From: Tony meppem
Sent: Tuesday, November 18, 2025 3:06 PM
To: Rhea Rachel
Subject: IPart Biodiversity Credit Market Submission

Dear Rhea

The concerns raised regarding the structure and performance of the biodiversity credit market reflect long-standing debates in environmental economics about the appropriate balance between government intervention and market autonomy. The experience of landholders preparing biodiversity credits for trade demonstrates that the present institutional arrangements are struggling to produce price transparency, liquidity, and confidence — all conditions required for a functioning market. The current pricing and transaction architecture appears heavily bureaucratic, and rather than enabling straightforward exchanges between buyers and sellers, it has contributed to delays, uncertainty, and high participation costs. These symptoms point not to a failure of biodiversity markets in principle, but to flaws in **market design and the role of government within it**.

From a theoretical perspective, the logic for the biodiversity credit market is clear. Because biodiversity decline is an environmental externality unpriced by conventional markets, governments can intervene to internalise that externality by requiring developers to offset impacts. This **creates demand** for biodiversity credits, but it does not necessarily create a market that is liquid, transparent, or efficient. Economic theory consistently shows that for markets to function effectively, buyers and sellers must be able to interact with minimal friction, discover prices freely, and transact with confidence. When price formation is influenced by government rather than competition, the system loses incentives and suppresses private capital — outcomes evident in the current NSW biodiversity credit environment.

The core critique raised — that the government has attempted to improve market function by **increasing its involvement rather than decreasing it** — is supported by the historical performance of many emergent markets. Instead of transitioning toward a competitive trading ecosystem, the government has taken on roles beyond framework design: shaping price expectations, directing market behaviour, and signalling ongoing reforms. Each reform cycle reshuffles policy parameters and introduces new compliance burdens, creating uncertainty for both landholders and credit buyers. This uncertainty functions as a risk premium, discouraging participation and weakening liquidity, which in turn reinforces justifications for further government intervention. In economic terms, this dynamic reflects a **feedback loop of over-correction**, where attempts to stabilise the market through additional controls contribute to the instability they seek to address.

A more efficient pathway forward would align with the structure of other mature environmental markets, such as carbon markets in Europe and Australia, Murray-Darling Basin water-trading markets, and U.S. wetland mitigation markets. In these cases, government performs three core functions: establishing the legal framework, ensuring credible verification and permanence of credits, and enforcing rules against fraud and ecological collapse. However, **the marketplace itself — price discovery, liquidity provision, investment structuring, and transaction infrastructure — is led by private actors**, not government departments. This division of responsibility recognises that the state is well suited to guarantee environmental integrity, while the private sector is better positioned to develop dynamic and adaptive market mechanisms.

The risks of government acting as both regulator and market operator are not merely theoretical. Competition regulation generally discourages arrangements in which a government agency becomes both rule-maker and participant in the marketplace it oversees. While this structure may emerge out of caution rather than intention, it has the effect of crowding out private innovation and delaying the development of business-to-business models that could dramatically scale biodiversity restoration. The argument that "government created the market, therefore government should operate it" is a conflation. Government did not create biodiversity; it created a regulatory requirement for developers to value it, rather than for biodiversity to remain an unvalued externality. The market's purpose is not to fulfil a bureaucratic function but to **mobilise private investment in conservation**, and this cannot occur while the state dominates price architecture and decision-making.

The larger issue underlying these concerns is **the need for a transition plan**. It would be naïve to argue that government should withdraw immediately; premature exit could result in collapse of credit confidence and ecological risk. Yet it is equally unrealistic to expect the biodiversity market to mature under a structure where pricing, transactions, and risk settings are controlled from inside government. A staged transition — from **government-directed market** to **government-regulated market** — is both economically sound and operationally necessary. Such a transition would progressively shift responsibility for liquidity, pricing, investment tools, and trading platforms to private actors while retaining rigorous government oversight of ecological standards.

