REGULATED DESTRUCTION

How biodiversity offsetting enables environmental destruction

Friends of the Earth International

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Cover, p5, p24 Community agroecology and agro-forestry project, Sungai Buri, Sarawak, Indonesia. Members of the women's group picking vegetables. *Amelia Collins/Friends of the Earth International*
p11 Penang Inshore Fishermen Welfare Association (PIFWA), Mangrove Education Centre, Seberang Perai Selatan, Penang, Malaysia. *Amelia Collins/Friends of the Earth International*
p21 Community agroecology and agro-forestry project, Sungai Buri, Sarawak, Indonesia, Members of the women's group including the two women leaders. *Amelia Collins/Friends of the Earth International*

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Introduction

This publication forms part of a series of two. It explores how *financialization of nature*[1] as a central plank of the green growth discourse has evolved since the turn of the millennium.

This report looks at how *financialization of nature* allows corporate destruction to continue behind a smokescreen of market-based environmental instruments. Compensation offsets, and biodiversity offsetting in particular, are the most rapidly advancing of these instruments. They are increasingly linked with compensation trust funds and biodiversity banks as implementing mechanisms.[2]

Chapter 1 discusses key assumptions behind biodiversity offsetting and shows why offsetting leads to more, not less, environmental destruction, and often amounts to a double land grab where corporations control land use at two locations — the site of the corporate destruction and the location the company now claims as biodiversity offset.

Chapter 2 outlines different ways in which biodiversity offsetting or similar compensation offset schemes are embedded in environmental regulations in different countries, and the different mechanisms that companies can use to fulfil offsetting requirements.

Chapter 3 examines how offsetting enables continued destruction, particularly in areas of special importance to biodiversity. It looks at how Performance Standard 6 of the World Bank's International Finance Corporation is driving offsetting, even where it is not required by a country's environmental regulation. The examples cited demonstrate how unreliable offsetting commitments are.

With REDD+[i], international forest policy has also been strongly influenced by *financialization of nature*. More than a decade ago, REDD+ was introduced at the UN climate negotiations with the expectation that as a financing mechanism, it would generate large sums of private sector funding from industries that profit from continued fossil fuel extraction and use. The money generated through selling carbon credits (see chapter 1) was to be used to help end deforestation and finance forest conservation.

In reality, conflicts abound,[3] REDD+finance remains largely public sector funding for private sector enterprises and international consultants,[4] and large-scale deforestation continues at alarming rates.[5] Rather than ending the disastrous experiment, however, REDD+ is now increasingly presented as 'payment-for-performance' mechanism. Yet, its core architecture remains that of an offset mechanism.

Chapter 4 looks at how the global food, agriculture and aviation industries are using biodiversity and carbon offsetting to maintain social license to continue their destructive activities and ward off the threat of regulation

A final section reflects on emerging trends in the field of biodiversity offsetting.

i. REDD stands for Reducing Emissions from Deforestation and Degradation of Forests. The 'plus' indicates that activities involving forest conservation, forestry management and tree planting also qualify for REDD+ payments.

1

What is biodiversity offsetting?[6]

Advocates of biodiversity offsetting claim that the instrument ensures corporations causing damage to biodiversity compensate for their impact by maintaining or improving biodiversity on another site.

It is one of a range of *financialization of nature* instruments that proponents of market-based environmentalism and 'green growth' claim will enable nature to flourish while destructive corporate activities continue. They emphasize their expectation that the *financialization of nature* will help create new environmental assets — biodiversity-rich properties or land with high water filtration or carbon storage capacities — that can be rented out for compensation. These assets, they promise, will one day become profitable investments. They also emphasize that a shift from regulation focused on limits, targets and restrictions on destruction or pollution to 'flexible' regulation based on compensation will relieve the state of the increasing costs of environmental protection and restoration.

Above all, corporate demand for 'regulatory relief' and World Bank standards that weaken environmental protection are driving the growing popularity of biodiversity offsetting and compensation offset schemes more generally.

Offsetting schemes provide 'regulatory flexibility'. Looked at from a different perspective, they undermine environmental protection, by giving companies an opportunity to ignore pollution limits or nature protection rules at any particular place of interest to them, while claiming that they are respecting environmental protection laws. Offsetting allows government agencies and financial institutions to maintain a dependable flow of environmental licenses and financing for corporate destruction despite the growing catalogue of environmental regulation that has evolved in response to public pressure for better environmental protection since the 1970s.

In essence, biodiversity offsetting and similar compensation offset schemes allow more pollution and destruction today on the promise to restore or prevent planned destruction elsewhere, in future

To understand how offsetting schemes provide this regulatory flexibility, it is important to recall what offsets are.

Offsetting is based on the assumption that the ecological damage caused in one place can be cancelled out — offset — by restoring or protecting biodiversity claimed to be at risk elsewhere. This assumption allows a company to exceed a pollution limit or circumvent a prohibition to destroy at any one particular place it wants for corporate profit-making. The only requirement: presenting a plan to authorities and financiers outlining how this damage that is over and above a legal limit or regulatory restriction will be cancelled out through avoiding planned destruction or pollution elsewhere. This prevention of supposedly planned destruction elsewhere, or the promise for restoration of a 'degraded' habitat that otherwise would remain 'degraded', it is claimed, will cancel out the ecological damage at the site of corporate pollution or destruction.

In essence, biodiversity offsetting and similar compensation offset schemes allow more pollution and destruction today on the promise to restore or prevent planned destruction elsewhere, in future. Offsetting leads to more, not less ecological destruction, causes more pollution, and amounts to a double land grab because corporations end up controlling land use at two locations – the site they are destroying and the location they are claiming as offset. This is the case whether the offset is for biodiversity, carbon from land-based projects or forest restoration.

World Rainforest Movement / Re:Common

Carbon credit

A carbon credit is the promise that someone has been foregoing an activity which would have caused greenhouse gas emissions. The unit used to quantify this promise is a tonne of carbon dioxide, 1 t CO2 – or CO2-equivalent, if the activity would have caused emission of another greenhouse gas, such as methane.[7] One carbon credit thus represents one tonne of CO2e that has not been released into the atmosphere. A buyer can use the carbon credit to claim that the climate impact of his / her own activity has been cancelled out by the tonnes of CO2e not released – the promise contained in the carbon credit. For this promise to be valid, the emission saving represented by the carbon credit has to be in addition to any savings that would have happened anyways. Had the emission been prevented anyways, it's not an additional saving and therefore cannot cancel out the climate impact of someone else's emission. The dilemma of offset credits is that such proof — the saving would not have happened otherwise — is impossible. It requires assessing a hypothetical activity – the emission that would have taken place but which did not, because it was prevented by the carbon offset project. One in-depth study found that less than 7 percent of the carbon credits issued through the UN's Clean Development Mechanism and sold in the EU carbon market are highly likely to represent such additional savings, and for more than 75% of credits it is highly unlikely that they represent additional emission savings.[8] For a detailed critique of carbon offsetting, see the Fern publication *Trading Carbon. How it works and why it's controversial.*[9]

Reframing nature as service provider

The assumption that destruction in one place can be cancelled out by preventing hypothetical destruction elsewhere requires a perception of nature that differs from the prevailing Western one, and even more so from indigenous cosmologies. Offsetting requires a re-framing[10] of nature.

