THE BIODIVERSITY MARKET MIRAGE

HOW BIODIVERSITY OFFSETTING AND CREDITING DESTROYS NATURE AND UNDERMINES THE RIGHTS OF PEOPLES

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IN A WORLD WHERE ECONOMIC GROWTH DRIVES MOST POLITICAL DECISIONS AND WHERE PROFIT IS THE PRIMARY FOCUS OF CORPORATE CEOS, BIODIVERSITY IS CONSTANTLY UNDER THREAT. MANY SECTORS OF THE ECONOMY DEPEND ON THE ABILITY TO IMPLEMENT "DEVELOPMENT PROJECTS" IN AREAS WITH VALUABLE ECOSYSTEMS. BIODIVERSITY OFFSETS AND CREDITS PROVIDE THIS ABILITY.

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INTRODUCTION

THE BIODIVERSITY MARKET MIRAGE

Biodiversity is in crisis. Nature is being degraded and destroyed at a dizzying pace, and entire species are being eradicated as their habitats disappear. Over the past years, the obvious solution to stop destroying ecosystems and uphold the Rights of Indigenous Peoples has been overshadowed by various ploys to quantify and put a financial value on nature.

In this report, we take a closer look at biodiversity offsets and credits, which are part of the plethora of market-based schemes that are being presented as antidotes to the biodiversity crisis. Biodiversity offsets are in fact policy schemes that may or may not be market-based, but we consider them as part and parcel of free-market capitalist ideology. Biodiversity offsets and credits promote and normalise the idea that the loss of biodiversity and nature in one area can be compensated for elsewhere. The various articles compiled here expose the myriad of problems associated with these schemes, showing that they are yet another false 'solution' proposed by the beneficiaries of neoliberal economic monetisation and financialisation.

Nele Marien of Friends of the Earth International starts by laying out the mechanisms behind the different types of biodiversity offsets and credits, as well as the failure of the 'mitigation hierarchy'. Mirna Ines Fernández from the Third World Network explains why biodiversity offsetting is at odds with 'ecosystem integrity' – an ecosystem's capacity to maintain its structure and functioning throughout time – resulting in loss of key habitats, ecosystem functions, soil degradation, disruption of water cycles and the proliferation of invasive species.

Since biodiversity offsetting and crediting markets are modelled on carbon markets, argues Simon Counsell, they will fail to protect ecosystems due to their multi-pronged flaws – conceptual, programmatic and methodological – and will instead result in greenwashing, malpractices and huge profits for those behind the schemes. In his elaboration of the mechanics behind biodiversity financing, Heitor Dellasta from the Global Youth Biodiversity Network concludes that stopping the negative financial flows that directly harm biodiversity and enhancing non-market-based approaches will be more effective in curbing biodiversity loss than increasing positive financial flows through market-based approaches like biodiversity credit markets. Next, Frédéric Hache, from the Green Finance observatory, illuminates the most significant institutional developments in biodiversity offsetting and crediting and the enormous economic and political power propelling it forward; he notes that this trajectory is particularly worrisome as it happens outside the public spotlight.

Tamra L. Gilbertson of the Indigenous Environmental Network reveals how corporations and conservation NGOs use the concepts of offsetting and crediting to justify encroachment into the rich historical biodiversity in Indigenous Peoples territories by transforming biodiversity into exchangeable units and building new markets. In the following piece, Valentina Figuera Martínez from Global Forest Coalition explains how biodiversity offsets will impact affect gender equality and human rights by opening the floodgates for forced evictions, arbitrary detentions, land grabbing, various forms of gender-based violence, food insecurity, destruction of livelihoods and traditional practices, and human right violations.

Based on these multifaceted insights and critiques, Lim Li Ching from the Third World Network concludes that market-based instruments are a dangerous distraction from the urgent need for governments and institutions to focus on the system change needed to reverse biodiversity destruction. Biodiversity offsets and credits pose major threats to biodiversity and human rights, and those who stand to lose the most – Indigenous Peoples, local communities, peasants and other small-scale food producers, women and youth – are those who have contributed the least to biodiversity loss.

At the 2024 UN Biodiversity Conference of the Parties in Cali, Colombia, civil society is calling on governments, multilateral bodies, conservation organisations and other actors to stop the promotion, development and use of biodiversity offsetting and crediting schemes. Instead, we need a combination of community-based, rights-based, gender-just and science-based approaches to ensure that ecosystem integrity is taken seriously for the long term and that the communities who defend, care for and depend on these ecosystems are able to flourish.

AN INTRODUCTION TO BIODIVERSITY OFFSETS AND CREDITS

01

NELE MARIEN / Friends of the Earth International

In a world where economic growth drives most political decisions and profit is the primary focus of corporate CEOs, biodiversity is constantly under threat. In fact, many sectors of the economy depend on the implementation of 'development projects' in areas with valuable ecosystems.

At the same time, global awareness of the biodiversity crisis is increasing, and there is widespread recognition that 'something' must be done. This is where biodiversity offsets and credits come into play. Biodiversity offsets allow corporations to compensate for actions that destroy nature, supposedly by restoring or saving biodiversity elsewhere. Biodiversity credits are promoted as tradeable units that allow for more general investments in nature, but will very likely also be used for offsets. Both types of offsets promise to be that 'something' that allows business to show they care for nature, while at the same time allowing for the aforementioned economic growth.

TWO TYPES OF OFFSETS

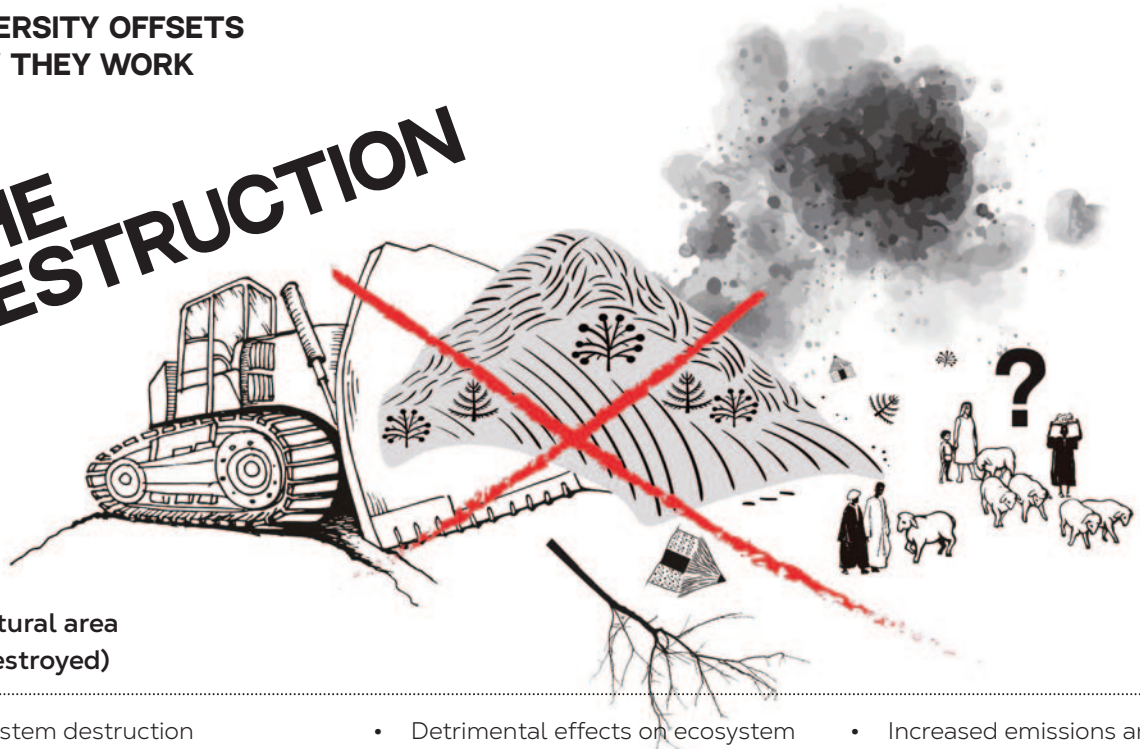
The core idea behind biodiversity offsets is that it is acceptable for a particular natural area to be destroyed as long as the environmental impact is compensated for elsewhere with an equivalent amount of nature. This compensation typically happens in one of two manners: habitat restoration or avoided loss.

'Habitat restoration' offsets claim to restore ecosystems on degraded land in order to achieve biodiversity levels similar to those measured on the original land. Unfortunately, there are serious problems that make this type of offsetting a very bad idea:

- Achieving ecological restoration to the extent that conditions are comparable to the original ecosystem is nearly impossible. Research indicates that restoration is not a very effective method for compensating biodiversity loss, and many of the expectations set by offset policies for ecological restoration remain unsupported by evidence.[1] In particular, highly complex ecosystems are difficult to restore, and there are very few examples of successful restoration in forested[2] and marine ecosystems.[3]
- There is a significant time gap between the loss of biodiversity and any potential gain.[4] Development projects are typically completed in the short term, whereas restoration efforts take much longer to implement. Even if the restoration is eventually successful, the interim biodiversity loss will severely impact overall biodiversity levels and undermine conservation objectives.[5]
- Restoration takes time. Research indicates that even in the best-case scenarios, species richness takes up to a century to reach old growth ecosystem reference values; species similarity takes about twice as long; and obtaining the original composition of species takes an order of magnitude longer (hundreds to thousands of years).[6]
- Permits for development projects are typically issued with a promise of restoration at some point in the future.[7] This means that oversight of the actual implementation and long-term continuity of restoration projects is often deficient.[8]
- The financial costs of restoration to offset biodiversity loss are extremely high.[9]
- Claims about the availability of degraded land are misleading; there is little truly 'empty' land anywhere in the world. This often means that corporations engaging in restoration are offsetting lands they have grabbed from Indigenous Peoples or local communities. There have also been cases where the ecosystem designated for restoration was undervalued, for example with 'forest restoration' of savannahs, which are extremely valuable ecosystems in themselves.[10]

BIODIVERSITY OFFSETS & HOW THEY WORK

THE DESTRUCTION



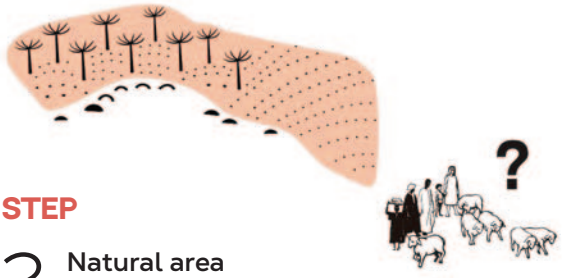
STEP

1 **Natural area (Destroyed)**

- Ecosystem destruction
- Land degradation
- Loss of biodiversity, indigenous species and natural habitat.
- Displacement of Indigenous Peoples and Local Communities. (IPLCs)
- Detrimental effects on ecosystem services outside the area of destruction
- Local and global impacts on climate with decreased ability to sequester emissions.
- Increased emissions and pollution as a result of increased industrial and economic development.

