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**CLARIFYING THE ROLE OF  
BIODIVERSITY CREDITS OR  
UNITS IN POLICY COMPLIANCE  
FRAMEWORKS**

**Authors:** Mariana Sarmiento, Vanessa Garcia, Lina Aristizabal.

In environmental compliance frameworks, **biodiversity credits or units**—also referred to as habitat or conservation credits—are not the only tool available to regulated actors or “impactors” for the purposes of this paper (typically infrastructure developers, miners or large scale agriculture operations). Rather, they are one of several **mechanisms** that can be used to meet biodiversity offset obligations, once avoidance, minimization, and restoration have been pursued. Rather, they are one of several mechanisms that can be used to meet biodiversity offset obligations, once avoidance, minimization, and restoration have been pursued.

Unlike the compliance carbon markets where polluters must either buy allowances or reduce emissions, regulatory frameworks for nature mitigation do not mandate the use of credits, but rather offer the impactor multiple options to comply with the required environmental outcomes that will meet certain criteria such as ecological equivalence, durability, and additionality. These options generally fall into three categories: impactor constructed offset project, payment into a government or third party fund which is mandated to undertake restoration, or purchasing regulated offsets from a third party habitat bank.



# From Obligations to Options: How Compliance Works

Most biodiversity compliance frameworks follow the mitigation hierarchy:

1. **Avoid** impacts to biodiversity wherever possible.
2. **Minimize** those impacts that cannot be avoided.
3. **Restore** ecosystems affected by project activities.
4. **Offset** any residual impacts that remain.

It is in this final step—offsetting—where biodiversity credits can play a role. However, regulators rarely prescribe how to offset. Instead, they define what **standards** must be met (e.g., ecosystem type, duration of conservation actions, measurement of biodiversity gains), and leave the **means** of compliance up to the impactor.

Because biodiversity is inherently local—shaped by unique ecological, geographic, and cultural contexts—offsets are also intended to be local. In that regard, regulatory frameworks typically require that compensation occur within the same ecosystem type and biogeographic region to ensure ecological relevance and equivalence.

The impactor's decision typically depends on:



- **Cost-efficiency** – Which option is most affordable, considering opportunity costs and long-term obligations?



- **Time** – Which alternative aligns with the project's timeline and permitting deadlines?



- **In-house capacity** – Does the organization have the expertise and resources to develop and manage a mitigation project?

This flexibility allows impactors to choose the solution that best fits their **technical, financial, and strategic context**, while ensuring that biodiversity outcomes are delivered.



## How a Developer Decides What to Do: An Illustrative Example

Consider a renewable energy company planning to build a solar park in a dry forest ecosystem. After avoiding and minimizing impacts, it is left with an obligation to offset 50 hectares of affected habitat.

### The compliance authority provides clear criteria:

- The offset must be in the same ecosystem type.
- It must be protected and monitored for at least 30 years.
- It must demonstrate measurable ecological improvement.

Option	Description	Considerations
<b>In-house offset</b>	Identify and restore 50 hectares on land they own	Time-consuming; requires ecological expertise and long-term monitoring; not cost-effective; delays construction. The company bears 100% of the offset implementation risk.
<b>Outsourced offset</b>	Hire an environmental services company, fund an NGO or a local organization to manage an offset site	Viable, but requires up-front investments. Transactional costs can be high. Operators capacity can be limited in the region. The interests and incentives of operators are not always aligned with efficient processes.
<b>Pay into a government fund</b>	Make a monetary payment to a government-managed or approved fund responsible for implementing biodiversity offset projects on behalf of the developer.	Simplifies the process, but offers limited visibility or control over where and how the offset is implemented. Timelines for projects implementation and ecological outcomes may be uncertain due to bureaucratic processes. Effectiveness depends on the fund's governance, transparency, and long-term monitoring capacity.
<b>Purchase biodiversity credits</b>	Buy 50 hectares' worth of credits or units from a certified project that meets the authority requirements	Readily available; meets ecological and management criteria; allows immediate compliance. Outcome-based payments ensure that risks are being shared between the engaged parties.

After comparing cost, timeline, and risk, the company may then opt to purchase credits from a nearby project, allowing them to focus on their core business while meeting legal requirements efficiently. By using biodiversity credits or units from aggregated projects instead of implementing the project in-house, the company can participate in landscape-level initiatives and collaborate with other companies. Offsets through biodiversity credits enable more permanent conservation efforts.

