perceive potential for future cash flow—a good proxy for market demand, but only a proxy with inherent limitations.

Proving early traction with customers is far more valuable than investor interest. Actual commitments from payors—those who will purchase the environmental service or benefit—provide stronger validation of market demand than even the most enthusiastic investor feedback. This distinction is crucial because investors are ultimately betting on future customer payments, not providing those payments themselves.

This confusion sometimes leads to unnecessarily complex financial structures that don't actually increase the funding available for conservation. Innovative structures like environmental bonds or blended finance vehicles only add value when they accomplish at least one of three outcomes: bringing new resources to conservation, increasing efficiency or speed of implementation, or effectively shifting risks to parties better positioned to bear them (such as investors or insurers). Without achieving at least one of these goals, such mechanisms merely repackage existing funding flows

rather than expanding them—creating financial smoke and mirrors without real impact.

In some cases, financial engineering is used to disguise the absence of a real payor altogether. This creates the illusion of market-based financing when the mechanism actually depends on philanthropic or public funding to function.

In short, the market doesn't reward intent. It rewards relevance.

Treatment approach: Thinking like a startup

First principles and problem definition

Instead of starting with ecological needs, successful conservation finance projects begin by understanding how environmental interventions create value that specific stakeholders will pay for. This requires going back to first principles and asking fundamental questions: What problem are we solving? Who experiences this problem? How might we create solutions that align with their priorities and needs?

This approach recognizes that organizations engage with environmental initiatives based on their identity, narrative, and material interests—not out of a sense of ethical obligation. A corporation might invest in watershed protection not because they "should," but because it reduces operational costs, mitigates regulatory risks, strengthens community relationships, or aligns with their brand positioning.

Systems thinking is essential to this process. By mapping the entire ecosystem of stakeholders, regulatory incentives, operational dependencies, and competitive dynamics, practitioners can identify leverage points where environmental interventions align with organizational priorities. This holistic view reveals opportunities that a narrower focus on ecological restoration alone might miss.

Prototyping, testing, and learning

Conservation finance projects typically involve substantial upfront costs and long timelines before generating returns. This creates significant risk if key assumptions about buyer demand prove incorrect. The startup approach mitigates this risk through rapid prototyping, testing, and iteration. Just as tech entrepreneurs launch early-stage products to test adoption, conservation ventures must test willingness to pay before scaling restoration.

Instead of developing comprehensive projects before confirming demand, practitioners should create low-cost prototypes to test critical assumptions. For example, before investing in a full-scale wetland restoration project, a developer might:

- Create visual simulations of the proposed project and measure potential buyers' responses.
- Develop sample credit documentation to get feedback on measurement approaches.
- Propose simplified pilot transactions that validate willingness to pay.

Each prototype should be designed to answer specific questions about market demand: Are buyers more interested in biodiversity metrics or water quality outcomes? What verification standards create sufficient comfort for transaction approval? What pricing thresholds trigger heightened scrutiny in procurement processes?

The minimum viable product (MVP) concept can transform how conservation finance projects are developed. Rather than waiting until all ecological elements are perfectly designed, practitioners should identify the simplest version of their offering that delivers sufficient value to attract initial buyers. An MVP approach might involve starting with a smaller geographic area, focusing on fewer ecological metrics, or simplifying verification processes while maintaining scientific integrity.

Human-centered design interviews with potential buyers are critical to this process. These conversations should explore not just whether a buyer might be interested, but their specific decision-making processes, internal approval requirements, budget constraints, and competing priorities. Often these interviews reveal unexpected insights: a corporate sustainability officer might care more about the storytelling potential of a project than its precise ecological metrics, while a compliance manager might prioritize regulatory certainty above all else.

Crucially, conservation finance practitioners must be willing to pivot when early testing reveals that initial assumptions don't hold. If the original concept doesn't resonate with potential customers, it's better to adapt the approach based on feedback than to persist with a flawed model. Funders should build flexibility into their grants to allow for prototyping and pivoting rather than forcing practitioners to pursue dead-end approaches simply because they were included in the original proposal. This flexibility helps avoid the traps discussed earlier, preventing practitioners from becoming stuck on a problem or tool that won't work in the market.