In the Western world, the prevailing association with the word 'nature' is that of a unique place that has its own stories, history and mysteries. In other words, a place characterized by a particular, complex and dynamic web of human and non-human interaction and stories that is different from any other place. For this reason, nature is much more than the volume of carbon stored or the sum of the species present at any one place.

Biodiversity offsetting and similar compensation offset schemes, however, require that we associate 'nature' not with 'uniqueness' but with an assemblage of distinguishable parts and functions that can be neatly separated from each other, and whereby the whole is no more than the sum of its parts. In this new conception of nature, the separate parts and functions are described as 'goods and services' which can be defined and measured as distinct units. They can then be compared, exchanged and a price can be established for them – like for other goods and services we know.

> Trying to force this volatile and dynamic web of nature into neatly packageable and tradable 'service' units risks breaking existing (subsistence and customary) relationships and local economies

Such re-framing is always a conflict-ridden process because nature is not made up of neatly separable parts. Nature is shaped by a highly volatile set of social and biophysical relations and processes, and by complex systems of use and access rights that are specific to a particular place.[11] Trying to force this volatile and dynamic web into neatly packageable and tradable 'service' units risks breaking existing (subsistence and customary) relationships and local economies. It is likely to push customary users into reliance on food markets, for example. This is already happening, for example, where communities' cassava or sago production in forests is restricted by biodiversity offset projects, making them become more dependent on the globally traded commodity rice as a staple food. In Madagascar, communities are prohibited from cultivating cassava at the edge of a forest that has been declared part of a biodiversity offset by mining multinational Rio Tinto, international NGOs and the government authority. Local communities were not involved in this decision.[12]

Policy makers, conservation industry brochures and articles in academic journals increasingly refer to nature as 'natural capital' and call ecological functions 'ecosystem services'. As a result, hearing or reading the word 'nature' starts to trigger the association 'service provider' and 'capital' for a growing public audience. Market-based approaches to nature become more acceptable once the new association of nature with 'service' manifests itself in our brain: we are already used to paying for services in other contexts, so what is wrong with paying for the right to use (or destroy) 'services' that nature provides?

Much is wrong with this reasoning, however. When species and ecological functions come to be perceived as 'ecosystem services', they become bearers of mere monetary value. Inevitably, the place-bound and manifold values associated with ecological functions are pushed to the margins of our own perception and are made invisible in the 'ecosystem services' quantification process.

Cognitive scientists warn of the consequences of adopting such economistic language on politicized issues such as the question of how land is used. They point out that the language influences – frames – our thinking and in doing so also influences the policies that are made.[13]

Considering what it takes to re-frame nature into a 'service provider' it is perhaps not surprising that conflicts, contradictions and inconsistencies abound in the definition of 'ecosystem service' units and implementation of offsetting policies. Conflicts in relation to the question of who has which rights to what land that is turned into different units, and contradictions and inconsistencies in relation to the definitions and quantification of the newly created units. In the case of REDD+ projects (see page 25), measurements for carbon storage in forests have margins of error that can be larger than the claimed emissions savings. Offsetting of wetland destruction in the US relies on identifying a plant species for which botanists are still debating whether its variants all make up one species or whether they should be split into several species, or even different genera. Geographer Morgan Robertson, who has closely analyzed the evolution of biodiversity offsetting in the US, notes that defining units that adequately represent ecosystem services such as 'production of clean water by forests' or 'habitat for forest biodiversity' or 'pollination by insects' might eventually prove an impossible task.[14]

Licensing corporate destruction even if it causes 'unavoidable' ecological damage

The mitigation hierarchy describes a sequence of steps which licensing agencies or development banks often request companies to pass through if their project will destroy important natural areas. It is often argued that the mitigation hierarchy helps alleviate corporate environmental damage because the company has to present a plan that shows how this damage will be addressed. The plan has to include proposals for how to 1) avoid; 2) minimize; 3) restore; and, most controversially, 4) offset environmental damage caused by the company's activity:

1 | AVOIDANCE

Measures taken to avoid destruction from the outset, such as careful spatial or temporal placement of infrastructure, in order to avoid impacts on biodiversity where this is possible through improved planning.

2 | MINIMISATION

Measures taken to reduce the duration, intensity and/or extent of environmental damage if the company deems it not possible to completely avoid the damage.

3 | REHABILITATION/RESTORATION

Measures taken to rehabilitate or restore biodiversity that has been damaged or destroyed at the site for which the company was granted a license or financing.

4 | OFFSET

Measures taken outside the location for which the company holds a license. These measures are supposed to cancel out environmental destruction that the company and licensing agency deem unavoidable and where minimization and restoration/rehabilitation were also ruled out. Unlike the other steps in the mitigation hierarchy, this step requires (unobtainable) comparability between unique places because the process requires evidence that ecological functions and biological diversity equivalent to those destroyed have been restored or protected elsewhere.

New image of nature weakens environmental policies

These contradictions and incoherence have not, however, stopped the advance of biodiversity offsetting and similar compensation offset schemes.

Regardless of the inconsistencies, regulators accept the new units as proof that an area of nature equivalent to that for which they gave permission to destroy has been restored or protected. In the UK, for example, a property developer was allowed to reduce the size (and thus cost) of biodiversity offsets outside property housing development by claiming that football pitches set up as part of the housing complex were 'grassland' and 'semi-improved grassland' (the unmown edges around the pitch). This, the company argued, had already compensated for destruction of nature caused by the luxury housing complex, and fewer biodiversity offsets were required elsewhere.[15]

Policy-makers, practitioners and lobbyists for market-based environmentalism and green growth argue that biodiversity offsetting is only a measure of 'last resort'. They underscore that it is embedded in a mitigation hierarchy which, they claim, helps ensure that other measures to avoid and reduce ecological harm are taken first. The offset option is said to be a 'last resort', to mitigate environmental destruction that the project developer and licensing agencies consider unavoidable. What this argument overlooks, however, is that the mere possibility of offsetting undermines legal pollution limits and protection of areas of special ecological importance because it provides an option to approve corporate destruction that causes 'unavoidable' damage where otherwise such approval would be difficult if not illegal, and where financing would have been hard to obtain.

The actual use of the mitigation hierarchy also reveals many problems with the approach. The most noteworthy in the context of biodiversity offsetting is that what is advertised as a measure of 'last resort' is quickly becoming the norm. Increasingly, biodiversity offsetting is the instrument that legalizes pollution and environmental destruction in places where environmental regulation would otherwise not allow such destruction. It is the regulatory measure which paves the way for corporate licenses to destroy and pollute where otherwise such destruction would not have been allowed. Payments for biodiversity compensation can thus be understood as a fee that legalizes corporate destruction where, without the option to offset, a company would have risked a fine for violating environmental regulation.

Biodiversity offsetting and similar compensation schemes also help corporations secure funding for destruction. Since the 1990s, regulations and guidelines have been put in place to prevent, for example, international financial institutions like the World Bank's International Finance Corporation, from financing corporate destruction of what the Bank calls 'critical habitat'. Now biodiversity offsetting allows these financing institutions to circumvent those restrictions and finance destruction and pollution of 'critical' habitat.