# How Biodiversity Credits or Units Are Implemented Around the World

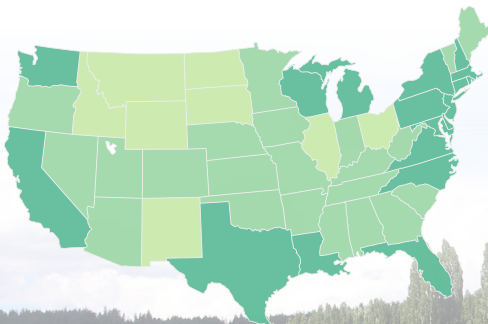


## United States

In the U.S., biodiversity mitigation is well established through the **Clean Water Act** (for wetlands and streams) and the **Endangered Species Act** (for threatened species and habitats). When residual impacts cannot be avoided, developers must offset them using one of three mechanisms:

- 1. Permittee-responsible mitigation** – the developer designs and implements their own restoration site.
- 2. Purchase of credits or units from a mitigation or conservation bank**, where ecological improvements are pre-established and verified.
- 3. In-Lieu Fee (ILF) programs**, where the developer pays a government-approved intermediary to implement mitigation later.

When mitigation banking is chosen, it is often because developers perceive it as offering faster and more reliable outcomes. However, its use is not mandatory. Developers evaluate their options based on credit availability, internal capacity, and project timelines, ensuring flexibility within a framework of ecological rigor.





## United Kingdom

Under the **Environment Act 2021**, England mandates **Biodiversity Net Gain (BNG)** for most developments. Developers must demonstrate at least a **10% improvement in biodiversity value** using the official **Defra Metric**.

To meet this requirement, they can:

1. Deliver biodiversity gains **on-site**.
2. Implement or fund gains **off-site**.
3. **Purchase biodiversity units** from registered habitat banks.
4. As a last resort, **buy statutory biodiversity credits** from the government.

Habitat banks are increasingly used due to their ability to deliver **pre-approved, high-quality biodiversity uplift**. However, developers retain the flexibility to choose the most suitable pathway.





## Australia

In Australia, biodiversity offset frameworks are **state-based**, with New South Wales (NSW) offering one of the most advanced models under its **Biodiversity Conservation Act 2016**.

Developers with offset obligations can:

- 1. Buy credits** from certified biodiversity stewardship sites via the Biodiversity Credits Market.
- 2. Establish their own offset site** and generate credits for use.
- 3. Make a payment** to the **Biodiversity Conservation Fund**, which delivers offsets on their behalf.

The system ensures **like-for-like ecological outcomes**, while giving developers a choice between direct action, market-based solutions, or delegation through public offset funds.





## Colombia

In Colombia, environmental licensing regulations require developers to follow the **mitigation hierarchy**, with mandatory offsets for residual biodiversity impacts.

Developers with offsets obligations can comply by:

- 1. Directly implementing offsets**, such as acquiring and restoring equivalent habitat.
- 2.** Hire or partner with third parties to manage offset sites.
- 3. Purchasing credits or units** from certified **Habitat Banks**, which pre-develop and manage long-term conservation areas.
- 4.** Implement specific government regulated projects that involve restoration or conservation efforts, among other objectives, such as payments for ecosystem services schemes.

Habitat Banks are authorized under Decree 2099 of 2016, Resolution 1517 of 2017 and Resolution 256 of 2018 and technical guidelines from the Ministry of Environment. While biodiversity credits or units use is **optional**, it is increasingly preferred due to **reduced permitting time, lower implementation risk**, and access to specialist expertise.





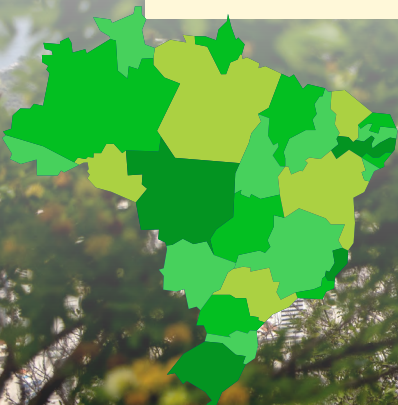
## Brazil

Brazil's offset framework is based on two main laws: the National System of Conservation Units (Law 9.985/2000), which requires financial compensation for impacts to protected areas during environmental licensing, and the Forest Code (Law 12.651/2012), which mandates restoration or compensation for native vegetation loss on rural properties. While not strictly biodiversity-focused, these mechanisms function as offsets for environmental harm.

Offset options include:

1. Pay compensation fees to environmental funds (does not apply for legal reserve obligations)
2. Directly implement offset projects, typically involving restoration, conservation or reforestation.
3. Purchase Forest Reserve Credits (Cotas de Reserva Ambiental - CRAs) from properties with native vegetation surplus.
4. Lease equivalent areas under an environmental easement or under Reserva Legal restoration projects.
5. Donate land inside public protected areas.
6. Own and register another property with a native vegetation surplus equivalent to the area in deficit.
7. Buy Forest Reposition Credits from executed reforestation projects, which are issued based on the estimated wood stock.