THE OFFSET

OFFSET HABITAT 'RESTORATION'



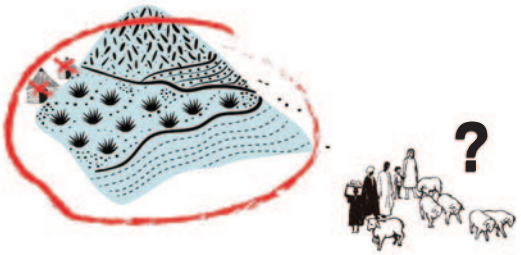
STEP

2 **Natural area (Identified & 'Restored')**

- Ecological restoration comparable to original ecosystems not possible
- Interim biodiversity loss outweighs any possible long term potential biodiversity gain
- Restoration takes a long time to reach even minimal comparative ecosystems.
- Long term restoration implementation lacks continuity and oversight.
- Financial costs of restoration are high.
- Available empty land often non-existent and other ecosystems appropriated.

OR

OFFSET 'AVOIDED LOSS'



STEP

2 **Natural area (Seized & 'Preserved')**

- Where there were two valuable ecosystems, now there is only one.
- Potential ecosystem loss should not equal automatic offset potential.
- Designated offset sites often have no need for additional protection.
- Increased poverty and human rights violation due to exclusion of IPLCs.

'Avoided loss' offsets, also known as 'preservation offsets', seek to compensate for the loss of one natural area due to development projects by claiming to prevent another natural area from degrading. In these cases, the offsetting action involves eliminating or reducing threats in the designated offset area. However, this type of offset also presents significant challenges for several reasons:[11, 12]

- Ecosystem loss should always be avoided if possible rather than counted as an offset. Accounting for a potential loss as if it would definitely happen allows for the destruction of nature as a baseline definition. In short, this institutionalises rates of destruction.[13]
- The presumed benefits depend on the assumption that biodiversity loss would have happened at the offset site without the extra protection provided. This, however, is uncertain, and will by definition always be impossible to prove. One study indicated that only 3% of the sites designated for avoided loss offsets would have been lost without the additional protection![14]
- Many cases of avoided loss offsets are based on the claim that the loss was inevitable due to the local population – often Indigenous Peoples and Local Communities (IPLCs) – not handling their environment well.[15] As a result, these projects either exclude IPLCs from their own territories or impose arbitrary management rules on them.[16] Increased poverty and human rights violations are rife in such projects.
- Furthermore, claiming that IPLCs are responsible for the destruction of their areas is grossly unfair. Nature is generally declining less rapidly on Indigenous Peoples' land than on other lands.[17] In 2023 alone, nearly 200 environmental defenders were killed,[18] many of whom were defending their land from corporate developments. Claims by corporations that they need to protect these lands from IPLC management is simply perverse.

In summary, both types of offsets are inconsistent with environmental integrity and lead to further declines in biodiversity[19] and the rights of IPLCs.

THE SAME BAD CONCEPT IN NEW PACKAGING

Although biodiversity offsetting has existed for decades, the concept has gone through a number of reincarnations in terms of terminology and handling. Nonetheless, the creation process for the offsets is always related to the two broad categories described above.

There are however differences between the actors involved, and how the offsets are organised. In some cases, a corporation will organise the offset itself or will partner with a conservation NGO that will carry it out for them. In other cases, government-organised systems, such as compensation funds, are designated to carry out the compensation[20] (although they often fail to do so).[21] Yet in other cases, habitat banks are set up that allow private entities to create habitat credits (e.g. for wetlands), which can in turn be bought by project developers.[22]

There are also many different names for offsetting schemes. Traditionally called 'No Net Loss' policies, the description gradually morphed into 'Net Gain', then 'Net Positive', and most recently, *'Nature Positive'*. Yet the basic principle remains the same: to allow ecosystem destruction in one place as long as it is 'compensated' by restoration or protection elsewhere. The 'positive' in 'Nature Positive' boils down to a balance sheet exercise in which irreplaceable natural resources are sacrificed so that the numbers add up.

BIODIVERSITY CREDITS: CONCEALED OFFSETTING

Biodiversity credits are tradeable units that supposedly represent 'measurable conservation outcomes' – such as protecting certain species or ecosystems, or parts of them. Companies can buy and sell these credits, sometimes to meet regulations or voluntary sustainability goals. While in theory these credits could be used to help a company greenwash its image as to appear 'responsible', in practice businesses generally purchase biodiversity credits mainly for offsetting purposes.

The difference between biodiversity credits and offsetting is that the latter establishes a direct connection between the development site and the offset site, whereas biodiversity credits can, in theory, be generated and sold anywhere in the world.

DODGY BACKGROUND PHILOSOPHY: THE MITIGATION HIERARCHY

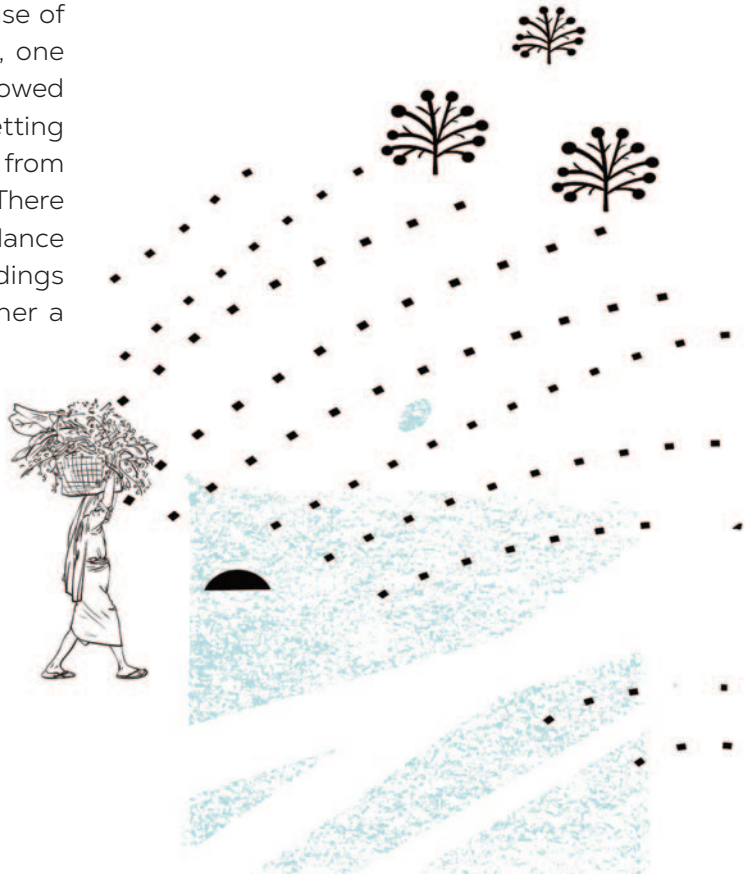
In fact, offsets are intended to be a 'last resort'. This idea is embedded in the 'mitigation hierarchy',[23] which was originally established as one of the International Finance Corporation's Performance Standards[24] and is now recognised and applied as a legal instrument in dozens of countries.[25] Under this approach, development projects must first see if they can avoid, minimise, restore or rehabilitate biodiversity before considering offsetting. The steps are as follows:

1. **Avoidance:** The first and most important step is to avoid any activities that could harm nature in the first place. This means planning projects in a way that prevents damage to critical habitats or species.
2. **Minimisation:** If it is impossible to avoid some impact, the next step is to minimise it. This means adjusting the project's design or methods to reduce its negative effects as far as possible.
3. **Restoration or rehabilitation:** After impacts have been minimised, companies should work to restore or repair the damage done to the environment. This could mean replanting trees, cleaning up polluted areas, or repairing disturbed habitats.
4. **Offset:** If the damage can't be fully restored, it is acceptable to offset the remaining damage as a last resort.

Unsurprisingly, there seems to be an over-reliance on offsetting in development projects at the expense of the earlier steps in the hierarchy. For example, one study analysing a decade of offsetting in Chile showed that projects had a tendency to use more offsetting compensation measures than would be expected from the implementation of the mitigation hierarchy. There was limited use of repair measures, and avoidance measures were rarely proposed.[26] Such findings appear not to be unique to Chile, but are rather a symptom of a more general problem.

Indeed, several – if not the majority of – offsets requested by states or voluntary financial agreements do not subscribe to the mitigation hierarchy. Instead, firms eschew the avoidance and mitigation phases and move directly into compensation. The problem lies in the mitigation hierarchy itself; having offsets as the final step tends to disincentivise the earlier stages of avoidance and mitigation.[27, 28, 29] In short, it is cheaper and faster for firms to pay for compensation than it is to avoid or mitigate biodiversity loss.[30]

The fact that the mitigation hierarchy exists and is legally embedded in many countries actually *increases the chance that damage to biodiversity is permitted*, and this means that avoiding the damage in the first place is simply not happening.[31] This is a logical result of offsetting always being an option, albeit as a last resort.[32, 33] The availability of the mitigation hierarchy can distract governments and institutions from focusing on the system change needed to reverse biodiversity destruction.[34]



ECOSYSTEM INTEGRITY: A KEY CONCEPT OVERLOOKED IN BIODIVERSITY OFFSETTING

02

MIRNA INES FERNÁNDEZ / Third World Network

Ecosystem integrity is mainly associated with an ecosystem's capacity to maintain its structure and functioning throughout time. An ecosystem with high integrity can operate effectively and adapt to disturbances without losing its functions. Any intervention or project that overlooks this concept undermines global biodiversity goals and risks causing negative environmental impacts. Biodiversity offsetting mechanisms usually ignore or oversimplify the idea of ecological integrity, and end up promoting projects with more potential for harm than good.