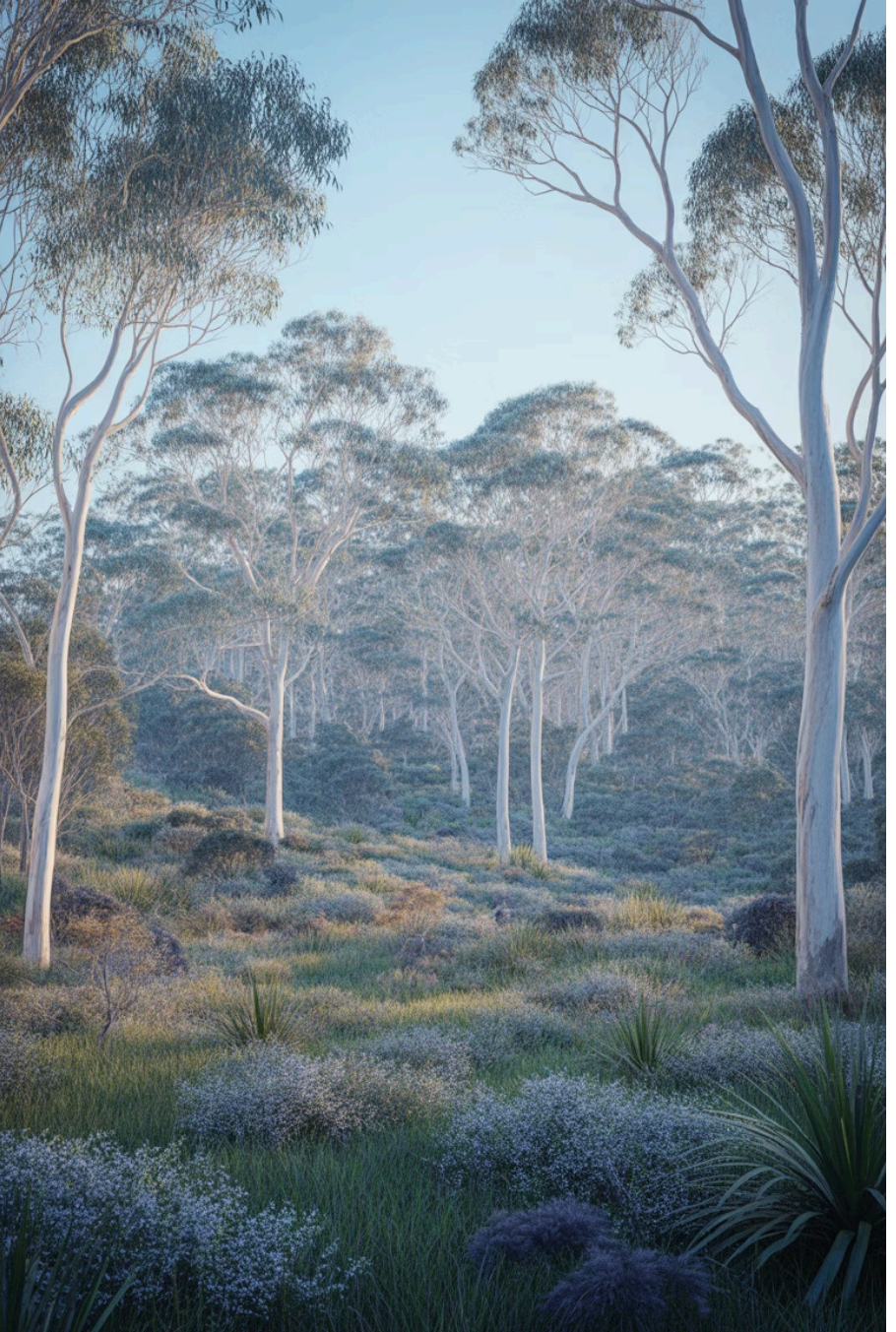
Finally, it is worth noting that many of the frustrations expressed by landholders are not criticisms of the market concept, but of its **implementation**. Biodiversity credits have enormous potential to generate conservation outcomes, support regional economies, and reward land stewardship. The challenge is not the existence of a market, but the current configuration of that market. A shift toward open exchange platforms, investor participation, financial innovation, and professional ecosystem services would create the competitive conditions required for pricing to reflect true biodiversity value. The opportunity for the Department, therefore, is not to defend its current role but to **reform it** — facilitating, rather than managing, the evolution of a high-functioning biodiversity market.