As with many buzzwords, the language of offsetting is changing over time. But the core idea remains the same: destruction is made possible in places where it would otherwise not have been. What makes this possible is the company's promise that biodiverse or carbon-rich habitat equivalent to the one destroyed is being restored or protected elsewhere. 'Biodiversity net gain', 'no net loss' and 'zero net deforestation' are some of the new buzzwords used alongside biodiversity offsetting.[16] The concepts behind them all rely on some form of offset.

> What is advertised as a measure of 'last resort' is quickly becoming the norm

What's wrong with biodiversity offsetting?

Biodiversity offsets are controversial, for many reasons. Here are some of them:

BUILT-IN EXPECTATION OF FURTHER DESTRUCTION OF NATURAL PLACES

Biodiversity offsetting links conservation of natural places and restoration of critical habitat to a license to pollute or destroy such places elsewhere, for example where offset payments are used to fund maintenance costs of protected areas and maintaining protected areas becomes dependent on offset payments. Offsetting also risks weakening traditional conservation programs because it advances the argument that 'nature must pay for itself'.

PERVERSE INCENTIVES

Biodiversity offsetting makes it easier for companies to access land, and obtain licenses and finance for destructive corporate projects that would previously have been denied approval, or faced major opposition and difficulty securing financing. Companies are effectively given a license to destroy even in places of special importance for biological diversity.

IGNORES UNIQUENESS OF PLACE

Biodiversity offsetting ignores the fact that every place is unique and characterized by a unique and complex web of human and non-human interactions. These socioecological, cultural and spiritual dimensions are place-specific and cannot be recreated elsewhere.

AGGRAVATES SITUATION IN POLLUTION HOTSPOTS

Biodiversity offsetting ignores the fact that destruction and pollution not only cause ecological damage but also have negative socio-cultural impacts. These remain unmitigated by a company buying biodiversity offsets. What is worse, offset credits can even allow pollution to rise above legal limits at a pollution hotspot; the company exceeding a pollution limit locally can argue that it has cancelled out the damage caused by this excess pollution through paying someone elsewhere to reduce that same type of pollution. For people exposed to excessive pollution at the pollution hotspot, the increased health risk remains unmitigated, however.

DOUBLE LAND GRAB

Corporations buying biodiversity offsets take control over the territories of indigenous peoples and peasant communities in two places: at the site of their operations and at the site of the biodiversity offset. Local communities are often not allowed to access land that is declared a biodiversity offset, even if they hold customary rights to it. There is ample evidence of human rights abuses when communities try to defend these customary rights.

HYPOTHETICAL RISKS ALLOW REAL DESTRUCTION

Offsets allow destruction or pollution that would otherwise be unacceptable, or even illegal. To be able to claim that the excess destruction or pollution has been offset, the project owner has to demonstrate that the protection of biodiversity or the reduction in pollution would not have happened without the prospect of selling offset credits. In technical terms, the project has to provide evidence that its protection of biodiversity or reduced pollution are 'additional'. So additionality claims are always based on a hypothetical story of what would or would not have happened without the project. It is ultimately impossible to verify a hypothetical story of what would have been, yet this story of preventing hypothetical destruction justifies real destruction.

PUSHES DAMAGE AND POLLUTION OUTSIDE THE OFFSET AREA

Declaring a place as an offset site could merely displace supposedly avoided destruction. For example, if a forest that was at risk of being cleared is declared an offset site to cancel out the deforestation caused elsewhere by a mining company, the logging could just shift somewhere else. In technical terms, this risk is referred to as 'leakage'.

DAMAGE TODAY FOR PROMISE OF RESTORATION IN THE (DISTANT) FUTURE

Places of special importance to biological diversity that have been destroyed or degraded will take long periods of time to recover their full ecological functionality. Yet, companies receive a license to destroy today. They usually only pay the cost of maintaining a biodiversity offset site for a limited period that is much shorter than the time needed for ecosystem restoration. Ancient woodland, for example, will not recover within the lifetime of a human being, and certainly not within the 30-40 years that is the maximum lifetime of most biodiversity or carbon offset projects.

DEFINITION AND QUANTIFICATION OF BIODIVERSITY

The units that have been proposed to measure 'ecosystem services' are widely disputed. Even for carbon storage, the perhaps least complex of these ecological functions, methodological disputes are rife and uncertainty ranges are at times larger than the numbers measured. Given continued incomplete knowledge of ecological functioning, crucial interlinkages may be overlooked in the measurement and quantification. Unknown effects of habitat fragmentation on dispersal or the loss of genetic diversity may lead to areas of land being accepted for compensation when in reality their boundaries are insufficient to fulfil the claimed ecological compensation.

REDUCES LOSS TO ECOLOGICAL DAMAGE

Compensation offsets only consider ecological damage, and thus make invisible the social, cultural and local economic damage that corporate destruction also causes. This damage is never even considered when government agencies, financial institutions and corporations speak about 'offsetting'.

UNDERMINES CITIZENS' RIGHT TO A HEALTHY ENVIRONMENT

Environmental legislation established between the 1970s and 1990s, while insufficient and inadequately implemented, established legally binding limits for environmental pollution or destruction which apply to everyone, and at any location covered by the law. Introducing compensation offsets into environmental legislation undermines this principle and takes away citizens' right to insist on a company respecting the limit locally. With environmental legislation that allows for offsetting, a company can expand and exceed the local pollution limit, as long as it can show that it is paying a fee – the offset credit price – for someone to keep pollution below legal limits elsewhere. For the citizens affected by the increase in local pollution, compensation offsets elsewhere are of little consolation, even if they were to function.

2 Regulated destruction: How biodiversity offsetting undermines environmental protection

Biodiversity compensation in environmental regulation is not new – the USA, Germany and India introduced biodiversity compensation in the 1980s – but recent years have seen a sharp increase in environmental regulation that favours biodiversity offsetting or other forms of compensation offsetting. By 2017, environmental policies that included biodiversity offsetting or similar compensation offsets were in effect in 115 countries, according to IUCN nearly double the figure at the turn of the century.[17] Among the reasons for this increase are that:

- many countries have adopted the political goal of No Net Loss of biodiversity, and biodiversity offsetting is the mechanism to achieve this goal;
- corporate destruction increasingly targets formally protected areas or particularly biodiversity-rich areas where the current regulatory framework without offsets only allows destructive activities to be licensed in exceptional cases;
- the World Bank and its private sector financing arm, the International Finance Corporation (IFC) have been heavily promoting biodiversity offset provisions in environmental regulation in the global South, to facilitate implementation of the IFC Performance Standard 6 biodiversity offset provisions (see chapter 3). These provisions, added to the Performance Standard in 2012, allow the IFC to finance destruction in what the World Bank has defined as 'critical habitat'. Before the 2012 revision, approval of IFC financing for corporate destruction in such habitat would have been more difficult and controversial.

National approaches to compensation offsets

The way that biodiversity offsetting or similar compensation offsets are embedded in environmental regulations varies from country to country, as does the terminology used to describe it. Some regulations started out with area-based compensation payments that were quite different from biodiversity offsets which pretend to be based on equivalence between the offset area and the area that is being destroyed. Subsequent revisions, however, turned these compensation provisions into mechanisms that adopt an offset logic and use economic valuation language associated with the *financialization of nature*. The selection below describes some approaches and language used to anchor biodiversity offsetting and similar schemes in environmental regulation.