WHAT IS ECOSYSTEM INTEGRITY AND WHY IS IT SO IMPORTANT?

The Kunming-Montreal Global Biodiversity Framework (KMGBF) aims to maintain, enhance or restore the integrity, connectivity and resilience of ecosystems. While connectivity and resilience are well-known terms, the concept of ecological integrity has evolved through the years and different definitions coexist. The KMGBF states that ecosystems have integrity when their core ecological characteristics – such as the diversity, composition and abundance of species and the structure, functions and ecological processes these species support – are within their natural range of variation and are resilient to perturbations.[35] Indicators of ecosystem integrity may include the "structure, function and composition of an ecosystem relative to the preindustrial range of variation of these characteristics".[36]

Ecosystems are comprised of species, the habitats they require to interact with one another, and the physical environment. To maintain integrity, ecosystems must contain a variety of habitats with sufficient size, quality and connectivity as required by the species that drive the systems' ecological processes. Losses or gains in these essential attributes manifest themselves as changes in: i) the diversity, composition, structure and function of species communities; ii) the distribution, sizes, resilience and extinction of species; and iii) the genetic diversity of species.[37]

This is why the prioritisation of ecosystem integrity is key to guaranteeing that natural systems remain functional and resilient.

ECOSYSTEM INTEGRITY ISSUES IN BIODIVERSITY OFFSETTING

Offsetting mechanisms, like the ones promoted by biodiversity credits, seek to compensate for biodiversity loss caused by projects or interventions through the conservation or restoration of habitats in other areas. However, these mechanisms usually overlook ecosystem integrity, and this leads to significant environmental problems.

A global review of the ecological outcomes of biodiversity offsets under 'No Net Loss' (NNL) policies,[38] which turned up more than 15,000 articles and covered more than 300,000 hectares of biodiversity offsets, found significant gaps between the implementation of offsets and their demonstrated effectiveness. From the one-third of the NNL policies assessed that reported success, most used area-based outcome measures, making it impossible to know if real NNL was achieved. Although two-thirds of the world's biodiversity offsets are applied in forest ecosystems, none of the assessed studies demonstrated real outcomes in NNL for forested habitat or species. Furthermore, the authors did not find evidence of success in NNL with the use of avoided loss offsets.

CONTROVERSIAL OFFSET IN PERTH, AUSTRALIA

One study assessed the effectiveness of the offset package developed for the Roe Highway Extension in Western Australia for Carnaby's black cockatoo, the red-tailed black cockatoo, and the southern brown bandicoot. The results revealed that the offset produced a net loss of environmental value.

The offset sites provided only 64% of the habitat required by the black cockatoo, and it was of a lower quality. Also, the variation in undergrowth vegetation used by southern brown bandicoots indicated lower quality.

The offset resulted in an actual decline in native vegetation as well the loss of an area highly valued by local residents. Changing the conservation status of other more distant sites does not compensate for the local loss of amenity, ecological value or connection with nature – factors that are not even considered when developing an offset package.

Thorn, S., Hobbs, R. J., & Valentine, L. E. (2018). Effectiveness of biodiversity offsets: An assessment of a controversial offset in Perth, Western Australia. *Biological Conservation, 228,* 291–300.

Ignoring ecosystem integrity can result in the following negative environmental impacts:

- **Removal and substitution in habitat restoration offsets** The aim of habitat offsets is often to avoid the impacts on biodiversity of permitted habitat removal. However, the chances of success are rather low, and few evaluations exist of whether 'No Net Loss' of habitats over time is actually feasible.[39]

  Biodiversity offsetting tends to focus on quantitative aspects, like the extension of conserved or restored habitat, without a guarantee that this ecosystem will have the same qualities and functions as the original one. This lack of ecological equivalence will most likely lead to 'restored' ecosystems that do not fulfil the functions and services of the original ecosystem that was meant to be compensated. For example, a secondary forest will not have the same balance of nutrients, water cycles or food webs that are present in a primary forest.

  Complex ecosystems, such as old-growth forests, peatlands and some marine ecosystems, cannot reasonably be re-created, restored or rehabilitated. In addition, slow-breeding, endemic or very demanding species cannot be restored. In this regard, offsets can offer only poor or incomplete replacements for the lost biodiversity.[40]

- **Time lags** Offset projects are often carried out after the original impacts have occurred. This temporal disconnection between impact sites and offset areas limits the effectiveness of such projects and prevents restored or conserved ecosystems from providing the same ecological services as the original affected ecosystems. For example, habitat offsets in cases where there is a significant time lag between habitat loss and the replacement of resources for a threatened species will probably result in extinction in that habitat.

  Long time lags also result in severe resource bottlenecks, causing some species and communities to suffer increased vulnerability to other threats.[41] While biodiversity loss is immediate in offsets, gain is uncertain, and if it is achieved it may be far in the future.[42] Furthermore, the period between the establishment of an offset and the delivery of its expected functions can be considerable.[43] For example, it can take more than 120 years for a tree to develop hollows that provide nesting and shelter for wildlife.[44]

  In short, all of this demonstrates that the risks inherent in long time lags in offsets are too high to provide confidence in the success of the restoration.

- **Disregard of ecosystem functions and services** Current offset mechanisms often fail to adequately address specific ecosystem functions and services, including pollination, climate regulation and water purification. The loss of these essential functions is a threat to local biodiversity and to the communities that depend on these functions. Failure to focus on ecosystem functions can lead to a net loss of ecosystem services despite offset efforts.

  There is very little data on ecosystem functions and services in published studies on offsetting. Most studies reference habitats as comparison points to evaluate singular taxa of biodiversity or other parameters, but rarely assess ecosystem services[45] or functions.

- **Invasive alien species** Focusing on a particular aspect of the ecosystem – instead of all of the components that comprise ecosystem integrity – opens the door for bad decisions about ecosystem management. This has been the case with many offsetting initiatives that focused on only one ecosystem function like carbon sequestration, or only used certain species as indicators to measure biodiversity outcomes. In some countries, for example, monetary incentives in the form of carbon credits have been used to retain or expand populations of invasive non-native trees in natural systems as a measure to increase carbon sequestration, even though non-native tree invasions often have negative effects on biodiversity and the integrity of ecosystems.[46]
- **Challenges in ecological restoration** Ecological restoration, a key component of offsetting mechanisms, faces several challenges. These include the difficulty of re-creating original ecosystem conditions and the risk of introducing elements that can alter the equilibrium of the restored ecosystem.

  Ecological restoration is defined as the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed.[47] It is not just about planting trees, but also involves re-establishing soil conditions, restoring stream structures and functions to pre-disturbance conditions, and facilitating the return of fauna, among other actions necessary to achieve full recovery.

  If not properly planned, and if not integrated in regional biodiversity conservation strategies, ecological restoration practices often contribute to biotic homogenisation[1] rather than counteracting it.[48] This can prevent restored ecosystems from achieving the desired ecosystem integrity.
- **Soil degradation and altered water cycles** Very few offset projects make serious efforts to restore soils and water cycles, as their restoration and measurement is very difficult. Restoration evaluation strategies often report on area-based metrics or other basic structural attributes that are not predictive of improvements in water quality or the counteracting of desertification.[49]

  This is critical, however, since failure to properly restore soil properties and maintain hydrological processes can lead to problems such as soil erosion and altered drainage patterns. Moreover, cases have been reported where offset afforestation efforts resulted in the degradation of vegetation structure and soil retention functions, aggravating soil erosion.[50] Ecological restoration science is relatively new, and the complex non-linear interactions between land degradation and environmental conditions have not been thoroughly studied.

CHALLENGES IN POST-FIRE ECOLOGICAL RESTORATION IN LATIN AMERICAN FOREST ECOSYSTEMS

Forest fires are a major driving force of forest degradation across Latin American and the Caribbean, and there is growing interest in promoting and developing ecological restoration following such fires.

There is an important distinction between ecosystems that are fire-adapted and those that are not. When landscapes are affected by fire, experiences show that passive restoration may be as effective as active restoration if soils are not severely affected. This also excludes the risk of failures in active restoration such as the introduction of invasive species.

Damage from forest fires worsens when harmful activities occur soon afterwards. For example, repeated fires combined with heavy cattle grazing have created a new disturbance pattern in Northern Patagonia. In Córdoba's high-mountain rangelands, the regular presence of livestock has led to a 50% increase in soil loss following fires, turning the area into a rocky desert.

Souza-Alonso, P., et al. (2022). Post-fire ecological restoration in Latin American forest ecosystems: Insights and lessons from the last two decades. *Forest Ecology and Management, 509,* 120083.

1 The process by which species invasions and extinctions increase the genetic, taxonomic or functional similarity of two or more locations over a specified time interval (McKinney and Lockwood, 1999).

PRIORITISING ECOSYSTEM INTEGRITY

The failure to consider ecosystem integrity in biodiversity offsetting projects can have devastating effects on the environment. Loss of key habitats, ecosystem functions, soil degradation, disruption of water cycles and the proliferation of invasive species are some of the potential direct consequences of the alteration of ecosystems without taking into account their structure and function. Even when some of these important aspects are addressed, it is almost impossible for an offsetting project in a complex ecosystem to take all these factors into account and achieve real success. For this reason, biodiversity offsets are not viable solutions to the biodiversity crisis.

Before any interventions with potentially negative impacts on ecosystems are taken, an exhaustive evaluation of the impacted ecosystem's structure, functioning and composition must be carried out to ensure that key ecosystem functions will be protected, and that it is feasible to restore those that may be degraded or damaged. Otherwise, following the precautionary approach, the interventions must not be carried out. Conservation and restoration activities must consider the connectivity and scale of the landscape to ensure that the conserved or restored ecosystems contribute to the ecosystem integrity of larger ecological systems.

Long-term, scientifically sound, participatory and continuous monitoring systems need to be designed and implemented to evaluate the effectiveness of conservation and restoration activities and make corrections when needed. The effective participation of local communities in the design and monitoring of conservation and restoration projects will help to ensure long-lasting socio-ecological benefits.