Dr Tony Meppem

Director

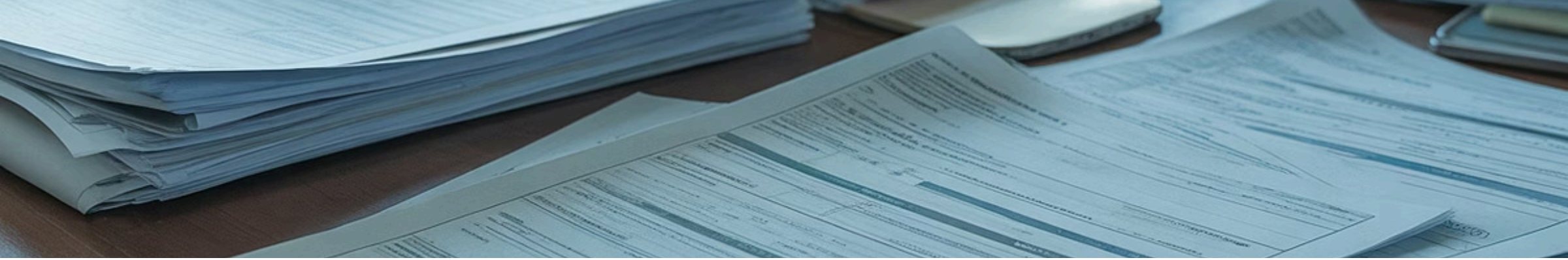
BAM Sustainability Pty Ltd

Supply Nation Accredited



Reforming the NSW Biodiversity Credits Market for Ecological and Economic Effectiveness

A policy briefing on structural market reform for conservation finance in New South Wales



The Market Paradox: Good Intentions, Flawed Design

What Was Intended

The NSW biodiversity credit market was established to internalise environmental externalities by requiring developers to offset biodiversity loss. The mechanism should theoretically create a flow of private capital into ecological restoration and land stewardship—a market-driven solution to conservation finance.

What Actually Happened

Instead of delivering price transparency, liquidity and confidence, the current system is characterised by opaque pricing, slow and complex transactions, and a heavy bureaucratic footprint. The fundamental issue is not the existence of a biodiversity market, but **the design of that market and the role government has chosen to play within it**.

A Policy Paradox: Attempts to Improve the Market Have Weakened It

Role Confusion

Government acts simultaneously as regulator, price signaller, gatekeeper and market operator—economically incompatible functions that prevent genuine market formation

Complexity Spiral

Rather than stepping back, government has responded to dysfunction by layering new policy revisions, requirements and pricing expectations onto an already complex system

Uncertainty Signal

Every policy adjustment signals uncertainty and disincentivises participation, creating a self-reinforcing cycle of reduced market confidence and further intervention

The market's underperformance stems from a conflation of two very different roles: the state as regulator and the state as market operator. Government rightly created compliance demand for biodiversity credits, yet its continuing control over price formation and transaction architecture has prevented buyers and sellers from interacting freely.

Learning from Successful Environmental Markets

Carbon Markets

Domestically and internationally, carbon markets succeed because government governs the **framework**, not the **trading space**. Regulators enforce measurement, permanence and integrity but leave pricing and liquidity to private actors.

Water Trading

Australian water markets follow a similar model —clear regulatory standards with private sector innovation in trading infrastructure, investment products and price discovery mechanisms.

US Wetland Banking

Wetland mitigation banks in the United States demonstrate how regulated environmental markets can scale through private capital, transparent pricing and liquid exchanges.

Environmental markets thrive when governments provide stability and oversight, and the private sector provides innovation, liquidity and price discovery

NSW has attempted to position itself as architect, regulator, price signaller and gatekeeper—functions that are economically incompatible with efficient market operation.

Two Credit Types, Two Market Opportunities

Compliance Offset Credits

The current NSW system focuses almost exclusively on compliance offsets, in which developers are the only buyers. This inherently limits market size, investor participation and liquidity to the smallest possible demand base.

- Developer-only demand
- Project-specific requirements
- Limited scaling potential
- Regulatory bottlenecks

Voluntary Investment Credits

Global trends indicate the greatest scaling potential lies in **voluntary biodiversity investment**—credits purchased by corporations, philanthropists, institutional investors or ESG-driven funds because biodiversity has intrinsic social, ethical and reputational value.

- Diverse buyer universe
- Institutional capital access
- Market-driven pricing
- Innovation opportunities

By not enabling voluntary biodiversity investment through market openness and exchange infrastructure, NSW has constrained the market to its smallest possible demand base.

The Landholder Burden: Risk Without Return

The impacts of the current structural configuration are particularly acute for rural landholders, who are the primary suppliers of biodiversity credits and who bear the ecological and financial risk of restoration. Many have already invested substantial time, labour and capital into biodiversity projects with no certainty that credits will sell, or when.

Asymmetric Risk

The current system places all risk on landholders while returns remain hypothetical. Family farms, unlike large corporations, cannot absorb multi-year regulatory uncertainty without predictable commercial pathways.