This cycle of building, measuring, learning, and pivoting allows conservation finance practitioners to develop solutions that genuinely meet market needs, rather than hoping demand will materialize for solutions designed in isolation.

A systematic framework for designing conservation finance

While human-centered design and lean startup methodologies provide the overall approach, a systematic framework can help practitioners avoid the "Field of Dreams" trap by focusing attention on the key elements of successful conservation finance projects. This framework examines three fundamental elements: value creation and demand, value capture mechanisms, and market size and scaling potential.

Value creation and demand

Understanding the different types of markets for environmental benefits is essential for identifying potential sources of demand. Each market type is driven by distinct factors that influence willingness to pay.

Natural markets emerge when environmental projects deliver measurable benefits to specific beneficiaries. The value creation is straightforward: it maps directly to operational or financial outcomes. Consider watershed protection that reduces water treatment costs. The value creation is clear (reduced operating expenses), the beneficiary is identifiable (the water utility), and the benefit is quantifiable.

What makes these markets powerful is that they align environmental outcomes with existing business imperatives. When an agricultural company invests in soil health, they capture immediate value through increased productivity and reduced input costs. The environmental benefit becomes a means to achieve an operational goal, not an end in itself.

Compliance markets create value by helping organizations meet regulatory obligations. While the immediate value is avoiding penalties, successful projects recognize that compliance markets also offer opportunities for competitive advantage. Organizations can position themselves as industry leaders who shape, rather than simply follow, environmental standards.

The wetland mitigation banking industry exemplifies this dynamic. The most successful banks don't just sell credits—they build business reputations as trusted partners who help clients navigate complex regulatory requirements while delivering superior environmental outcomes.

Voluntary markets generate value through connections to organizational identity and narrative. Companies participate not because they must, but because environmental stewardship aligns with who they are—or who they want to be. This might mean being seen as an ethical leader, building employee engagement, demonstrating innovation in addressing global challenges, strengthening stakeholder relationships, or managing reputational risks.

Understanding this identity dimension is crucial because it affects willingness to pay and demand stability. Organizations that embed environmental action into their core identity tend to be more reliable partners than those pursuing one-off "green" initiatives.

Public procurement often serves as a mechanism to capture various forms of value creation. Government agencies might act as direct beneficiaries seeking natural value (e.g., flood protection), compliance purchasers meeting regulatory obligations, aggregators of public demand for environmental benefits, or long-term stewards of natural assets.

Value capture mechanisms

Converting the value created by environmental interventions into reliable revenue streams represents one of the most challenging aspects of conservation finance. This challenge requires understanding both the nature of the benefits and the practical mechanisms for monetizing them.



Forest floor biodiversity in Barker Pass, Tahoe City, CA. Credit: Tica Lubin.

The first step is to diagnose where your environmental benefits fall on the spectrum from private to public goods. Are the benefits excludable (can you prevent non-payers from receiving them)? Are they rivalrous (does one person's use diminish another's ability to benefit)? These characteristics fundamentally shape which value-capture mechanisms are most appropriate.

For benefits with private good characteristics, like sustainable timber or agricultural products, direct market transactions often work well. The challenge shifts to production, certification, and market access rather than the fundamental value capture mechanism itself.

For benefits with club good characteristics—like exclusive access to restored natural areas—membership models, permits, or access fees can effectively capture value. The New York City watershed agreement exemplifies this approach, where the city secured improved water quality through upstream conservation rather than building costly filtration infrastructure.

The greatest challenge comes with public good benefits like biodiversity protection or carbon sequestration, where traditional market mechanisms break down. Here, practitioners must create artificial excludability (through regulation or voluntary commitments) or find ways to bundle these benefits with more easily monetized values.

In practice, effective conservation finance projects often layer multiple value capture mechanisms to create a sustainable financial model. A nature reserve might combine ecotourism revenue (private good) with carbon credits (public good made excludable), payments from downstream water users (club good), and philanthropic support for pure public good elements that can't be easily monetized.

