

The Role of Insurance in the Biodiversity Credit Market

Introduction

Biodiversity credits seek to mobilize finance for measurable, positive biodiversity outcomes. Uncertainty over project delivery, ecological durability and contractual obligations can deter participation or raise financing costs. Insurance can help by transferring the financial consequences of specified risks to an insurer and providing resources for recovery when covered events occur.

Beyond financial protection, insurance may also help build confidence among market participants, encourage stronger risk management and support investment in biodiversity projects. There is a potentially valuable relationship in both directions: insurance can help manage risks to nature-related projects, while healthy, resilient ecosystems can help reduce risks to people, assets and economic activity.

This brief explores the role insurance can play in biodiversity credit markets. It examines three connected roles: protecting projects and transactions, strengthening confidence in the management of financial risks, and supporting resilience across projects. In doing so, it distinguishes applications in biodiversity and ecosystem restoration from carbon-market precedents and prospective applications. The type and extent of protection available will depend on the terms of the insurance contract, and availability may vary by project and jurisdiction. [1–3]

Insurance complements, and is not a substitute for, risk reduction, rigorous measurement and verification, social safeguards and good governance. Insurance is not a precondition for a functioning biodiversity credit market, particularly a voluntary one. As in voluntary carbon markets, buyer-facing coverage is more likely to emerge as the market matures, and volumes justify the underwriting costs. Its contribution should be assessed against the High-Level Principles to Guide the Biodiversity Credit Market, developed by BCA, the International Advisory Panel on Biodiversity Credits and the World Economic Forum: verified outcomes for nature, equity and fairness for people, and good governance. [4]

I. Transferring risks at the project and transaction level

Insurance exchanges a premium for protection against defined financial losses, subject to limits, exclusions and other conditions. It helps manage uncertainty by transferring selected risks. Identifying the insured party, the covered event and the recipient of a payout is the starting point.

- **For project proponents**, including Indigenous Peoples, local communities and Afro-Descendant Peoples, coverage may fund restoration or protect specified revenues following a covered event. Policy design must make clear whether resources reach those responsible for recovery and those whose livelihoods are affected.
- **For buyers**, cover may compensate specified losses arising from non-delivery, reversal or invalidation of credits, or meet agreed replacement costs. These are distinct risks and should not be assumed to be covered together.
- **For investors and lenders**, insurance may reduce exposure to defined delivery, physical or political risks. Whether this improves access to finance or borrowing terms depends on the financing structure and the scope and reliability of cover.

The following risk categories describe the problems insurance might address. Parametric and indemnity insurance describe how payouts are determined. They are not separate categories of underlying risk.

Physical and ecological shocks to biodiversity outcomes

Storms, fire, drought and other hazards may damage ecosystems and interrupt conservation or restoration. Insurance can provide funds for an agreed response or compensate for defined losses. Recovery still depends on ecological feasibility, local capacity and timely implementation.

Insurance can help address the financial consequences of these shocks through approaches such as parametric cover and indemnity coverage.

Parametric cover pays according to a pre-agreed formula when a measurable trigger is met, such as wind speed or rainfall deficit. It can reduce the need for post-event loss adjustment, but payment remains subject to policy conditions. One limitation is basis risk: the possibility that the trigger-based payout does not match the actual loss. A damaged project may therefore receive too little or no payment.

Indemnity coverage responds to assessed losses within the policy terms. Assessment can take longer and may be difficult where ecological damage is hard to measure. Neither design automatically covers gradual degradation or failure to achieve a biodiversity target. [1,2]

- **Ecological restoration insurance: documented application.** SCOR's Restore and Manage products address, respectively, the implementation and management of conditions established for ecological recovery. They support recovery following defined insured events rather than insuring biodiversity credits themselves. SCOR and AXA announced a Lloyd's consortium for ecological restoration insurance in January 2026, illustrating further development of this approach. [5–7]
- **Coral reef insurance: documented application.** The Nature Conservancy describes parametric reef insurance in Mexico and other locations, using defined storm conditions to release finance for post-storm response and reef repair. This protects recovery activities. It would not insure the validity of a potential reef-linked biodiversity credit. [8]
- **Mangrove insurance: documented application.** AXA's San Crisanto example in Mexico covers the community against hurricane impacts, with payment linked to storm strength and proximity. The arrangement can support mangrove restoration and community recovery. This is an ecosystem and community insurance example, not yet linked to insuring any biodiversity-credit delivery or buyer claims. [9]
- **Drought cover for wetland restoration: prospective application.** A policy could use a locally calibrated rainfall or drought trigger to release funds for agreed interventions when drought threatens a wetland being restored through a biodiversity-credit project. The purpose would be to limit further degradation and support recovery of that wetland. Feasible interventions, water availability, trigger accuracy and eligible uses of funds would need to be established before such cover could be offered.
- **Working and production forests: a potentially lower-**