Only a combination of community-based, rights-based, gender-just and science-based approaches that are grounded in ecosystems will ensure that ecosystem integrity is conserved and enhanced for the long term, and that the communities who depend on these ecosystems are able to thrive.

CARBON COPY?
HOW A BIODIVERSITY CREDITING SYSTEM MODELLED ON CARBON MARKETS IS DESTINED TO FAIL

SIMON COUNSELL

The concept of biodiversity crediting is being developed much along the same lines as carbon markets currently operate. The idea of credits for biodiversity protection is that they could be bought by, for example, companies wishing to claim to 'offset' the damage they cause to biodiversity in their usual operations, in the same way companies have claimed to be carbon neutral by buying carbon offsets. Not only will this likely replicate the kinds of problems seen in carbon markets, but it will exaggerate and intensify them. This article argues that biodiversity markets modelled on carbon markets will be fundamentally conceptually flawed, will incorporate critical programmatic failures, and will face insurmountable problems and risks at the methodological and project levels.

CONCEPTUAL FLAWS

The underlying concept of carbon offset markets is that one ton of carbon dioxide emissions in one location is pretty much the same as one ton of carbon dioxide not emitted, or stored, in a different location. In theory, advocates argue, the second can be traded against the first, allowing for those emissions to be 'compensated'. Of course this means that total net emissions are not reduced; they simply remain constant, assuming that the reduction or storage of the compensation efforts work perfectly. This problem of 'net zero loss' (rather than *zero* loss) will also apply in biocrediting systems and, if used for offsetting, will *rely* on damage continuing elsewhere. To this extent, the existence of biocredits provides a justification for continuing to damage biodiversity. And of course some of this damage could be permanent and irreversible, making compensation impossible.

The concept of compensation for biodiversity damage through biocrediting suffers another intractable problem. Carbon markets have a common unit of trade: the ton of carbon dioxide. Such a common unit does not exist for biodiversity markets. Each species, population, ecosystem, or any other conceivable unit of biodiversity is unique.

Numerous efforts are being made by different biocredit developers to devise a standard unit. These so far include, *inter alia*:

- one hectare of an ecosystem 'restored' for one year;[51]
- one square metre protected for 20 years;[52]
- a one percent biodiversity 'uplift' on one hectare for one year;[53]
- a one percent biodiversity 'uplift' on one hectare for 25 years;[54] and
- one hectare conserved for one month.[55]

Other more exotic units have also been proposed, although clearly none of them would be interchangeable. More importantly, they all rely on underlying qualitative measures, such as 'uplifting', 'restoring' or 'protecting', which raises questions about how to define them in order to reach a common meaning, and how they can be measured in a standard way.

There have been decades of attempts to achieve broadly similar outcomes through the establishment of protected areas, such as national parks. Yet despite the many hundreds of billions of dollars spent on these parks, the amount of empirical data showing the impact at any biodiversity unit level is surprisingly small, other than for relatively easily monitored populations such as elephants or tigers.[56] Even then it can be difficult to disentangle the effects of the

conservation effort from other factors, such as land use in surrounding areas, demographics, effects of wildlife trade measures, changing preferences, markets and so forth. Even limited monitoring efforts are likely to be intense and lengthy, which could significantly raise the costs of biocredit transactions. Monitoring for standard units based on changes (or the absence of them) over a period of one year or less is likely to result in many meaningless results; populations of individual species can naturally fluctuate massively over years, and hence so can the composition of the ecosystem to which they belong. As well as reflecting complex ecosystem effects, such fluctuations can also be strongly related to climate patterns, which are of course changing and becoming more unpredictable.

The first-mover biocredit programmes foresee using a limited set of indicators to verify the achievement of their preferred measure of outcomes.[57] Hence, rather than directly measuring the claimed outcomes, the entire system will be based on *proxy* measures. The need to reduce the health of populations – or more likely entire ecosystems – to a limited set of values carries the risk that the selected outcomes will be preferentially encouraged to the exclusion of wider ecosystem values. For example, one nascent scheme will focus on the presence of jaguars in the project area. It also raises further questions about the equivalency of units, as the indicators selected are likely to vary even more between systems than the overall quantified outcomes. These selected outcomes will also be subject to high levels of manipulability, as they will probably rely on unreproducible and low-frequency observations, from camera traps or annual quadrat sampling for example.

In practice, the claimed equivalence of 'one ton of carbon' in carbon markets is often not the case.[58] Most credits probably represent much less than a ton of emissions avoided and, in many cases, they represent none at all. The result has been unrestrained greenwashing and widespread claims of 'net zero' carbon emissions, whilst the actual emissions of credit purchasers has continued unabated. For biocredit markets, even if the underlying standardisation problems highlighted above can be resolved, this still does not address the reality that, for example, a one percent biodiversity uplift over some unit of area for a unit of time is unlikely to be equivalent to some kind of 100 percent loss elsewhere, even for broadly similar ecosystems.

Biodiversity market advocates argue that biocredits won't necessarily be used for offsetting,[59] hence the problem of precise equivalence would be less significant. Using this argument, biodiversity credits could be used for example to show the purchaser has made a 'contribution' to a 'nature positive future'. Such ideas have similarly been posed in carbon markets, as it has become clear that carbon offsets rarely or never represent a real ton of reduced emissions (and a growing number of corporate buyers of these credits have been successfully sued in court for claiming that they do). But the use of carbon credits as mere 'climate contributions', rather than as offsets, has attracted almost no interest. Corporations would rather not buy these credits at all. Biocredits are similarly likely to prove unwanted and worthless unless they can be used for claims to offset real damage elsewhere. However, for this purpose, they face fundamental problems of credible equivalence and monitoring.

DESIGN FAILURES

The overall structure of programmes for the creation of biodiversity credits is expected to be broadly similar to programmes for voluntary carbon markets. An organisation or company will set standards for the process of generating credits, and will also run a registry of projects and credit issuance. They will approve specific methodologies (for different ecosystems, for example, or different actions, such as restoration or preservation), and accredit or approve certification companies. These companies will in turn be responsible for auditing projects to ensure they comply with the relevant methodologies.

This programme structure for carbon markets is considered to be highly dysfunctional at best and, at worst, structurally flawed and riddled with conflicts of interest.[60] The standards' bodies universally rely on income derived from the registration of credits, which in carbon markets typically range from about $0.20 to $0.50 per credit.[61] This means that these bodies have a vested financial interest in ensuring that the standards they set out, the methodologies they approve, and the certification audits they oversee and rely on result in the creation of projects and the maximisation of the credits they generate. There is no incentive to reject projects or to minimise generated credits.

The certification companies (known as 'validation and verification bodies', or VVBs) contract directly with the credit-producing projects and have a direct financial interest in producing positive outcomes, as this guarantees future audits and monitoring fees and thus income. The competition between both the overall schemes and the specific VVBs they employ encourages a 'race to the bottom' for standards and auditing.

Furthermore, as they are voluntary bodies, the schemes are overall largely unaccountable. Even complaints' mechanisms are typically internal processes and are unlikely to result in outcomes contrary to a scheme's interests.[62] Whilst most carbon crediting systems are relatively transparent – making full project documents and monitoring and auditing reports publicly available, for example – there has nevertheless been a smokescreen of obscurity created through the sheer complexity of the information contained within the documents. Most of these documents can only be understood with a very high level of technical and mathematical expertise, and most are only available in English.

It is highly likely that these features will be carried over to biocrediting systems. Existing carbon market standards/registry bodies such as Verra, Plan Vivo and Cercarbono are already actively developing systems for biodiversity credits.[63] Other new, potentially more rigorous and less conflicted systems will likely find it hard to compete. The problems seen in voluntary carbon markets are likely to be amplified by the technical challenges inherent in biocrediting. The complexity of biocrediting standards, methodologies and monitoring data will mean that there is even more scope for the 'system gaming' (see below) that carbon markets have barely tried to prevent. The claim still used by carbon programmes several decades into the market's existence – that they are 'learning by doing' – will be a frequent refrain when problems are found in biocrediting systems. This will mask the truths that corners have been cut, vested interests have prevailed, and malpractices have been tolerated.

METHODOLOGICAL PROBLEMS AND RISKS

As with carbon credit generation, biocrediting projects will rely on a process of 'normalisation' and 'mathematisation' of what is essentially a story of what they claim to be achieving in order to create a tradeable asset. As with carbon markets, this will be achieved by demonstrating to a supposedly independent auditor, or VVB, that certain basic rules have been followed and that parameters have been quantified. The most important of these methodologies used in carbon markets are explained below, along with a brief consideration of how they will be even more challenging in biocrediting schemes.

Additionality: This concept assumes that the action generating the credits could not have happened without the income from the sale of credits. Although this is a fundamental requirement for credit generation, its use has proven to be very 'flexible' in carbon markets. Additionality can be demonstrated by, for example, showing that there are technical or cultural barriers to what is being proposed (i.e that it is probably a bad idea!).