Deforestation around Pakke Tiger Reserve, India
Nandini Velho

India | Compensatory afforestation

The term 'compensatory afforestation' first appeared in India's Forest (Conservation) Act of 1980. Later revisions of the law make it obligatory for a company applying for a license to destroy a forest, a so-called 'forest clearance', to compensate for the loss of that forest.[18] A company can compensate either by setting up and maintaining tree plantations or by making a payment to the Compensatory Afforestation Fund.

Implementing guidelines linked to a landmark 2005 Supreme Court decision introduced the language of *financialization of nature* into the legislation. The introduction of the guidelines also marked the turning point from mere compensation payments to compensation offset payments, where the payment or tree planting is expected to be equivalent to the forest that has been destroyed. The court ruling requested obligatory payments to represent the 'net present value' of the forest being destroyed. This value is to be calculated by quantifying the 'ecosystem services' and 'goods' that the forest (now called 'natural capital') has been providing before it is destroyed.[19]

> Compensatory activities have often caused severe conflicts between the Forest Department and communities

Government agencies like the India Forest Department are supposed to ensure that land is allocated and afforestation or forest restoration activities are undertaken to compensate for the forest that is destroyed. According to the law, a forest clearance can only be permitted once "an equivalent amount of non-forest land or 'degraded' forest land twice the size" has been identified for compensatory tree plantations or forest restoration.

However, over 500 billion Indian Rupees (USD 6.8 billion) of funds had accumulated in the Compensatory Afforestation Fund by 2016, and large areas of forest have been destroyed without any compensatory afforestation having taken place. Forest biodiversity and community livelihoods have been devastated and the government agencies continue to issue forest clearances on a large scale.

The large amounts of accumulated money in the Fund is clear evidence that government agencies have been issuing permits that allow companies to destroy forests without the legal promise of compensation being honored. What's more, it is highly unlikely that unencumbered land on the scale needed to implement the compensatory afforestation promises already pending could be found without causing further conflict with forest communities and tribal rights holders.

A government website set up to track issuance of forest clearances and spending under the Compensatory Afforestation Fund provides an indication of the scale involved: Between 2011 and 2013, the federal environment ministry had issued 1,039 forest clearances that

would allow a total of 29,400 hectares of forest to be destroyed.[20] Compensatory afforestation should have thus taken place on at least 30,000 hectares of 'non-forest' land or 'degraded' forest. Research shows just how little compensatory afforestation has taken place and reveals that there appears to be no government record over where the areas supposedly used for compensatory afforestation or forest restoration are located.[21]

Where this information is available, it reveals that the compensatory activities have often caused severe conflicts between the Forest Department and communities. Government agencies primarily target land over which communities hold customary rights or where the land question is disputed. These customary rights will often be restricted when land is turned into a compensatory afforestation area because land used for such measures has to be reclassified as forest, under government control. It's worth noting that this classification includes tree plantations, which further jeopardizes community livelihoods due to the widely documented social and ecological devastation that industrial tree plantations cause for forest-dependent communities.[22] Despite legislation passed in 2006 to protect the rights of forest-dependent communities,[23] conflicts between the Forest Department and forest communities abound.

Conflicts are set to increase further following a 2017 decision by the Ministry of Environment, Forests and Climate Change to amend the guidelines for compensatory afforestation in a way that will severely affect food sovereignty and farming activities of rural communities.[24] The amendment calls on Indian states to set up 'land banks', and describes their aim as a measure to help with "speedy disposal of [forest clearance] proposals under the Forest (Conservation) Act 1980". The land categories proposed for inclusion in these land banks are mainly those used as community commons, for shifting cultivation and subsistence food production.

Draft rules related to the 2017 decision also suggest that compensatory afforestation funds can be used to expand existing protected areas and to displace communities living in such protected areas. In the state of Maharashtra, the government has already used compensatory afforestation funds to displace 15 villages located inside protected areas of the Vidarbha region.[25] This is an example of how compensation offsets can lead to a double land grab and violate the rights of communities in two locations: the site destroyed for the corporate project and the site used as compensation offset.

> Government agencies have been issuing permits that allow companies to destroy forests without the legal promise of compensation being honored

Uganda | National Environment Bill introduces biodiversity offsets into national law

In 2017, the government of Uganda tabled a National Environment Bill to revise the existing National Environment Act of 1995. Article 114 of the Bill includes a proposal for biodiversity offsets as a compensation mechanism: "Biodiversity offsets, other offsets and compensation mechanisms may be applied to address residual impacts." The Bill also specifies that companies that use biodiversity offsets or any other compensation offset, "shall design and implement it to address residual impacts and to achieve measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity or other benefits."[26] Although the Bill has not yet passed into law, laws regulating mining, hydropower and infrastructure projects are already preparing for the future inclusion of biodiversity offsetting in Environmental Impact Assessments.

The proposal for revision of the National Environment Act followed the confirmation in 2013 of commercially viable oil deposits in the Albertine Rift region of Uganda, a global biodiversity hotspot with high species endemism. Oil exploration licenses have been approved, including in the internationally renowned Murchison Falls National Park (see chapter 3).

As well as the proposed inclusion of biodiversity offsetting provision into the National Environment Bill, a number of *financialization of nature* initiatives have taken place in Uganda in recent years, the majority involving the US-based conservation NGO Wildlife Conservation Society.[27] With funding from USAID, the Wildlife Conservation Society initiated a process in 2014 to create the Uganda Conservation Trust Fund which makes

reference to biodiversity offset payments.[28] In 2017, the UNEP World Conservation Monitoring Centre published 'Experimental Ecosystem Accounts for Uganda'[29] in collaboration with the Wildlife Conservation Society.

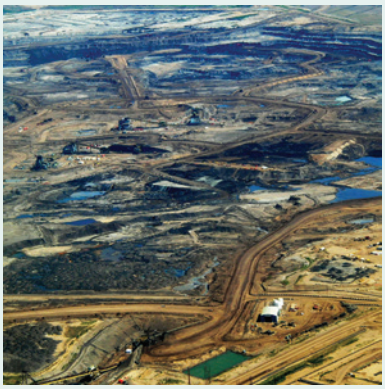
Uganda is also one of 28 countries participating in the UNDP Biodiversity Finance Initiative (BIOFIN), which has a strong emphasis on 'ecosystem services' and including nature into national accounts, and one of four countries that take part in the initiative Conservation, Impact Mitigation and Biodiversity Offsets in Africa (COMBO) which is financed, among others, by the French Global Environment Facility.[30]

Until the 2017 National Environment Bill becomes law, there is no legal requirement for biodiversity offsets in Ugandan environmental regulations. But companies involved in oil exploration and infrastructure that will affect the Albertine Rift region are already advertising their commitment to the mitigation hierarchy and biodiversity offsetting in accordance with the IFC Performance Standard 6 (see chapter 3).