cost pathway. In many jurisdictions, including the Nordics, conventional forest insurance against fire and storm is already widely available and is beginning to be adapted toward ecological objectives. Examples include the EU-funded Piloting Innovative Insurance Solutions for Adaptation (PIISA) project's forest-insurance pilots, and a Nature Conservancy–Willis Towers Watson "wildfire resilience" pilot in California that cut premiums where ecological forest management reduced fire risk [10,11]. Extending such policies to recognize biodiversity-credit obligations could build on this existing infrastructure rather than requiring bespoke products.

Coverage for other ecological pressures, such as invasive species or disease, would require a defined, insurable event and an agreed way to assess losses. It should not be presented as generally available protection against ecological underperformance.

Project delivery and revenue disruption

A project may fail to generate or deliver contracted credits on time, with consequences for proponents, buyers and financiers. Coverage must specify which causes of non-delivery are insured, how loss is valued and whether the remedy is cash compensation, restoration expenditure or replacement units. A physical-damage policy does not necessarily protect lost credit revenue, and a delivery policy is not an unconditional performance guarantee.

- **Biodiversity-unit delivery: documented application.** DUAL's Environmental Investment Protection insurance supports Highlands Rewilding's Bunloit project in Scotland, which generates biodiversity and carbon units. [20] DUAL describes habitat protection and the cost of substitute units needed to meet insured contractual obligations. This is a relevant biodiversity-market example. However, substitution under a contract does not establish ecological equivalence between different places or outcomes. [12] Delivery insurance and forward contracts cannot be priced at scale without shared replacement rules—a question of ecological equivalence as much as price. Defining like-for-like criteria and tolerances is therefore a market-development priority
- **Carbon-credit non-delivery: Adjacent-market precedent.** In August 2025, Marsh announced CFC-underwritten non-delivery insurance supporting a J.P. Morgan-led financing facility for Chestnut Carbon. The transaction illustrates how insurance can help support project finance. Its value lay in unlocking finance rather than protecting an individual buyer's claim, by covering the risk of under-delivery to enable a facility that would otherwise have been harder to

structure. For biodiversity, the near-term opportunity is likely to be similar: non-delivery coverage supporting forward purchase agreements and project finance for larger projects, rather than buyer-level policies on small spot transactions. Adapting this approach to biodiversity would require clear delivery obligations and loss definitions. It should not be assumed to cover any missed ecological milestone or any cause of underperformance. [13]

Liability and professional risks

Developers, ecologists, assessors, verifiers and advisers may face liability arising from their activities or professional work. Professional indemnity insurance can protect an insured professional against covered liability for negligence or errors. Environmental liability products may address specified environmental damage and associated liabilities. Their suitability depends on the activity, jurisdiction and policy wording. Neither is a general guarantee of credit quality. [1,2]

A purchaser's recourse against a professional depends on the applicable duties, contract and law, as well as proof of liability and loss. The professional's insurance may support payment of a covered claim, but it does not automatically give the purchaser a direct claim against the insurer. Limits, exclusions, notification requirements and the period of coverage require particular attention.

Political and sovereign risks

Political risk insurance and guarantees can address specified events such as expropriation or a host government's breach of a covered contract. The World Bank Group's Multilateral Investment Guarantee Agency's (MIGA's) investment guarantees illustrate this approach. In 2024, MIGA also introduced a Letter of Authorization template to clarify host-government commitments and support guarantees for Article 6 carbon-market investments. [13,14]

An analogous biodiversity application would need clearly established rights, government obligations and eligible investment structures. Political risk cover should not be described as blanket protection against regulatory change, a fall in credit prices or any policy decision that reduces project value. An insured event must meet the contractual definition and relevant claims conditions.

II. Enhancing buyer confidence

Insurance can strengthen confidence that specified financial risks have been considered and allocated. This is different from demonstrating that a credit represents a valid,

additional and durable biodiversity outcome. Independent measurement, verification and credible governance remain essential.

Underwriting as an additional source of scrutiny

Insurers assess the risks they accept, which may bring additional scrutiny of project design, data and controls. However, underwriting focuses on the insured exposure—it is not comprehensive certification of ecological or social integrity. A low premium can reflect narrow coverage, exclusions or a high deductible rather than better biodiversity outcomes.