Circumvention of additionality requirements in biocrediting will probably be very easy: for example by managing a species or ecosystem in multiple ways that are not legally required or 'business as usual', although these options may not be particularly desirable or helpful. In some cases, such as in existing protected areas, proving additionality in biodiversity schemes could be a challenge. But even here there will likely be easy workarounds, such as claiming that the park was under-resourced or subject to some new threat that was previously not evident. Some advocates of biocredits argue that there should be no additionality requirements for biocrediting, meaning that credits could be issued for something that was going to happen anyway.[64]

Baselines: This concept describes what would have happened in the project area had the crediting programme not occurred. Baselines are essential to environmental crediting schemes (the crediting level is basically the result of deducting what actually happens from what is said would have happened in the baseline). This has proven to be a prime area for manipulation and generation of excessive (and climate-worthless) credits in land and nature-based carbon offset projects.[65] The same 'moral hazard' of

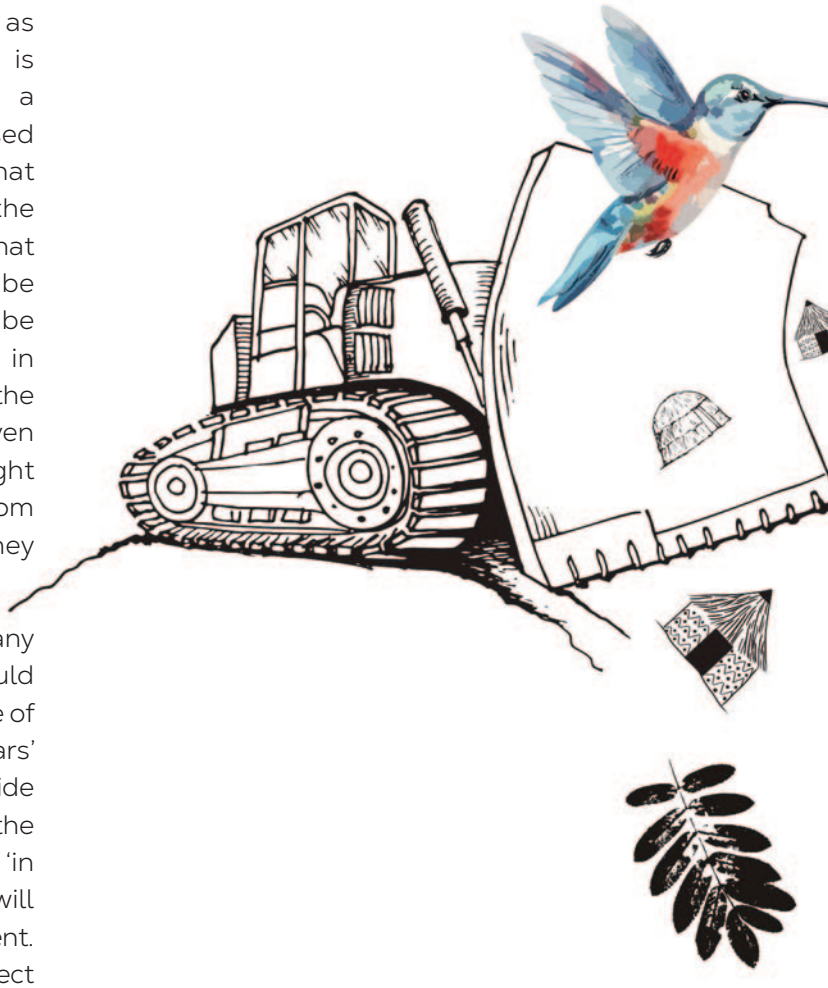
seeking to maximise credits through inflation of counter-factual baselines will likely be much easier to exercise in biocrediting projects. For instance, selected population species data can be used to indicate that that species or even whole ecosystems are in rapid decline even though, as noted above, large fluctuations can occur naturally. Any of the multiplicity of threats to biodiversity – land use changes, demographic changes, trade policy changes, inappropriate subsidies, etc. – could be mobilised to show a high level of threat, even if an empirical and numerically quantifiable demonstration to this end would be extremely difficult.

Leakage: This concept refers to the idea that if the credit-generating action is successful, it should not simply cause the threat or loss to move elsewhere. Again, this has been widely problematic in carbon markets, especially for land-based projects such as 'avoided deforestation' schemes. In practice, it is almost impossible to determine whether, say, a claimed result in protecting a forest caused deforestation to shift elsewhere (though, given that carbon offset projects almost never tackle the *underlying causes* of deforestation, it is very likely that this shift will occur). Such problems will likely be amplified in biocrediting schemes, as it may be impossible to monitor subtle negative changes in ecosystems elsewhere resulting from, for example, the protection of a species in a project. For instance, even if negative changes elsewhere were detected, it might well be completely unclear how to 'deduct' them from the 'success' achieved in the project area if they concerned a different species or ecosystem.

Permanence: This concept refers to the idea that any success achieved through the crediting project should be durable over extended periods of time. In the case of carbon, this is taken to mean broadly in the '100+ years' timeframe (reflecting the length of time carbon dioxide molecules typically remain in the atmosphere). In the case of biocredits, it should probably mean 'in perpetuity', as the damage that biodiversity credits will likely be used to compensate for will also be permanent. But of course no system or project can claim to protect a natural asset for the rest of eternity, hence 'permanence' requirements are likely to be minimal, or the commitments to achieve them simply fabricated.

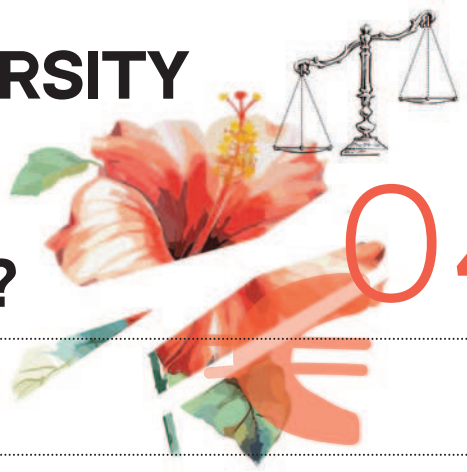
FUNDAMENTAL LACK OF ENVIRONMENTAL INTEGRITY

Each of the issues above should raise serious concerns about the likely environmental integrity of biocrediting schemes. In fact *all* of them are likely to emerge. The decades-long experience of voluntary carbon markets has been that these unregulated schemes have allowed malpractices to flourish and become the norm, resulting in widespread greenwashing, highly questionable environmental outcomes, and profligate profits for some. There is every reason for regulators, and indeed those involved in currently developing such schemes for biodiversity, to call for a pause. This would allow for the serious consideration of how, or if, such outcomes can be avoided and whether biocredit schemes should even be permitted.



HOW MUCH WILL BIODIVERSITY CREDITS AND OFFSETS CONTRIBUTE TO BIODIVERSITY FINANCING?

04



HEITOR DELLASTA / Global Youth Biodiversity Network

It is estimated that the global biodiversity finance gap will range from between US$598 to US$824 billion annually until 2030. However, many of the current narratives and proposals to address this gap are deeply embedded in political and economic interests and influenced by power imbalances that determine which values of nature are acknowledged and integrated into decision-making processes and which are not.[66]

HOW IS BIODIVERSITY FINANCE CURRENTLY BEING FRAMED?

Two approaches can be particularly useful in understanding the biodiversity finance discussion.

The first involves channelling financial resources to either increase positive or reduce negative flows.[67] Increasing positive flows means enhancing the total resources allocated for conservation through public or private expenditures and other mechanisms that generate or leverage financial resources for nature, such as with private sector financial schemes or direct payments. Conversely, reducing negative flows focuses on decreasing the financial resources that contribute to biodiversity degradation. This reallocation requires a range of policy interventions across both the public and private sectors. Public sector actions include regulation and incentives to prevent negative flows and the reform, redirection and elimination of harmful biodiversity subsidies. In the private sector, this encompasses practices such as environmental and social risk management, impact assessments and supply chain evaluations.

The second focuses on the type of approach utilised: either market-based or non-market-based.[68] Market-based approaches assign economic value to ecosystems and biodiversity to facilitate trading or selling these values in public and private markets. They include green bonds, payments for ecosystem services, credits, and sustainability standards. On the other hand, non-market-based approaches are closely tied to local biodiversity actions but cover a broader spectrum of essential support, such as biodiversity conservation, ecological agriculture, environmental education, governance, community engagement and rights advocacy.

Too much emphasis has been placed on increasing positive financial flows through market-based approaches, despite the numerous challenges and risks they pose to ecosystem integrity and human well-being.[69] Evidence shows that decades of private finance, blended finance and voluntary mechanisms have failed to address the biodiversity funding gap at the necessary scale or pace,[70] and, in many cases, have even resulted in harmful environmental and social impacts.[71]

Even so, there is a growing effort aimed at increasing financial flows through market-based approaches, particularly by developing and scaling up biodiversity credits. These financial instruments are being promoted by their proponents as having the greatest potential to attract private investment for biodiversity conservation and restoration.[72, 73]

Biodiversity credits are closely linked to offset schemes; however, proponents argue that their use extends beyond offsetting.[74] Other proposals include using these credits for broader purposes, such as enhancing carbon credits for better nature outcomes, facilitating access to ecosystem services for improving natural capital, contributing to nature recovery efforts beyond direct and indirect impacts, and offering bundled products that combine conservation with economic benefit.[75]

WHICH KEY ASPECTS OF BIODIVERSITY FINANCE NEED URGENT ATTENTION?

To address the drivers of biodiversity loss, it is more effective to reduce the negative financial flows from governments and businesses that directly harm biodiversity than to increase positive financial flows through market-based approaches.

There is an urgent need for reform in the economic and financial sectors, as well as for effective regulation, actions and policies to address critical biodiversity issues.[76] Harmful subsidies and other damaging public and private financial flows remain significant drivers of biodiversity loss. The financial sector, for instance, has a profound impact on biodiversity as it provides large amounts of credit and capital for activities that contribute to environmental degradation.

Between 2015 and 2023, over US$1 trillion in global credit was funnelled into large corporate groups operating in sectors that pose high risks to biodiversity.[77] Additionally, in 2023, public and private financial flows responsible for biodiversity loss and associated environmental damage were estimated at US$7 trillion.[78]

Moreover, little to no effort has been made to expand and unlock financial resources for local biodiversity initiatives grounded in non-market-based approaches. Biodiversity financing must acknowledge the vital role played by Indigenous Peoples and local communities as key drivers of successful governance and environmental conservation. Historically, these groups have been under-recognised and insufficiently supported in securing their land and resource rights.[79]

Since 2020, funding for land tenure rights and the stewardship of ecosystems and biodiversity has averaged only US$517 million per year.[80] While this represents an increase compared to previous years, there is little evidence of a systematic shift in funding modalities or more direct financial support from donors to organisations led by Indigenous Peoples and local communities. Moreover, the disparity becomes even more pronounced when considering women and youth as rightful stewards of the Earth, as there is no comprehensive global figure tracking financial support for these groups.

Addressing these aspects of biodiversity finance is key to unlocking financial resources in a less risky, more effective and equitable way.

Biodiversity credits are still a long way from being aligned with market expectations, operating within a framework of supply and demand, and ensuring both credibility and transparency. Without these essential standards, the credits simply have no viability. This raises a critical question: who will purchase biodiversity credits, and for what purpose, if not for offsetting schemes?