Capital Commitment

Restoration work requires upfront investment in fencing, revegetation, pest control and ongoing management—all undertaken before any credit revenue materialises or transaction certainty exists.

Market Necessity

If the market is to scale, the system must support landholders through **fast, reliable and transparent trading opportunities**, not administrative bottlenecks and shifting policy settings.

Indigenous Ecological Economics and Market Equity

Many of the landscapes with the highest biodiversity values in NSW are Indigenous-managed or hold deep cultural significance. Yet financial, legal and bureaucratic barriers limit participation and reduce opportunities for Indigenous-controlled biodiversity enterprises.

This replicates a pattern common in resource markets: **Indigenous lands supply ecological services while other actors capture the financial value**. Effective reform must recognise that biodiversity outcomes and cultural outcomes are interdependent.

Culturally grounded land management—including Indigenous fire practices, species stewardship and kinship-based governance—offers some of the most effective models for biodiversity conservation globally. Systems that undervalue these models are not only inequitable but ecologically inefficient.

Markets Cannot Be Successful If Indigenous Landholders Are Marginalised

Decision-Making Authority

Indigenous communities must have genuine authority in governance structures, not token consultation in predetermined frameworks

Credit Ownership Rights

Legal structures must enable Indigenous landholders to own, control and trade credits generated from their Country on their terms

Financial Return Equity

Revenue models must ensure fair distribution of financial returns to those undertaking the ecological work and bearing custodial responsibility

The Transition Imperative: From Government-Directed to Government-Regulated

A sustainable market architecture must centre on **transition** rather than abrupt shifts. Immediate government withdrawal would risk ecological and financial instability, but long-term government control will continue to inhibit market performance.

Current State

Government-directed market: state controls pricing, transactions, access and market structure

Transition Phase

Staged shift enabling private infrastructure while maintaining ecological oversight and integrity standards

Target State

Government-regulated market: private actors provide liquidity, pricing and innovation within clear regulatory boundaries

What Government Should Do vs What Markets Should Do

Government Responsibilities

Essential State Functions

- Set ecological integrity standards
- Enforce permanence requirements
- Ensure compliance monitoring
- Regulate measurement protocols
- Provide policy certainty
- Protect against fraud
- Maintain credit registry

Role: Framework steward and regulator

Private Sector Contributions

Market Infrastructure Functions

- Price discovery mechanisms
- Digital trading platforms
- Liquidity provision
- Investment product structuring
- Secondary market development
- Risk management instruments
- Innovation in transaction design

Role: Market operator and capital provider

The most economically robust solution preserves the state's essential responsibilities while opening space for private actors to provide the infrastructure that makes markets functional.

Prerequisites for Market Scaling

Digital Trading Platforms

Modern exchange infrastructure enabling real-time price visibility, transparent transactions and reduced friction costs—moving beyond manual, opaque bilateral negotiations

Institutional Investment Products

Structured biodiversity funds, biodiversity-linked bonds and ESG investment vehicles that enable large-scale capital deployment into ecological restoration