Insurers can incorporate recognized crediting requirements and the High-Level Principles to Guide the Biodiversity Credit Market into eligibility and policy conditions. BCA's Assessment Matrix can help projects and methodologies examine alignment with those principles. It is a learning and assessment tool, not a substitute for independent validation or an insurance guarantee. [4]

Financial protection and environmental claims

Where reversal, invalidation, or non-delivery results from a covered event, insurance may compensate for the buyer's specified financial loss. Carbon-market products offered through Oka and Cloverly illustrate buyer-facing reversal and invalidation protection. They have not established an equivalent standard product for biodiversity credits, and the existence of insurance does not in itself, confer greater integrity on the credits being insured. [15]

A monetary payout does not restore lost biodiversity, recreate a unique ecosystem or preserve the buyer's environmental claim. Replacement credits also cannot be assumed to represent an equivalent outcome, given biodiversity's location-specific character. Buyers must reassess, amend or withdraw affected claims as required by the relevant methodology, registry rules, claims guidance and applicable law, regardless of whether insurance pays.

Disclosures must describe the protection accurately: who is insured, which events are covered, the duration and limits, and what remedy is available. Describing a credit simply as "insured" can obscure material gaps. Insurance should not be presented as protection from greenwashing allegations or as a substitute for the buyer's own due diligence.

Checking the protection available at purchase

A buyer should distinguish three possible layers: coverage for its own financial interest in the credits; insurance held by the project proponent for restoration or delivery obligations; and professional indemnity held by relevant advisers or service providers. These policies may protect different

parties and respond to different events. They should be checked for gaps, overlapping recovery provisions and the relationship with project reserves or credit buffers. The buyer should also establish whether it is an insured party, beneficiary, or neither.

III. Strengthening resilience across projects

Insurance can support continuity by financing responses to covered shocks and limiting some financial losses. Its market-level contribution should nevertheless be stated cautiously. Ecological recovery may take years, and neither a payout nor replacement purchases can ensure uninterrupted credit supply or stable prices.

Pooling may make coverage more accessible where projects offer sufficiently diverse exposures. However, projects in the same region can experience simultaneous losses from drought, fire or storms. Pooling highly correlated risks does not remove the risk of accumulated losses. Insurers and reinsurers need credible exposure data, adequate capital and explicit limits.

Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC) provides a useful institutional analogy. It pools catastrophe risks and provides parametric coverage for Caribbean and Central American governments and other eligible members. Applying a similar approach to biodiversity projects would require project-specific governance, funding, triggers and arrangements for distributing payouts. [16]

Insurance should sit within a clear sequence of risk-management mechanisms: prevention and good management first; then contingency reserves, portfolio diversification and credit buffers where relevant; and insurance for the tail and correlated risks that remain. Any interaction between these mechanisms should be explicit, including the order of payment and responsibility for restoration. UNDP's Insurance and Risk Finance Facility and UNEP Finance Initiative's insurance work provide wider experience for developing nature-related risk finance and insurer capacity. [3,17,18]

IV. The business case for insurers

Biodiversity markets offer potential demand for restoration, delivery and liability coverage, while insurance may help make selected transactions financeable. Healthy ecosystems can also reduce hazards affecting conventional insured

assets. Supporting ecosystem resilience can therefore align with insurers' wider risk-management interests, where these benefits can be demonstrated. [2,3,18]

The commercial opportunity remains uncertain. Biodiversity credit markets are developing, loss histories are limited, and ecological outcomes are difficult to standardize. At current market volumes and transaction sizes, coverage is likely to be expensive relative to credit value, especially bespoke products. Climate change, correlated hazards and obligations extending beyond an annual insurance policy create further challenges. Annual renewal should not be assumed to secure protection for a multi-decade commitment.

The business case depends on whether the protection delivers enough value to justify premiums, deductibles and transaction costs. Carbon-insurance market forecasts should not be treated as estimates of biodiversity-insurance demand. Early engagement is most credible when it starts with clearly defined risks, realistic loss assessment and affordable products.

V. Priorities for engagement

Insurers, project proponents, rights-holders, buyers, financiers, governments and standard setters can advance practical applications through the following steps.

- **Identify priority risks and responsibilities.** Map the project's hazards, delivery obligations and potential losses. Identify who bears each risk and which risks can first be avoided or reduced. Select residual exposures for which insurance offers a useful remedy.
- **Standardize before insuring.** Establish common definitions of delivery, reversal, replacement and claims treatment, which lower underwriting costs and benefit the market regardless of insurance
- **Improve data and risk assessment.** Combine ecological expertise, local and traditional knowledge, hazard information, and monitoring data. Use comparable methods where appropriate while retaining ecosystem-specific assessment and making uncertainty explicit. Underwriting data should not replace verification of biodiversity outcomes.
- **Use existing insurance lines first.** Adapt conventional property, forest and liability policies before designing bespoke biodiversity credit products.
- **Define coverage and its relationship to integrity.** Specify insured parties, events, triggers, loss valuation, deductibles, exclusions, duration and claims procedures. Align project eligibility with credible standards and

safeguards. Clarify the relationship with buffers, restoration obligations and buyer claims. Financial compensation must not be treated as evidence that an ecological outcome persists.