In the first place, there is no meaningful demand and limited market interest in biodiversity credits.[81] Some initiatives try to create demand by pressuring companies to take responsibility for their nature-related impacts, dependencies and risks, but fail to recognise the measurement challenges for companies; this simultaneously allows them to continue greenwashing.[82] Current voluntary disclosure tools also pay excessive attention to reporting business dependencies and risks, rather than reporting negative impacts on biodiversity and human rights.[83]

Furthermore, recent impact assessments have yielded poor results, revealing issues in terms of market participation, expectations and trust.[84] A loss of investor confidence severely limits the effectiveness and growth of these markets, primarily due to the absence of science-based methodologies. Misaligned incentives prevent project developers from reliably determining if their credits meet necessary

expectations and baselines, while buyers are hesitant to participate in markets that are flooded with dubious credits and may lack credit quality assurance.

Due to these difficulties, biodiversity credits will primarily end up in offset schemes, which are still the only currently feasible application from a market demand perspective. So, given the potential negative impacts of biodiversity offsets for both nature and people,[85] it is essential that the door also be closed to biodiversity credits, whether for offsets or for other purposes. This indicates that these biodiversity credit markets are not as viable as many expect, and are certainly not the answer to closing the biodiversity finance gap.

WHAT IS REALLY NEEDED TO TRANSFORM BIODIVERSITY FINANCE?

We must move beyond simply attempting to fill the funding gap by initiating transformative change that addresses the underlying drivers of biodiversity loss.

Increasing evidence suggests that the most effective strategy is to reduce harmful financial flows from governments and businesses that negatively impact biodiversity, while significantly increasing public financing for biodiversity through debt and tax justice.[86, 87]

This includes reversing decades of tax cuts on personal income and corporate revenue and establishing an international tax convention to equitably capture wealth from both public and private sectors to fund nature and climate initiatives. Additionally, restructuring and cancelling sovereign debt would not only remove the conditions driving countries to harmful activities but would also more fairly allow countries to prioritise spending on biodiversity. Ensuring the broad inclusion and participation of rightsholders and civil society would enable collective decision-making on funding priorities for nature.

Non-market-based approaches must be at the centre of the discussion on biodiversity finance. These offer an opportunity to link funding to the recognition and support of governance, conservation practices, sustainable resource use and livelihoods, particularly by scaling up grassroots initiatives led by Indigenous Peoples, local communities and rightsholders.[88] Secure tenure and funding for local biodiversity actions are among the most effective, equitable and efficient ways to protect ecosystems and biodiversity.[89]

These include designing and implementing direct funding instruments, adaptive performance-based payments, and increasing development assistance and appropriate philanthropic contributions. Strengthening the role of collective actions by Indigenous Peoples and local communities and supporting the community-driven management of territories based on cooperation, solidarity and broader civil society support are also necessary key actions.

While closing the nature financing gap is essential, there is insufficient justification to focus on developing and scaling biodiversity credit markets. Pursuing such market-based solutions risks diverting time and resources from more immediate and effective solutions that prioritise decision-making processes centred around nature and people.

THE MAIN INSTITUTIONAL DEVELOPMENTS IN BIODIVERSITY OFFSETTING AND CREDITING

05

FRÉDÉRIC HACHE / Green Finance Observatory

While biodiversity offsetting has a long history – from the first US mitigation banks in the 1980s to the launch of New South Wales' Biodiversity Banking and Offset Scheme in 2008, and the failed attempt by the European Commission to include it in its revision of the EU Habitats and Birds Directives in 2014 – the last few years have seen many key institutional developments.

THE UK'S BIODIVERSITY NET GAIN MARKET

In February 2024, the UK launched its compliance biodiversity offset programme. The biodiversity offset market is part of four so-called 'nature markets' in the UK, together with carbon sequestration, nutrient mitigation trading (aka permits to pollute rivers), and flood alleviation.[90]

Under the biodiversity offset programme, developers are required to offset 110% of their residual destruction of nature when building new housing and industrial or commercial developments as a condition of the planning permission process.[91]

The fact that this is a compliance market means that demand is guaranteed by law; this is a major difference with voluntary carbon offset markets. This development will lead to a greatly expanded market, and thereby constitutes a massive present to private investors.

Offsetting can be delivered on-site, off-site or via the purchase of credits from the government. Crucially, offsetting can also take place abroad in "low- and middle-income countries"[92] where land is far cheaper, under the pretext of unlocking private finance for poor countries and supporting the growth of international markets.

Several market features favour private speculators and market liquidity over environmental integrity. For example, in some cases offsetting with a different type of habitat than the one that was destroyed is allowed. Furthermore, secondary market trading is allowed, a feature that is completely unnecessary from a conservation perspective and creates additional price volatility for credits and thus related conservation projects.

The design of the UK's Biodiversity Net Gain market is particularly important, as the UK is one of the two countries leading the International Advisory Panel on Biodiversity Credits (IAPB), an initiative aimed at creating a global biodiversity market.

THE INTERNATIONAL ADVISORY PANEL ON BIODIVERSITY CREDITS

The International Advisory Panel on Biodiversity Credits (IAPB) is arguably one of the two most important initiatives promoting the privatisation of conservation policies and their transfer to financial markets. In addition to its co-chairs from the French and UK governments, its members include representatives from the World Economic Forum, IUCN, the NatureFinance lobby group, BNP Paribas, AXA, EY, the Taskforce on Nature-related Financial Disclosures (TNFD), the Nature Conservancy and the Science Based Targets initiative (SBTi).[93]

This initiative pushes for the creation of a global compliance biodiversity offset market, while sometimes claiming that the credits should not be used for offsetting purposes[94] but only for so-called 'nature positive'[2] investments. Indeed, this initiative initially went to great lengths to pretend that biodiversity credits are different from biodiversity offsets with the goal of avoiding criticism related to the well-known lack of integrity of biodiversity offsetting.

2 The Nature Positive Initiative (NPI) defines 'nature positive' as the goal to "Halt and Reverse Nature Loss by 2030 on a 2020 baseline, and achieve full recovery by 2050." https://www.naturepositive.org/app/uploads/2024/02/The-Definition-of-Nature-Positive.pdf

Also noteworthy is the emphasis put on obtaining the endorsement of Indigenous Peoples and local communities for this initiative, although balanced forums are not provided to this end. This suggests that the IAPB's market proposal will endorse international offsetting in Global South countries, which is much worse than domestic offsetting. Rather than steering clear of Indigenous land, this proposal will open the door to massive land grabs while simultaneously trying to avoid the label of 'green neocolonialism'.

During a recent event, the IAPB stated that it expects to present its final recommendations and possibly launch a pilot market at CBD COP16.[95] IAPB co-chair Sylvie Goulard also confirmed that biodiversity credits will be used for offsetting "when regulation forces companies to offset their damages as is the case in France and Australia". She further mentioned that offsetting will take place for a large part in the Global South, stating it would "bring funding to those who need it the most" (this claim has already been debunked by La Via Campesina).[96] She also stated that there can't be a single global biodiversity market but rather a collection of local markets, and that the Corporate Sustainability Reporting Directive (CSRD) will push for the development of biodiversity credits.[97]

THE BIODIVERSITY CREDIT ALLIANCE (BCA)

The Biodiversity Credit Alliance was launched during CBD COP15 with support from UNDP, the United Nations Environment Programme Finance Initiative (UNEP FI) and the Swedish International Development Cooperation Agency (SIDA). Its members are mostly carbon and biodiversity developers, lobbyists and other promoters, and its goal is also to support the creation of a global biodiversity credit market in line with Target 19d of the Global Biodiversity Framework (GBF), which calls for the "stimulat[ion of] innovative schemes such as (...) biodiversity offsets and credits".

It is worth noting that the BCA has already stated its support for issuing biodiversity credits before any positive biodiversity outcome has been measured, for example in cases where *"it is simply not practical to wait for all biodiversity outcomes to be achieved to award credits"* or when *"they are difficult to measure or slow to achieve"*.[98] Favouring expediency over environmental integrity contradicts the stated intention of issuing 'high integrity' credits.

The BCA will present a report on biodiversity credits at COP16, jointly published by the Biodiversity Credit Alliance, the World Economic Forum and the International Advisory Panel on Biodiversity Credits (IAPB).[99]

THE EUROPEAN COMMISSION'S NATURE RESTORATION LAW AND NET GAIN PRINCIPLE

The European Commission has been promoting biodiversity offsetting since 2010,[100] originally under the name 'habitat banking' and more recently as 'nature-based solutions' and biodiversity credits.[101] While the use of the credits as offsets is ostensibly excluded, the EU's biodiversity strategy is based on a 'net gain' principle. This means that new destructions of nature are measured together with restoration projects in a single metric; biodiversity credits can thus be linked to restoration projects and used de facto as offsets, as an increase in conservation or restoration actions could obfuscate an increase in destruction in the indicator.[3]

The EU's Nature Restoration Law, which introduced mandatory restoration targets, combined with its net gain principle, means that the EU is headed towards to a compliance rather than voluntary biodiversity offset market.

The only piece of EU legislation needed to launch such a market is a text proposing to fund the Nature Restoration Law with tradable credits.[102] A European Parliament press release on the Nature Restoration Law agreement stated: "within 12 months of this Regulation entering into force, the Commission will have to assess any gap between restoration financial needs and available EU funding and look into solutions to bridge a gap if it finds one."[103] In view of the definition of biodiversity offsets and credits in Target 19 of the GBF, it is very likely that these would be used to bridge this gap. In fact, EU Commission president Ursula Von Der Leyen confirmed the new Commission's intention to create "a market for restoring our planet" in a recent speech.[104]

3 The same applies to 'Nature Positive' investments, whose goals include "net positive by 2030." https://www.naturepositive.org/app/uploads/2024/02/The-Definition-of-Nature-Positive.pdf

AUSTRALIA'S NATURAL STEWARDSHIP TRADING PLATFORM

In 2023, Australia passed the Nature Repair Act,[105] which established a framework for the world's first national legislated voluntary biodiversity market. Scheduled for launch in January 2025, it will create a marketplace called the National Stewardship Trading Platform where individuals and organisations can trade biodiversity certificates linked to nature repair projects. As long as this market remains voluntary, this initiative is less important that the aforementioned ones.

INSTITUTIONAL MOMENTUM NEEDS TO BE HALTED

The above developments and the massive economic and political power of those who support them are a cause for serious concern, as is the almost complete lack of public awareness around this issue. The moves to create various markets for biodiversity are troubling, given their potential negative impacts on biodiversity and human rights, and the very likely use of biodiversity credits for offsetting purposes. Let´s make sure biodiversity policymakers don´t repeat the failures and related lost decades of climate action caused by carbon markets.