A biodiversity offset project is already in place to offset the flooding of iconic waterfalls and river banks by the controversial Bujagali hydropower dam on the River Nile. The biodiversity offset was a condition for World Bank funding of this controversial project. But when another company received planning permission for another dam that would flood the biodiversity offset site, the Bank agreed to the flooding of the site that was to have been protected 'in perpetuity' (see page 23).[31]

River Nile at the Bujagali falls
NAPE / Friends of the Earth Uganda

Tar sands, Alberta, Canada
Dru Oja Jay, Dominion



Canada | Biodiversity offsetting opens up habitat of endangered species to tar sand industry

In Canada, compensation offsets are required for fish habitat and wetlands under federal jurisdictions. Several provinces also have compensation offset provisions, among others, related to wetlands. Biodiversity offsetting has also facilitated large-scale destruction of caribou habitat in the boreal forest for fossil fuel extraction and processing.

A report published in 2014 contains several examples of companies engaged in compensation offsetting although this is not legally required. One case involves the construction of a pipeline through Jasper National Park. The example shows that while there was no actual legal requirement to do so, committing to the offset facilitated the licensing process for the company and "The pipeline expansion received approval from the National Energy Board without substantial environmental opposition."[32]

The report also lists a series of cases where biodiversity offsetting was a condition for approval of oil and tar sand exploitation projects. Among them is the example of a federal-provincial Joint Review Panel requesting that the French oil company Total change its application for the Joslyn tar sand mine. The panel requested "that habitat for species-at-risk be created (preferred) or protected 'in locations relatively near the project' so as to offset residual impacts on species at risk."[33] Another example cited is a federal Joint Review Panel reviewing the impact of the controversial Northern Gateway pipeline project proposed by the company Enbridge in 2013. The Panel made approval of the pipeline construction conditional on different kinds of biodiversity offsets (caribou habitat, wetlands, rare plants and ecological communities, fish and fish habitat, marine habitat).[34]

Colombia | Biodiversity offsets and domestic carbon markets facilitate corporate destruction

Within the past few years, Colombia has put in place perhaps the most encompassing set of laws, regulations and decrees worldwide to facilitate the use of biodiversity offsetting and domestic carbon offset mechanisms involving forests and other carbon-rich habitats like the páramo (high, tropical, montane vegetation above the continuous timberline). Some of these initiatives are described below.

Biodiversity offsetting was introduced into Colombian legislation as early as 1993, confirmed in 2010 and 2011 (law 1450),[35] and strengthened and further operationalized in 2012 by the National Policy for the Integral Management of Biodiversity and its Ecosystem Services and the adoption of a Manual for Allocating Offsets for Loss of Biodiversity.[36] The Manual was prepared with involvement from the international conservation NGOs The Nature Conservancy, Conservation International and World Wide Fund for Nature and criticised by many Colombian civil society organisations, among others, for the lack of adequate consultation. The Colombian organisations also pointed out that the international conservation NGOs involved in the preparation of the Manual receive substantial funding from companies in the mining and infrastructure sectors that will need to apply it.

> Even if the company does not buy the land in question, its biodiversity offset requirements will determine how this land can be used — for as long as its destructive activities continue elsewhere

The use of the Manual is obligatory for companies applying for an environmental license related to mining, oil and gas, infrastructure, and port developments. But many companies have received their environmental licenses long before submitting an offsetting plan.

The new policies will increase indirect corporate control over land. The existing regulations require that a company calculate the size of the area for which offsets are required (2-4 hectares for each hectare of so-called 'secondary' vegetation that will be destroyed and 4-10 hectares for each hectare of 'natural ecosystems'); identify potential offset sites; and demonstrate that the proposed offset location is 'ecologically equivalent' and will ensure 'no net loss' of biodiversity. So for each hectare a company destroys, it will control land use on another 2-10 hectares which will be managed in a manner determined by the biodiversity offset requirements of the company. Even if the company does not buy the land in question, its biodiversity offset requirements will determine how this land can be used – for as long as its destructive activities continue elsewhere.[37]

According to a report published by The Nature Conservancy, between 2013 and 2015 alone, the potential demand for land to be used as biodiversity offset amounted to more than 180,000 hectares.[38] As early as 2013, the web portal Ecosystem Marketplace, which advocates market-based environmentalism, pointed to a major looming land question in Colombia: "With over 8 million hectares under mining titles, over 130 oil and gas companies, with operations in the country over at least 1.5 million hectares, including Shell, Oxy, Chevron, ExxonMobil, and Petrobas, and thousands of kilometers of highways in the pipeline that will affect critical biodiversity hotspots, one of the key questions is where are the hundreds of thousands of hectares needed in offsets are going to come from."[39] That question remains unanswered while companies continue to receive licenses to destroy on the mere presentation of biodiversity offset plans.

In 2017, the Ministry of Environment launched a 'Habitat Bank', with an initial capital investment of USD 1.5 million, from the Inter-American Development Bank among others. Ministry and Bank expressed their hope that the Habitat Bank will facilitate the identification of sites suitable for biodiversity offsetting.[40] The same year, legislation was passed to establish the implementing mechanisms for the National Program on Payment for Environmental Services (Law Decree 870 of 2017). Subprograms of this National Program include conservation of biodiversity, conservation of carbon sinks and green trade.[41]

In addition, a number of bilateral and multilateral agencies have been financing REDD+ programs in Colombia in the past years, including the REDD Early Movers program with funding from Norway, Germany and the UK. In exchange for providing quantified evidence that emissions from deforestation in the Amazon region stayed below a level negotiated as part of the REDD Early Movers contract, the government of Colombia receives funds equivalent to 5 USD per tonne of CO2.

BanCO2: Carbon payments undermine peasants' control over their land

The domestic carbon offset mechanism 'BanCO2' has been in operation since 2013. It was set up as an implementing mechanism for corporations and others wishing to offset their greenhouse gas emissions. Its founder stated the vision to turn 'BanCO2' into the principal mechanism for payment of 'ecosystem services' in Colombia by 2020. BanCO2 signs agreements with peasant organisations who receive regular payments for protecting or restoring the carbon storage capacity of forests or the páramo grasslands on their property. More than 20 regional autonomous corporations, the energy companies ISAGEN, Ecopetrol and Petrobras, the mining companies AngloGoldAshanti Colombia and Antioquia Gold, the cement company Argos, the public utilities company EPM, and others have since started buying carbon offsets through BanCO2 to green their image.[42] BanCO2 thus seems to see itself as implementing mechanism not only for the legally required biodiversity offsets but also for programs linked to the National Program for Payments for Environmental Services of 2017.[43]

One of the companies polishing its image through contributions to BanCO2 is the mining corporation AngloGoldAshanti Colombia. The multinational corporation's Gramalote gold mine project covers an area greater than 9,400 hectares in six municipalities, potentially affecting 50,000 people.. Its BanCO2 contribution to offset the greenhouse gas emissions caused by operating this mine pays a mere 15 farming families to protect 215 hectares. The corporation holds another 504 mining titles in Colombia and has 3,074 applications for mining pending.[44]

The Public Utilities Company of Medellín (EPM), a Colombian company, is currently building the Hidroituango hydropower project, for which more than 4,500 hectares of tropical dry forest have been destroyed. EPM is also greenwashing with the help of BanCO2 but its corporate profits amounted to about USD 619 million in 2016, putting its BanCO2 contribution of a USD 421,482 into perspective. The company advertises its BanCO2 contribution on its website while information on the greenhouse gas emissions caused by its operations and, in particular, the construction of the mega-dam, is absent.