Liquidity Providers

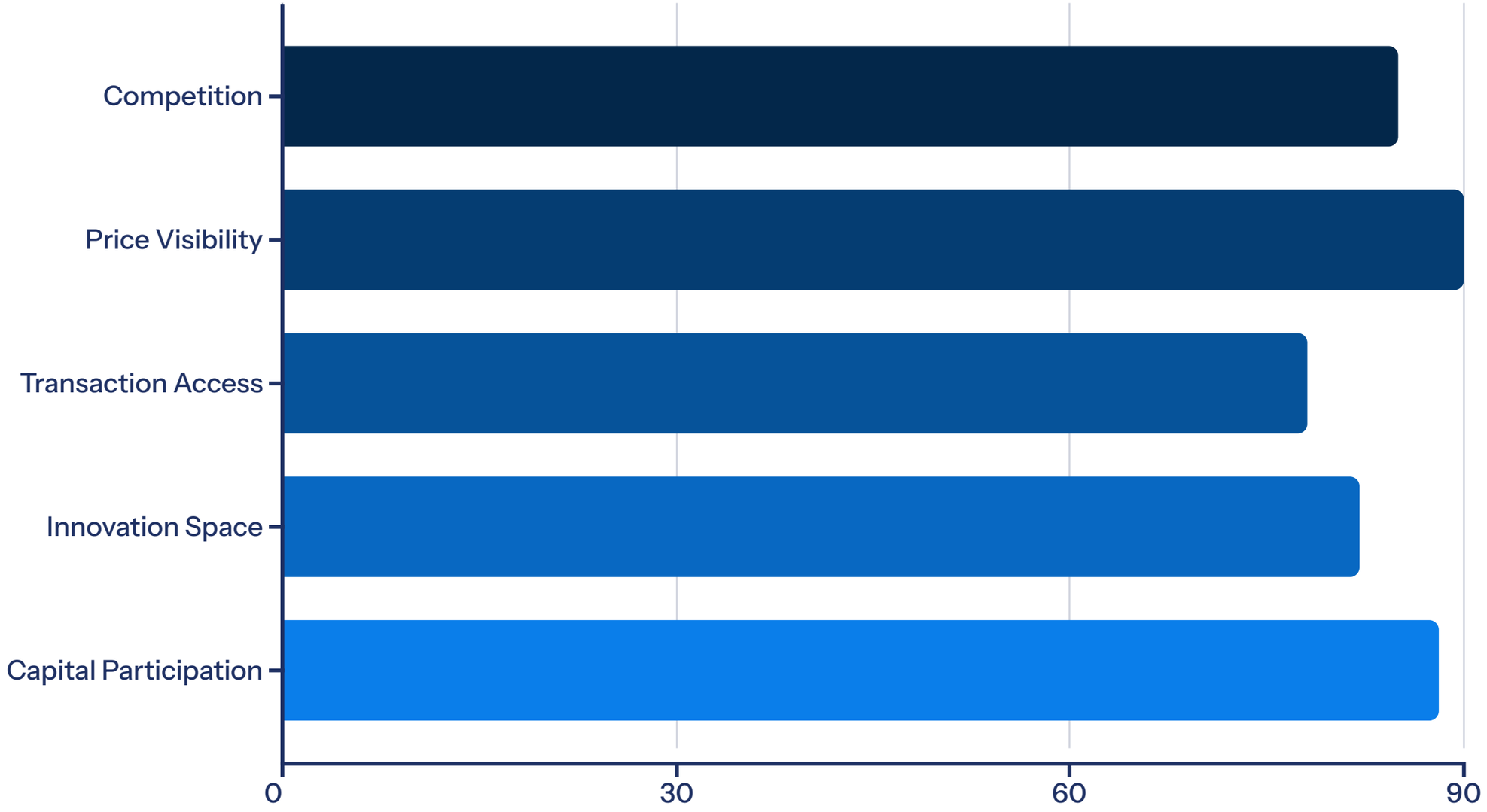
Market makers and intermediaries who facilitate continuous buying and selling, reducing the time lag between credit creation and revenue realisation for landholders

Voluntary Market Pathways

Clear legal and administrative routes for non-compliance buyers—corporations, philanthropists, ESG funds—to purchase credits, expanding demand beyond the developer-only base

These conditions are prerequisites for scaling biodiversity protection rather than administrative features of it. Without them, the market remains a policy mechanism rather than an economic ecosystem.

Why the Current Market Design Restricts Market Performance



The NSW biodiversity market is not failing because biodiversity is unmarketable. It is failing because the current design restricts the fundamental forces that make markets work: competition, price visibility, accessible transactions, entrepreneurial innovation and capital participation. The question is no longer whether biodiversity credits are viable, but whether the state is willing to **create the policy certainty and structural space for the market to evolve beyond bureaucracy**.

What Market Transition Would Enable

Empower Landholders

Reliable commercial pathways and reduced transaction risk for rural suppliers

Enable Indigenous Leadership

Financial structures supporting Indigenous-controlled biodiversity enterprises

Durable Ecological Foundation

Biodiversity restoration financed through economically sustainable mechanisms

Attract Institutional Investment

Liquid, trusted infrastructure mobilising large-scale private capital

A transition to market-driven structure would place biodiversity restoration on a financially durable foundation. Ecological improvement requires investment, and investment requires liquid, trusted, market-driven infrastructure.

The Path Forward: Redefining Government's Role

If NSW is serious about achieving large-scale biodiversity conservation, the market must be treated not as an internal government programme but as a **regulated economic ecosystem capable of mobilising private capital**.

The long-term sustainability of the NSW biodiversity market depends on the willingness of government to redefine its role—not as the operator of the marketplace, but as the **steward of the regulatory conditions in which the marketplace can genuinely succeed**.

Core Principle

> The purpose of biodiversity credits is ecological improvement. Ecological improvement requires investment. Investment requires liquid, trusted, market-driven infrastructure.

Reform is not merely desirable—it is structurally necessary for market viability and ecological outcomes.