Some states, such as São Paulo through its electronic system Sistema RepFlo, are advancing the implementation of Forest Reposition Credits. At the federal level, CRA mechanisms (as established in Federal Decree No. 9.640/2018) are also being promoted. Both instruments exemplify the use of market-based approaches to broaden and diversify available offset options.



## Conclusion: Biodiversity Credits or Units Are a Tool—Not a Rule



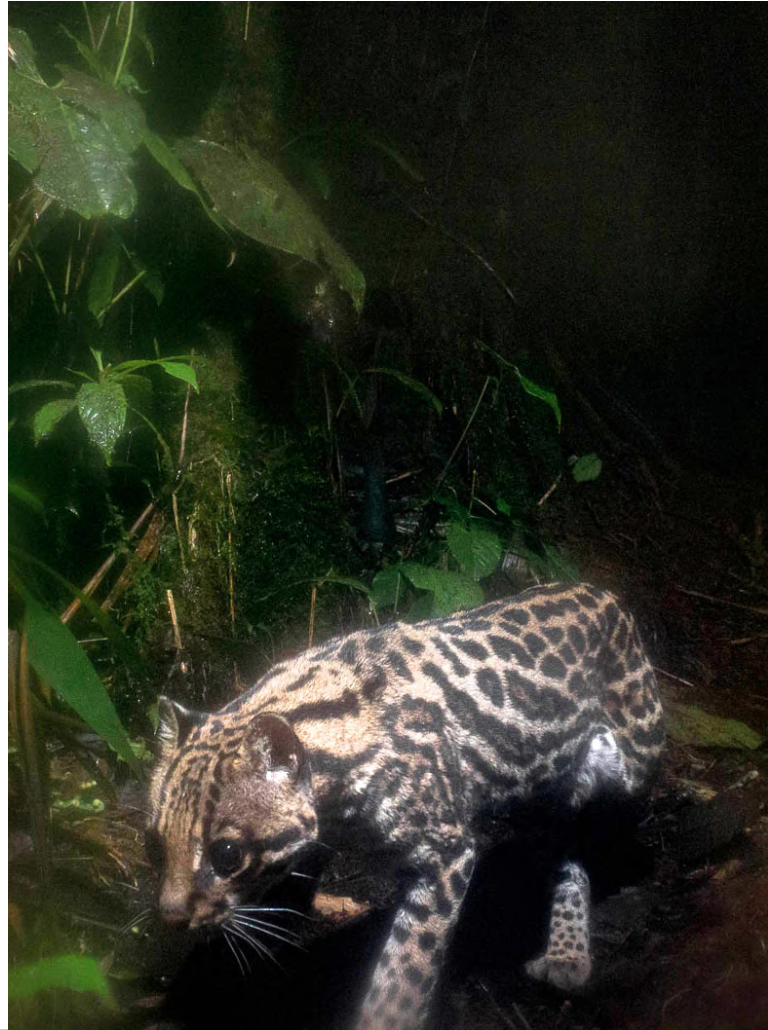
Biodiversity credits or units are a **compliance tool**, not a **compliance rule**. They offer a **market-based mechanism** for meeting offset obligations, but they exist within broader frameworks that prioritize **flexibility, performance, and ecological rigor**.

By defining **clear environmental outcomes and biogeographic local criteria**, regulators empower impactors to choose the most suitable compliance pathway—whether that means implementing their own offsets, partnering with conservation actors, paying into public funds, or purchasing credits.

This approach creates a more efficient and scalable compliance system while safeguarding biodiversity outcomes. In jurisdictions where biodiversity credits or units are well integrated, they **accelerate project delivery, reduce risk, and channel private capital into long-term conservation**—benefiting both business and nature.

## About Terrasos


Terrasos is a leading company in biodiversity conservation and the development of nature-based financing mechanisms. Terrasos specializes in mechanisms such as habitat banks, biodiversity credits, and environmental compensation schemes, which enable investments in biodiversity and provide legal, financial, and technical guarantees to achieve long-term territorial interventions. The company has extensive experience in Latin America and the Caribbean, supporting the development of public policy for biodiversity conservation mechanisms, based on payment-for-results schemes. We deliver specialized support in enabling conditions for biodiversity credit markets, habitat banking schemes, and strategies to achieve nature-positive outcomes.



For more information about our public policy work and advisory, contact our team at [vanessa.garcia@terrasos.co](mailto:vanessa.garcia@terrasos.co)


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