Part of the EPM payment was paid over the course of three years to 56 peasant families, who received the money through a bank account with Bancolombia, another implementing partner of BanCO2. Partnering with BanCO2 brings the bank thousands of new customers: to participate in the scheme, peasants have to open an account with Bancolombia. The peasant families also have to sign a contract obliging them to use their land in a certain way and restored deforested areas.

The BanCO2 approach to carbon offset payment raises questions about the consequences for peasant communities' control over their land and territories. Families retain ownership of their land when they sign up to the scheme, but they submit to implementing land use prescriptions made by others in return for the payment of currently 8,000 Colombian pesos (USD 2.5) per tonne of carbon dioxide emissions saved.

BanCo2's projects are sometimes advertised as ordinary 'payment for environmental services' (PES) schemes. They are different from earlier PES schemes, because they oblige peasant communities to sign a legally binding contract. Companies making payments to BanCO2 need a guarantee that their emissions have been cancelled out by someone elsewhere preventing carbon from being released into the atmosphere. To be able to make this guaranteee, BanCO2 obliges peasants to refrain from cutting trees and only to use the *páramo* in a certain way that will make sure no carbon is released into the atmosphere. The contract which peasant families have to sign obliges them to maintain the carbon in the trees or *páramo* for long after the payments will have stopped.

'No REDD' action at COP 21, Paris, 2015
© *Friends of the Earth International*

Brazil | Forest restoration credits and Environmental Services Incentives System

In 2010, the Brazilian state of Acre adopted an environmental framework called the Environmental Services Incentives System (SISA).[45] Revenue generation from selling offsets based on generating 'environmental services payments' for different 'ecosystem services' is at the heart of SISA. The System includes programs related to different 'services', including carbon storage and water filtration capacity of forests; soil conservation and restoration; and the "preservation of scenic beauty".

SISA was developed on the assumption that global biodiversity and carbon markets would create demand from governments and companies elsewhere for offsets. Global trading in offset credits would thus generate the funding for the government of Acre – which is highly dependent on national transfer payments for its budget – to pay for a variety of offset programs and maintenance of protected areas. This global trade has not materialized at any scale, yet the government of Acre has oriented its environmental regulation fully towards such international markets.

> The introduction of forest restoration certificates risks increasing deforestation if it is extended to legalize not just past but also future clearing above the legal limit

Of the six programs, only the carbon incentive program (ISA-Carbono) is currently being developed. Operationalizing the program involved setting up an elaborate institutional structure including the creation of a State Commission for Validation and Monitoring (an Institute on Climate Change and Environmental Services Regulation, an Environmental Services Development Company, a Scientific Committee and an ombudsman's office. Funding for this elaborate institutional set-up has come among others from the Amazon Fund of the Brazilian public bank BNDES and Germany's development bank KfW, via its REDD Early Movers program. The REDD Early Movers program has also made 'payments for results' under ISA-Carbono. To receive the payments, the government of Acre had to show that greenhouse gas emissions from deforestation had stayed below a negotiated limit in the previous year. REDD Early Movers then paid USD 5 per tonne of carbon dioxide that had supposedly been saved.

The governments of Acre and Germany underscore that the transactions are not 'carbon offsets' because neither the German government nor KfW will not use them to claim that their own emissions have been offset. However, the entire process is that of a carbon offset transaction, from the negotiation of a 'baseline' to the conversion of hectares of forest into tonnes of carbon stored in the trees and finally the quantification of the emissions avoided in tonnes of carbon dioxide.

Also, SISA itself allows for a variety of 'environmental service' payments, including the sale of carbon offsets, and the government of Acre is proactively seeking buyers for the tonnes of carbon dioxide not remunerated by the REDD Early Movers program. One potential buyer is a regional carbon market in California.[46] This dual use of the mechanism shows that at its core, the REDD+ infrastructure set up under the SISA is that required for a carbon offset mechanism, even if at present the funds received are not from carbon offset sales.

Deforestation in Brazil

Heron fliying over Kikretum Village in Para, Brazil
André Porto

The Forest Code: Offsets provide impunity for past illegal deforestation

The *financialization of nature* discourse is also reflected in the 2012 revision of Brazil's Forest Code. The previous version of the Code already limited the area of forest a landowner can clear. The limit depends on the forest type and region: in the Amazon region the limit is usually 20%, but many landowners have cleared much more. The revised Code requires that landowners who cleared forests in excess of the legal limits before 2012 restore the illegally cleared land or risk losing access to agricultural credit. But the Code provides an alternative to restoring their own land: landowners can buy 'forest restoration certificates' (CRAs). Each certificate represents 1 hectare of intact forest elsewhere, where a landowner has not deforested as much land as legally permissible.

The introduction of forest restoration certificates risks increasing deforestation if it is extended to legalize not just past but also future clearing above the legal limit. In this case, landowners will clear much more forest in areas where deforestation is advancing rapidly at the time than the law allows because buying restoration credits will be cheaper than foregoing profit that can be made from clearing land.

The introduction of forest restoration certificates also created an instrument that could shield large landowners from expropriation for social purposes such as agrarian reform. Large land holdings can be expropriated and the land transferred into agrarian reform programs under certain circumstances. One such circumstance is if the owner is unable to provide evidence that the land is used in a way that satisfies the constitutional requirement that private land holdings in the Amazon region fulfil a social function, i.e. that 20% of the property is under productive use (not necessarily cleared). With forest restoration certificates, a landowner can claim that the social function is fulfilled because any land not in productive use can be declared as a carbon storage and forest restoration asset with potential for forest restoration certification, for example.[47]

Landowners can buy and sell forest restoration certificates on a private platform called the BVRio, or Bolsa Verde do Rio de Janeiro. The BVRio was set up by Pedro Moura Costa, the former owner of EcoSecurities, a company which once dominated the global trading of carbon credits under the UN's Clean Development Mechanism.

Costa Rica | Pioneering financialization of natural wealth accounting and implementing the world's first aquatic offset

Costa Rica has long been seen as a laboratory for Payment for Environmental Services (PES) and economic valuation. It has hosted pilot programs for a wide range of *financialization of nature* approaches. Its PES program of 1997, for example, has been promoted as an early example of a successful 'market-based' environmental instrument that helped curb deforestation. In reality, the program was neither 'market-based', because the funds that paid farmers to restore forests were generated by a mandatory fuel tax, nor did it have a decisive role in halting the deforestation trend. It also did little to reduce poverty or help diversify local peasant economies. While the payments enabled peasant families to stay on the land, they also changed cultural norms and public policies by strengthening the perception that without monetary payments, there will be no forest protection. Instead of public policies that promote agroecology or regional economies which could also help peasant families to stay on their territories, the government is engaging in a new round of financialization initiatives.