BIODIVERSITY CREDITS AND OFFSETS: INCOMMENSURABLE COLONIAL INSTRUMENTS

06

TAMRA L. GILBERTSON PHD / Climate Justice Program of the Indigenous Environmental Network

'Fortress conservation' is a colonial assumption originating from an older Eurocentric Cartesian concept that humans are separate from nature. This idea asserts that nature can only be abundant and 'wild' if humans are absent from the land. Such notions of wilderness, wild open space and *terra nullius* have been used to justify genocide and to forcibly remove Indigenous Peoples from their territories since the beginnings of colonialism.

The belief that humans are inherently detrimental to nature and that 'empty lands' need to be controlled by so-called 'civilised' societies continues to play out today within the framework of the United Nations Convention on Biological Diversity (UNCBD). Biodiversity offsets and credits spring from these concepts, transforming 'nature' and the rich historical biodiversity in Indigenous Peoples territories into fungible, tradeable, exchangeable and commensurable units within the context of neoliberal economic monetisation and financialisation.

A clear point in fact is that the majority of the world's biodiversity is protected by Indigenous Peoples in their territories. All living things would be in an even worse situation today without this deeply important protection and defense of biodiversity. Since the majority of Mother Earth's biodiversity is situated within Indigenous Peoples' territories, the frameworks that are negotiated within the UNCBD have distinct and direct implications the Rights of Indigenous Peoples, including inherent, spiritual, cultural and legal rights. Indeed, the UNCBD should be guided by the traditional knowledge systems of Indigenous Peoples. Yet this body rarely includes Indigenous Peoples as leaders, directors, key actors or writers. It is from this perspective that we should analyse the deeply flawed and dangerous concept of biodiversity credits and offsets.

Biodiversity offsetting stems from the notion that an ecosystem can be rebuilt in another region; that destruction of an ecosystem can be monetised, financialised and accounted for on a database; that extractive development and economic incentives are commensurable with ecosystem destruction; and that land grabbing can be justified. In the context of displaced biodiversity, it is imperative that these questions be asked: From whose lands is biodiversity being displaced, and where will it be 'replaced'?

Rather than supporting existing biodiversity, credits and offsets justify the encroachment by corporations and conservation NGOs into the rich biodiversity and nature found in Indigenous Peoples territories. This will allow destructive industries to access intact forests, wetlands and other ecosystems and to destroy them with impunity. In fact, many countries, including Colombia, have a long history of legal frameworks that allow for this kind of devastation justified by so-called 'compensation'.[106]

Although the idea behind compensating for the destruction of ecosystems has been around since the 1980s, with wetland banking in the US and other programmes, the concept of 'innovative financial mechanisms' for pricing biodiversity was popularised in 2010 at the UNCBD.[107] The Economics of Ecosystems and Biodiversity (TEEB) project, led by Deutsche Bank, was launched in parallel, advancing the idea of incorporating the economic 'value' of ecosystems into governmental and corporate decision-making. Funded by the EU Commission, Germany, the UK, the Netherlands, Norway, Sweden and Japan, TEEB was welcomed by the CBD.

Proponents of compensation programs argue that an accounting system is needed to reflect the economic value of biodiversity. The reductionist process of turning a complex and diverse understanding of nature and biodiversity into a monetised unit to be bought and sold and building it into a system that prices biodiversity as a unit is deeply flawed.

When biodiversity is reduced to a unit in order to be counted and priced in a trading system, these units become financialised products. Next, the construction of apparent equivalences between different biodiversity types, locations, times and contexts are then exchanged in a system with the main goals of expansion and profit. The constant growth economy applied to unitised, monetised and financialised 'nature' and 'biodiversity' is the first contradiction in the plan to create biodiversity credits and offsets. One cannot simultaneously aim to expand and profit from a commodity that one is trying to sustain and ultimately use less of.

The next key contradiction is the argument that destruction in one place can be compensated with biodiversity protection, or re-creation, elsewhere. This is simply impossible. Firstly, ecosystems are not substitutable; they are very specific to time and place. This fallacy is seen in language such as 'No Net Loss' in biodiversity, with the same logic applying to 'Zero Deforestation' claims. For these purposes, a whole set of incommensurable practices, undertaken at different places and times, are treated as though they are the same. The neoliberal market fundamentalism rife in these schemes homogenises nature by assuming that the habitat of one destroyed region is similar to that of another. It also neglects to consider whose livelihoods are impacted and a host of other socio-cultural factors.[108]

Offsetting units and equivalences also ignore other knowledges and values attached to nature, particularly Traditional Indigenous Knowledge (TIK), which continues to be exploited in the name of 'development'. The process of creating an accounting system does not account for the foundation of what makes a natural system unique, nor does pricing nature consider the spiritual, cultural and inherent Indigenous Rights to a specific area. Instead, this process flattens meaning and at its core represents an incommensurable process that diminishes socio-nature interactions.[109]

Importantly, biodiversity credits and offsets are set up to benefit corporations and the state. They are of no use in the ecosystems of Indigenous Peoples, where nature and biodiversity are already protected . Rather, offsets and credits confuse a complex spiritually and culturally significant ecosystem with a unit of measure created by humans to justify environmental exploitation and degradation. These schemes displace biodiversity, which ultimately results in its loss. Moreover, biodiversity offsets and credits promote land grabbing, disregard free, prior and informed consent (FPIC) as enshrined in the Indigenous and Tribal Peoples Convention No. 169 and the 1993 Colombian Constitution, and legalise the violation of the rights of Indigenous Peoples as enshrined in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP).

Unfortunately, the UNCBD's COP16 is poised to continue to promote biodiversity offsets and credits as well as conservation targets without Indigenous Peoples at the helm. In doing so, the Convention advances an agenda deeply influenced by powerful nations in the Global North, colonial processes, fortress conservation, and extractive economic pursuits at the expense of the rights of Indigenous Peoples, the climate and biodiversity.

THE GENDER AND HUMAN RIGHTS DIMENSIONS OF BIODIVERSITY OFFSETS

07

VALENTINA FIGUERA MARTÍNEZ / Global Forest Coalition (GFC)

The intersection of gender and biodiversity is a key consideration for equitable, inclusive and effective conservation practices. Although this approach has gained recognition in the global policy-making agenda over the last decades, urgent policy action to effectively address gender inequalities is still pending, along with the need to address biodiversity loss. Ensuring gender-just participation in decision-making as well as access to resources is a cornerstone for respecting, protecting and promoting human rights, addressing structural changes and going beyond the 'agreed language' that has dominated international fora for decades.

Addressing gender issues in relation to biodiversity involves identifying the influence of gender roles, relations, and inequalities on the use, management and conservation of biodiversity. Division of labour, control over resources, gender-based violence, recognition of differentiated needs, decision-making power, access to knowledge and factors of differentiation (e.g. ethnicity, race, age, social class and sexual orientation) are some of the fundamental considerations in the assessment of how women, gender diverse people and men use and manage biodiversity resources.

The Kunming-Montreal Global Biodiversity Framework (KMGBF) includes considerations to ensure gender equality, the empowerment of women and girls, the reduction of inequalities, and the adoption of a human rights-based approach that entails respecting, protecting, promoting and fulfilling human rights. Similarly, the Gender Plan of Action (GPA), as well as Targets 23 and 22 of the CBD, introduce a framework to ensure a gender-responsive approach to biodiversity action, as well as participation in decision-making and access to justice and information related to biodiversity for Indigenous Peoples and local communities.

OFFSETS AFFECT GENDER EQUALITY AND HUMAN RIGHTS

Nevertheless, biodiversity offsets, aimed at compensating for loss of biodiversity in one place by restoring another area, are another market-based instrument that will pose significant risks to the fulfilment of human rights and achievement of gender equality. This will further delay urgent action to address the root causes of biodiversity loss. Similar to other market-based schemes, biodiversity offsets have been shown to have gendered social impacts in the landscapes where they have been implemented, as well as cultural and socio-economic consequences for nearby communities.

In addition to the documented socio-ecological consequences and inconsistent methodologies and conceptual flaws in the approach, the impacts of biodiversity offsets include forced evictions, arbitrary detentions, land grabbing, various forms of gender-based violence, food insecurity, destruction of livelihoods and traditional practices, and human right violations. Indigenous Peoples and local and Afro-descendant communities often face economic and political discrimination due to structural barriers based on gender, race, age and other factors. Communities depend on non-monetary resources that forests and other ecosystems provide for free, including water, firewood, fruits, seeds and medicinal plants, and their social risks are increased when offsetting interventions and unregulated schemes are developed.

Biodiversity offsets and other net approaches to biodiversity loss ignore the links between biodiversity and local livelihoods as well as the socio-cultural values of natural ecosystems for Indigenous Peoples, women, and local and Afro-descendant communities. Reports from communities have shown how extractive projects, such as commercial plantations, have contributed to increased sexual harassment and violence against women. Addressing the underlying causes of biodiversity loss through direct access to financial resources for frontline actors to support their community-led conservation practices is needed to achieve substantive biodiversity outcomes. This is in line with the determinants of transformative change.

Policies that defend gender-responsive and community rights-based approaches are fundamental to fighting extractivism, intensive monoculture, climate colonialism, racism, gender-based violence and other forms of power imbalances. The transformation of the economic system and its growth patterns, which necessarily implies cutting emissions, halting deforestation and stopping the overexploitation of natural ecosystems, is a pathway that should be at the centre of biodiversity action.

CONCLUSIONS AND REFLECTIONS

08

LIM LI CHING / Third World Network

The crystal-clear conclusion of the articles in this publication on various aspects of biodiversity offsets and credits is that these market-based mechanisms are not fit for purpose. Worse, they may exacerbate negative impacts on biodiversity, gender equality and human rights.

Those who stand to lose the most are those who have contributed the least to biodiversity loss: Indigenous Peoples, local communities, peasants and other small-scale food producers, women and youth. Land may be grabbed from them for biodiversity offsetting projects, resulting in dispossession and devastation of livelihoods. Time and time again, we see the rights of the communities that care for ecosystems through their knowledge, innovations and practices being trampled underfoot. Meanwhile, corporations and financial entities continue to greenwash their destructive activities under the guise of offset schemes.