The key to success lies in matching the value capture mechanism to both the nature of the benefit and the market context. A practitioner designing a watershed conservation program should ask:

Which aspects of watershed function can be linked directly to operational benefits for specific users? Which require regulatory frameworks to create demand? Which align with corporate identity or narrative needs? By tailoring value capture mechanisms to these different dimensions of value, conservation finance projects can build more resilient revenue models.

Market size and scaling potential

Understanding market size and scaling potential is essential for conservation finance success, yet theoretical market estimates often lead to disappointing reality. The journey from theoretical ecosystem service values to actual market transactions involves several critical steps of thinking.

The first dimension to consider is the nature of your potential payor base. Beyond simple numbers, consider which segments have the strongest motivation to pay based on regulatory exposure, operational risks, or identity alignment. A watershed conservation project might identify municipal water utilities as the theoretical market, but closer examination might reveal that only utilities in certain regulatory environments or facing specific water quality issues represent realistic prospects.

Equally important is developing a nuanced understanding of willingness to pay. Price points established in related markets create powerful anchoring effects. Many biodiversity initiatives struggle because potential buyers mentally compare their pricing to carbon credits at $7/ton, regardless of the differing costs of implementation. The key question becomes: What reference points shape your potential buyers' perception of value, and how might you reframe the conversation to establish more appropriate price expectations?

Market accessibility represents another critical dimension often overlooked in theoretical market calculations. What portion of potential payors can you reasonably reach through your channels, and what fraction will actually convert to paying customers? A watershed project might identify 50 potential corporate contributors, but reaching decision-makers and navigating procurement processes might limit actual access to just 10-15 companies.

The competitive landscape shapes market potential in ways conservation practitioners often underestimate. For biodiversity impact, a company faces multiple options: they could purchase biodiversity credits, fund a non-profit conservation organization, make payments to government agencies, implement their own offset projects, or simply do nothing. Each alternative solves the same fundamental problem for the company but with different cost structures, co-benefits, and implementation challenges. Understanding your solution's positioning amid these alternatives is essential for realistic market assessment.

By working through these dimensions of thinking, conservation finance practitioners can develop a more accurate picture of market potential. A watershed restoration project that initially estimates market size at $20 million (based on 20 percent potential savings on $100 million in water treatment costs) might, after careful analysis, recognize a realistic addressable market closer to $1.4 million. This profound difference has implications for everything from project scale to financial structure.

Beyond current market size, scaling potential depends on replication possibilities, economies of scale, and potential network effects. Can your approach be replicated across multiple watersheds or ecosystems? Do fixed costs (like measurement systems or market infrastructure) create economies of scale as transaction volume grows? Could your project create network effects where each new

participant increases value for existing participants? These questions help distinguish between one-off successes and approaches with true scaling potential.

Conclusion: Beyond conservation finance

This framework offers a starting point for designing conservation finance mechanisms that align with market demand rather than hoping demand will materialize for worthy ecological projects. By thinking like startup founders rather than traditional conservationists, practitioners can significantly increase their chances of developing financially sustainable approaches to nature protection and restoration.

However, it's important to recognize the limitations of conservation finance. Private finance works best when there is already money in the system—when there are stakeholders who can benefit financially, operationally, or reputationally from environmental outcomes. In contexts where potential payors lack resources or don't perceive clear benefits, conservation finance may not be appropriate. Therefore, conservation finance should not be seen as a replacement for public funding of nature. We cannot expect private dollars to fill in gaps in what the public sector is best suited to pay for, particularly for environmental values with public good characteristics.

The most promising path forward lies in a fundamentally different approach to conservation finance design. Rather than treating financial mechanisms as an afterthought to ecological planning, we need integrated teams that bring together ecological expertise, business acumen, design thinking, and systems analysis from the earliest stages of project development. This approach requires a different set of capabilities than those found in traditional conservation organizations or financial institutions alone.

By intentionally designing conservation finance solutions from first principles—combining rigorous customer discovery, iterative testing, and systematic market analysis—we can unlock new waves of private finance for biodiversity. The future of conservation finance belongs not to those with the most elegant ecological plans or the most sophisticated financial structures, but to those who most deeply understand the intersection of environmental value and market demand.

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