While the payments enabled peasant families to stay on the land, they also changed cultural norms and public policies by strengthening the perception that without monetary payments, there will be no forest protection

Like Colombia, Costa Rica is one of the pilot countries in the World Bank's WAVES initiative. WAVES stands for Wealth Accounting and the Valuation of Ecosystem Services. As part of its WAVES pilot accounting exercise, the Central Bank of Costa Rica and the Ministry of the Environment and Energy presented 'forest accounts' in 2016. The first edition of these accounts included mainly conventional forestry production data, such as how much and what types of forest are found in Costa Rica, how much forests and forest products are worth, and how these numbers have changed over time. Future editions, however, will incorporate economic figures for 'ecosystem services' like water filtration and biodiversity protection in forests.[48]

The effects of being a laboratory for *financialization of nature* initiatives on language can be seen more clearly in Costa Rica than elsewhere. It is now common for high-level government officials and ministers to speak of "natural capital" when they are talking about nature, and about "ecosystem services" when they refer to the vital functions that forests, rivers, land and soil provide. In April 2018, the then newly-appointed Minister of the Environment referred to nature as "the natural capital that we ought to manage in a sustainable manner".[49]

Costa Rica also acts as laboratory for *financialization of nature* approaches in relation to greenhouse gas emissions. It is one of the first countries to have set a goal to become 'carbon neutral' in the near future: by 2021. Although oil and gas contribute relatively little to electricity generation in Costa Rica (the main source of electricity generation is hydropower), transport remains dependent on fossil fuel. An end of fossil fuel burning by 2021 seems unlikely under current transport policies and achieving carbon neutrality would have required the false solution of purchasing carbon offsets. Following a change in government in 2018, the government language has been changing from 'carbon neutrality' to 'decarbonizing', recognizing that achieving 'neutrality' by 2021 is not feasible.

In recent years, the hydropower industry has promoted Costa Rica as it has implemented the 'world's first' aquatic biodiversity offset (see chapter 3). Costa Rica signed an agreement that would rule out the development of hydropower on a river dedicated as a biodiversity offset for a hydropower dam being developed on the Reventazón river, even though there is no national regulatory requirement for offsetting. The example demonstrates that international finance standards such as the IFC's Performance Standard 6 push biodiversity offsets even in the absence of national legislation regulating their use.

Different tools, same outcome

Different national regulations prescribe different mechanisms that companies can use to fulfil the biodiversity or compensation offsetting requirement. Broadly, three mechanisms are in use:

1. direct offsets, where the company itself is responsible for managing implementation of the offset;

2. land banks, where public or private entities create an database of areas eligible as offset and manage offset implementation in return for a fee from the corporate buyer of the offset credits;

3. compensation trust funds, where a company's offset obligation is reduced to a (usually one-off) payment into a government or private trust fund which is then responsible for implementing restoration or conservation activities in line with offset regulations. Compensation trust funds often fund e.g. maintenance costs of a protected area or increased armed guard patrols in protected areas.

Some regulations allow for any of the three to be used while in other cases, the regulation prescribes a particular implementing mechanism.

Direct offsets require that the company carries out the biodiversity offset itself, or in cooperation with an NGO or consultancy. The company is responsible for identifying a site, acquiring or leasing the land and managing the offset activities for the duration required. Companies that use biodiversity offsets because they are required to do so under IFC Performance Standard 6 (see chapter 3) tend to use this mechanism. The German Impact Compensation Law and the US wetlands compensation scheme initially favoured direct offsets but have since moved to favour banking mechanisms.

The **banking** mechanism is by far the most widespread mechanism used for biodiversity offset implementation. This is primarily because the biodiversity offset market is dominated by transactions related to the US wetlands offset market, which uses biodiversity offset banks. These banks are sometimes called habitat banks. Habitat banking is also in use in Australia, Germany, and Canada."[50] Biodiversity banking mechanisms are rising in popularity: the number of regulator-approved mitigation banks rose from 53 in 2005 to more than 1,500 as of 2016.[51]

Rather than directly managing the biodiversity offsets, biodiversity banking allows companies to outsource the management to the operator of the biodiversity offset or habitat bank. Some regulations also allow for the transfer of the legal obligation from the company to the biodiversity bank operator; in the US, such a transfer is possible whereas in France, the legal liability stays with the company.

Because companies complain that land which meets the offset requirements is often too hard to find, **compensation trust funds** are becoming increasingly popular. Implementing a biodiversity offset via a compensation trust fund only requires the companies to make a (usually one-off) payment into a trust fund that is administered either by a state authority or a private entity. Where compensation trust funds are used as the implementing mechanism for biodiversity offsets, it will become even harder to assess whether the 'equivalence' requirement has been met. Studies have shown that offset activities associated with compensation trust funds provide even less comparable ecological and geographical equivalences with impacts than other implementing mechanisms, and that performance criteria are less demanding than in banking or direct offsets mechanisms.

The Compensatory Afforestation Fund in India (see page 12) highlights another problem with compensation trust funds: the money may remain unspent and no additional restoration or protection be undertaken, yet the company has bought the right to destroy or pollute where otherwise this would not have been possible. According to the State of the Biodiversity Offset Market 2017' "at least USD 7.1 billion in total compensation funds collected to date remained unspent as of 2016, suggesting that negative impacts to biodiversity have already taken place *on the mere promise of restoration* or compensation."[52]

How offsetting enables continued destruction in areas of special importance to biodiversity

The number of countries in the global South that require biodiversity offsets as part of their environmental regulation remains limited,[53] yet many corporations state that they pursue biodiversity offsetting for regulatory purposes. This regulatory impetus derives from Performance Standard 6 (see box on page 22) of the International Finance Corporation (IFC), the private sector financing arm of the World Bank. If the activity for which a company is seeking IFC financing will destroy what the IFC has defined as 'critical habitat', then the company needs to present a biodiversity action plan which shows how the loss of that habitat will be cancelled out. All regional development banks, as well as private sector banks that adhere to the 'Equator Principles'[ii] have adopted requirements similar to the IFC's Performance Standard 6.

Even where there is no legal requirement or where offsets are not required to secure financing, companies see biodiversity offsetting and similar compensation offset commitments as ways to speed up licensing and financing of their projects. As well as biodiversity offsetting, corporate 'net gain' or 'net positive impact' (NPI) commitments have therefore proliferated in recent years. They amount to the same absurd claim: corporate activities might destroy biodiversity locally, but investments in restoration and protection of biodiversity elsewhere will ensure that biodiversity is better off with corporate destruction than without. In a joint publication on biodiversity offsetting and 'net positive impact' commitments, IUCN, Shell, Rio Tinto, The Nature Conservancy and the IFC write that these approaches "can help businesses achieve faster permitting and avoid delays to the project from, for example, legal actions or protests." They also explain that companies which have made 'net positive impact' pledges "are in a better position to acquire access to land which has significant biodiversity values. This applies particularly to companies with limited options for the geographical siting of impacts – such as in the mining and oil and gas industries." Because remaining mineral, oil and gas deposits are often in areas of high biodiversity, IUCN et al. note that "a clear commitment to NPI (or at least NNL – No Net Loss) may be the only way for such businesses to gain access to these resources."[54]

Many large-scale corporate projects are located in areas that qualify as 'critical habitat' under the IFC definition, and many of them seek financing from the IFC or regional development banks with similar biodiversity offset requirements. Examples of corporate projects that cite IFC Performance Standard 6 as a motive to develop biodiversity offset plans follow.

ii. The Equator Principles present a risk management framework, adopted by financial institutions, for determining, assessing and managing environmental and social risk in projects and is primarily intended to provide a minimum standard for due diligence and monitoring to support responsible risk decision-making.