FLAWED TO THE CORE

As it is inextricably linked to biodiversity destruction, the basic premise underlying biodiversity offsetting is flawed from the outset. No amount of accounting trickery can cover up this fact. Even if the professed intentions are to somehow avoid or restore biodiversity, these processes remain plagued by numerous challenges and high costs.

Furthermore, the technical challenges associated with the operationalisation of biodiversity markets – including issues like additionality, permanence, leakage and baselines – are already present and problematic in carbon markets. The number of cases exposing carbon offsets as 'worthless' in their failure to address carbon emission reductions is growing. What's more, the challenges – which include measuring biodiversity for offsets, ascribing a common 'tradeable' unit, and ensuring ecosystem integrity – make the situation even more complicated and prone to failure.

While there is much hype from proponents about the potential of biodiversity credits to generate new funding and incentivise biodiversity protection efforts, the hard reality is insurmountable: there is yet little demand for biodiversity credits, apart from for offsetting purposes. And if biodiversity credits are purchased without the intention of using them for offsetting, they are most likely being purchased for greenwashing purposes.

WRONG PRIORITIES

Currently, the amount of financing purportedly or potentially generated by biodiversity markets is far outstripped by the amount that is flowing towards biodiversity-destroying activities. At most recent count, close to US$7 trillion – roughly 7 per cent of global GDP – is invested each year by both public and private sector sources in activities that have direct negative impacts on biodiversity.

The current push for biodiversity offsets and credits has been turbocharged by their inclusion in Target 19(d) of the Kunming-Montreal Global Biodiversity Framework as one of the "innovative" schemes that should be "stimulated" to mobilise resources for biodiversity. Recognising the grave impacts these markets could have on biodiversity and human rights, however, the Target requires that environmental and social safeguards be applied. These impacts must be seriously evaluated and prevented, and safeguards – especially if not legally binding – may not be sufficient to do so.

Various national and international efforts for biodiversity offsetting and crediting are underway, and these will only end up promoting the privatisation and commodification of biodiversity. This notion is an affront to Indigenous Peoples and local communities. Private markets, driven by short-term financial considerations, will price and prioritise those biodiversity actions most favourable to them, at the expense of governments attempting to act in the public interest.

TRANSFORMATIVE CHANGE IS NEEDED

Civil society says that it is high time for a course correction. A *statement* signed by over 270 organisations and academics calls on governments, multilateral bodies, conservation organisations and other actors to stop the promotion, development and use of biodiversity offsetting and crediting schemes.[110]

Instead, civil society calls for a focus on equity and transformative change to tackle the underlying causes of biodiversity loss. This must include accountability and effective regulation to prevent damaging corporate activities and to stop harmful financial flows and investments. Equally important is the need to respect and protect the rights of Indigenous Peoples, local communities, peasants and small-scale food producers, women and youth, while supporting just transitions and community-led approaches to biodiversity protection.

Following this path will allow biodiversity and peoples to thrive, free of the dangerous distractions of biodiversity offsets and credits.

ANNEX

CIVIL SOCIETY STATEMENT ON BIODIVERSITY OFFSETS AND CREDITS

We, the undersigned, express our grave concerns about biodiversity crediting, offsetting, and related trading schemes. Biodiversity markets are being modeled on the carbon markets, which have serious failings. Additionally, there are insurmountable problems and dangers:

A wrong answer to the wrong question

- The justification for biodiversity offsets and credits is that there is a huge gap between the funding needed and what is available for biodiversity protection. Biodiversity offsets and credits build on a top-down, fortress conservation model, which is highly ineffective, costly, has often involved human rights abuses, and is the wrong response to address biodiversity loss.
- Instead, other proven forms of biodiversity protection, such as the legal designation of Indigenous Peoples' territories, and environmental regulation and enforcement, should be implemented.
- There is a deficit in the prevention and regulation of biodiversity-destructive activities, which amounted to $7 trillion annually in 2023. Reforming and redirecting harmful subsidies, estimated to be $1.7 trillion in 2022, and providing public financing in the form of grants, are better ways to address the funding gap, avoiding the need for risky financing schemes.[111]
- Just as carbon offsetting delays climate ambition, biodiversity offsetting will only delay urgent action on addressing the root causes of biodiversity loss.

Offsetting and greenwashing

- Cumulative land-based carbon-removal pledges, before the new land-based biodiversity credits that are now being scaled up, added up to 1,200 million hectares globally, nearly as much as all agricultural land.[112] There is no more land to offset carbon emissions or biodiversity loss without displacing peoples and undermining food systems.
- Based on the long experience with carbon credits, claims that biodiversity credits are 'additional contributions' to biodiversity protection and would not ultimately be used for offsetting purposes are either naïve or false.[113] If biodiversity credits are purchased without the intention of using them for offsetting purposes, they are most likely purchased for greenwashing purposes.

Failing on equity and rights

- International biodiversity markets could allow elites, especially in the Global North, to continue destroying ecosystems, whilst purchasing cheap and abundant credits from the Global South.
- Biodiversity offsetting can create conflicts over tenure rights and the use of lands, fisheries and forests, competing with agroecology and smallholder agriculture, undermining food sovereignty. It will likely drive land grabbing, community displacements, increasing land inequality[114] and human rights abuses, just as carbon offsets do.[115]
- Indigenous Peoples, local communities, peasants and other small-scale food producers, women and youth, the guardians of most of the planet's biodiversity, typically have received only a fraction of the proceeds of offset projects in their lands, whereas project developers and financial intermediaries receive the biggest share. Resources generated by market supply and demand are further unlikely to be equitably accessible for communities.

Perpetuating market-driven failures

- The commodification of nature through the monetary valuation of ecosystem functions and the creation of biodiversity markets runs fundamentally in opposition to the cosmovisions of many Indigenous Peoples and other

communities, who understand Nature as our mother, not as a commodity.[116]

- Biodiversity offsets and credits allow private markets to price and prioritize biodiversity actions, diminishing governments' role in biodiversity protection as a public good. Market-based biodiversity protection, driven primarily by short-term financial considerations, cannot be consistent with scientific knowledge on species and ecosystem prioritization needs.[117]
- Offsetting schemes typically rely on creating a future scenario of what would have happened without the project. These 'baseline' scenarios have proven extremely easy to manipulate, resulting in false and worthless credits.
- Proving 'additionality' is difficult, as it is impossible to demonstrate that conservation outcomes would not have happened otherwise. Achieving 'permanence', i.e. demonstrating that the positive changes will last over time, is inherently impossible. 'Leakage', where the negative impacts on biodiversity will only be shifted elsewhere, is a tangible risk.
- The problems with additionality, permanence, leakage, and baseline manipulation will be much more severe and intractable in biodiversity markets than in carbon markets, where these problems already exist.

Weak measurement methodologies

- Finding a common unit for biodiversity accounting purposes would involve serious over-simplification of ecosystem values and functioning. It is not possible to simplify millions of species and their complex web of interdependences into a few tradable assets.[118]
- Proposals to measure biodiversity gains are based on poor methodologies, many of which allow the cherry-picking of indicators, ignoring important and unique attributes of ecosystems.
- The different ways of living from, in, with, and as, nature illustrate the challenges of taking into account the diverse values held by peoples, which are not comparable or interchangeable.[119]

Uncertain revenues

- 'Investment' through biodiversity markets will be unstable and changeable, leading to unpredictable revenue swings for recipients, and fickle economic incentives for conservation.[120]
- No major companies have confirmed their interest in purchasing biodiversity credits. Moreover, they are pulling out of the carbon markets after recent exposés of their inherent flaws. There is every reason to expect that the biodiversity market will follow the same path.

Poor governance and conflicts of interest

- There is an absence of effective regulation based on human rights and environmental law. Biodiversity offsets and credit schemes that result in human rights violations, or do not live up to minimal environmental standards, are rarely sanctioned.
- The central involvement of organizations such as Verra and the absence of effective regulation based on human rights and environmental law are highly problematic. They have been responsible for issuing hundreds of millions of phantom carbon credits and have been unable to prevent human rights abuses in projects audited in accordance with their standards.[121]
- The experience with carbon markets showed us that there is a conflict of interest when it is the same organization which is financially benefiting from the issuance of credits whilst overseeing the process of standard-setting and third-party validation and verification.

Biodiversity credits and offset schemes are false solutions to a false problem - there are much better ways to increase biodiversity financing, without recourse to these risky schemes. Biodiversity offsetting, like carbon offsetting, enables rich countries, corporate actors, financial institutions, and other actors to profit from the biodiversity crisis they have created and maintain the status quo, avoiding implementing politically difficult decisions to regulate destructive activities domestically while creating a new asset class for their financial sectors.

We call on governments, multilateral bodies, conservation organizations and other actors to stop the promotion, development and use of biodiversity offsetting and crediting schemes. Instead, we call on them to prioritize transformational change in tackling the underlying causes of biodiversity loss, including: promoting effective regulation of harmful corporate activity; recognizing and respecting, protecting and promoting the right to land of Indigenous Peoples, local communities, small-scale food producers and women; stopping financial flows and investments that

are harmful to biodiversity and peoples; removing harmful government subsidies; changing production and consumption patterns, especially of the rich; supporting a just transition, including the transformation of food systems toward agroecology; ensuring funds flow directly and fairly to Indigenous Peoples, local communities, small-scale food producers, women and youth for community-led approaches; pursuing effective and equitable means of conservation; and taking immediate steps to phase down the supply and use of fossil fuels.

See https://www.biodmarketwatch.info to sign on and for the full list of signatories.

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TRANSFORMATIVE CHANGE IS NEEDED. CIVIL SOCIETY SAYS THAT IT IS HIGH TIME FOR A COURSE CORRECTION. OVER 270 ORGANISATIONS AND ACADEMICS SIGNED A STATEMENT TO CALL ON GOVERNMENTS, MULTILATERAL BODIES, CONSERVATION ORGANISATIONS AND OTHER ACTORS TO STOP THE PROMOTION, DEVELOPMENT AND USE OF BIODIVERSITY OFFSETTING AND CREDITING SCHEMES.

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Global Forest Coalition

Global Youth Biodiversity Network

GREEN FINANCE OBSERVATORY

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