- **Co-design with rights-holders.** Respect the differentiated rights of Indigenous Peoples, local communities and Afro-Descendant Peoples, including land and resource rights, traditional knowledge and applicable requirements for Free, Prior and Informed Consent. Agree on who pays premiums, controls the policy, receives funds and decides their use. Provide accessible information, grievance mechanisms and fair and equitable benefit-sharing arrangements. [4]
- **Pilot affordable arrangements.** Test products with a manageable group of projects and evaluate protection against realistic loss scenarios, including basis risk and correlated events. Public or philanthropic support may help meet initial data, capacity or premium costs, but should have a clear purpose and a sustainable funding plan.
- **Build mutual expertise and evaluate results.** Strengthen insurers' ecological understanding and market participants' understanding of insurance. Track coverage gaps, affordability, payout timing, allocation of funds and actual recovery outcomes. Publish lessons where possible without disclosing confidential information.
- **Reward demonstrable risk reduction.** Offer better terms where evidence shows that management practices reduce insured losses. High integrity should inform eligibility, but should not be assumed to make every ecological risk cheaper to insure.

Conclusions

Insurance can contribute to biodiversity credit markets by transferring specified financial risks, funding responses to covered events, and strengthening confidence in risk management. Emerging biodiversity and restoration products, together with carbon market precedents, show practical avenues for further development.

The value of insurance depends on clear coverage, credible ecological foundations, affordability and fair access to benefits. Insurance does not create credit quality, guarantee recovery or preserve an environmental claim if the underlying outcome is lost. Used alongside rigorous measurement, verification, safeguards and good governance, insurance can support more resilient projects and transactions while keeping nature and its stewards at the center of market development.



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References

Sources and product examples checked in September 2026. Product descriptions are illustrative; policy wording determines coverage.

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- [17] CCRIF SPC (n.d.). About Us. Accessed September 2026.
- [18] UNDP Insurance and Risk Finance Facility (2025 online edition). How Insurance Can Address Nature-Related Risks. Executive summary.
- [19] UNEP Finance Initiative (2025). Rooted in Risk: Framing Nature-Related Assessments for Insurers.
- [20] Note: DUAL describes this as the first insurance product brought to market since England's 2021 Environment Act mandated biodiversity net gain (BNG) for new developments, yet its first policy covers the Highlands Rewilding Bunloit project in Scotland, which has no equivalent BNG mandate and sells its units voluntarily. The compliance regime in England created the commercial impetus for the product; its first deployment was in a voluntary setting

About the Biodiversity Credit Alliance

The Biodiversity Credit Alliance (BCA) was established at COP15 in 2022. The BCA is a UN-backed coalition of like-minded organizations **working to shape the future of the biodiversity credit market** by bringing together scientific experts, conservation practitioners, and businesses to establish a **high-integrity, transparent, and scalable** biodiversity credit market. We're focused on ensuring that investments in nature generate **positive outcomes for biodiversity and communities**. By creating clear guidance and supporting market development in line with **principles of integrity, quality, and equity**, BCA helps unlock new funding streams for biodiversity conservation while ensuring credibility and impact. Whether you're a business, civil society organization, government, or land steward, we're providing the insights and framework to make biodiversity credits work effectively for people and the planet.

BCA Mission

BCA is a voluntary international alliance that brings together diverse stakeholders to support the realization of the Kunming–Montreal Global Biodiversity Framework, in particular Targets 19(c) and (d), which “encourage the private sector to invest in biodiversity” utilizing, amongst others “biodiversity credits ... with social safeguards.”

Our mission is twofold:



Help steer the development of a biodiversity credit market by building a framework of high-level, science-based principles.



Provide guidance and encourage best practice for market participants on the application of these principles, empowering them to achieve and maintain equitable, high-quality transactions that meet strict integrity criteria.

BCA Vision

BCA's **vision** is a transparent, trustworthy and efficient global market in biodiversity credits founded on just and equitable principles, and underpinned by innovation.

BCA works to facilitate the transition to a nature positive economy aided by an integrated, efficient and scaled biodiversity credit market. BCA considers biodiversity credits to be an effective complement to, but not a replacement of, the private sector's supply chain transformation efforts. BCA views biodiversity credits as an effective mechanism for advancing the private sector's participation in ecosystem remediation and transformative landscape approaches in line with science-based principles.