The International Finance Corporation's Performance Standard 6

Performance Standard 6 on 'Biodiversity Conservation and Sustainable Management of Living Natural Resources' endorses net gain and no net loss biodiversity compensation approaches as a way to justify financing of projects that destroy natural places considered to provide critical habitat for biodiversity. IFC financing is thus available for projects destroying critical habitat as long as the company seeking IFC financing presents a biodiversity offset *plan*.

Before the 2012 revision of the IFC Performance Standards, IFC would finance operations in areas designated as 'critical habitat' only in very exceptional cases. The text included in the 2012 revision introduces biodiversity offsetting, and has facilitated IFC financing of destruction in 'critical habitat' since the 2012 revision.

"For the protection and conservation of biodiversity, the mitigation hierarchy includes biodiversity offsets, which may be considered only after appropriate avoidance, minimization, and restoration measures have been applied. A biodiversity offset should be designed and implemented to achieve measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity; however, a net gain is required in critical habitats. The design of a biodiversity offset must adhere to the "like-for-like or better" principle and must be carried out in alignment with best available information and current practices. When a client is considering the development of an offset as part of the mitigation strategy, external experts with knowledge in offset design and implementation must be involved."[55]

Loopholes undermine biodiversity protection even further

A close inspection of the Performance Standard 6 reveals loopholes which allow financing of such corporate activities that destroy 'critical habitat' even in the absence of the company implementing a biodiversity offset plan. For example, the Performance Standard limits the obligation to compensate in "areas of natural habitat" that is not considered 'critical habitat': in these places, companies must only "achieve no net loss of biodiversity *where feasible*."(p3, emphasis added). Another loophole allows for the population of endangered species to be reduced as long as the biodiversity offset ensures that they recover "over a reasonable time period."

These loopholes turn what is presented as a tool for biodiversity protection into a smokescreen for financing corporate destruction in critical habitat where IFC and World Bank funding of destruction has previously been restricted.

OIL COMPANY KJV IN KENYA

Biodiversity offsets enabled KJV to obtain licenses and financing for oil exploration inside two World Heritage Sites, Lake Turkana National Park and the Kenya Lake System in the Great Rift Valley. The drilling will also affect internationally and nationally designated protected areas. KJV has committed to undertaking its activities in compliance with IFC Performance Standards, and IFC is an equity investor in Africa Oil, a company involved in the drilling. The creation of a Biodiversity Advisory Panel is a requirement of the environmental and social action plan agreed between IFC and Africa Oil.[56]

FRENCH ENERGY COMPANY TOTAL

cites IFC Performance Standard 6 as reason for developing a biodiversity offset plan for its Tilenga oil exploration project in Uganda and other operations which involve drilling in national parks or other protected areas: "In addition to applying the general principles of the Group's biodiversity policy, Total has agreed to meet the performance standards of the International Finance Corporation (IFC, World Bank) for its Tilenga, Papua LNG and EACOP projects, in order to take the particularly sensitive biodiversity of certain sites into consideration."[57]

The Tilenga oil drilling and the East Coast Oil Pipeline (EACOP) will affect one of the world's biodiversity hotspots, the Albertine Rift. The drilling will in part take place in and around the Murchison Falls National Park, an area that qualifies as critical habitat under the IFC definition. The report 'Total and Biodiversity. Commitments and Action' describes the biodiversity offset plans for the drilling in what it acknowledges is: " a particularly sensitive area for biodiversity." "These initiatives", Total says about the biodiversity offset plans, "will help stabilize the situation and even reverse the current trend by promoting the increase of priority species and the protection of critical habitats, with the goal of achieving a net gain in biodiversity."[58] Yet, in the same report, the company blames local land use for degradation rather than mentioning the destruction and devastation that drilling for oil in this national park will cause.

ACRELOR MITTAL LIBERIA

IFC Performance Standard 6 is also cited in relation to Acrelor Mittal Liberia's biodiversity offsetting activities in the biodiversity-rich forest areas affected by the company's iron ore mining in Liberia: "The terms of their concession do not require [Arcelor Mittal] to offset or in some other way compensate for its impacts, but they are following the IFC standards and their own policy of conservation. This policy is to compensate for the residual adverse impacts to biodiversity resulting from the company's operations. The policy is being achieved under the Company's Biodiversity Programme through enhanced protection of existing protected areas (such as the East Nimba Nature Reserve); support for sustainable management of surrounding forests and agricultural intensification to improve food security and reduce people's dependence on forest resources. The BCP is financed at around US$ 0.8 million per annum and is implemented through CI, FFI and several Liberian NGOs, as well as in-house."[59]

INSTITUTO COSTARRICENSE DE ELECRICIDAD

The Costa Rican energy company Instituto Costarricense de Elecricidad is experimenting with biodiversity offsetting on the Parisma river to compensate for ecological damage of the Reventazón river, where a large hydropower dam is being constructed. The construction of the dam is financed among others by the IFC and the European Investment Bank. According to an information note about the project, "The Reventazón River qualifies as Natural Habitat according to IFC PS6. Potential impacts include: loss of 8 km of flowing river, a barrier effect on migratory fish species entering 38 km of Reventazón River mainstream and tributaries downstream of Angostura HPP; changed hydrology (sedimentation and water quality) in downstream Reventazón River sections that will affect Tortuguero National Park." The note also states that "The Parismina River was identified as equivalent to the Reventazón River (like-for-like). This is an averted loss offset — no [hydro power project] will be developed on the Parismina River in the future."[60]

When perpetuity doesn't last

Experiences in Australia and Uganda show that biodiversity offsetting does not guarantee that the offset area will be protected in the long term. In both countries, areas dedicated as offset sites were destroyed when they themselves became part of a corporate project to mine or build a dam, respectively. It turned out that if an area set aside as biodiversity offset today becomes economically interesting for a company in the future, its destruction, too, can be licensed and financed simply by promising to offset a second time, to replace the area the company now wishes to destroy.

UGANDA | OFFSET AREA FLOODED BY NEW DAM PROJECT

The Bujagali hydropower project is no stranger to controversy.[61] The reservoir created by the dam on the River Nile flooded culturally and ecologically important waterfalls and river banks with great cultural and spiritual importance for the Basoga, indigenous peoples in the project area. In its public communications, the IFC assured critics that 'comparably important' waterfalls and river banks would be set aside in perpetuity as a biodiversity offset for the Bujagali reservoir. The legal agreement it eventually signed with the Government of Uganda, however, lacked unambiguous requirements that the offset site be protected in perpetuity.[62] As a result, perpetuity only lasted until another hydropower developer obtained permission for another dam on the River Nile. This new hydro reservoir will submerge the waterfalls and river banks set aside a few years earlier to compensate for the destruction of waterfalls and river banks further downriver caused by the Bujagali dam. The IFC agreed to the destruction of the biodiversity offset site on condition that a new 'offset' location be identified and protected.

AUSTRALIA | BIODIVERSITY OFFSET DESTROYED FOR COAL MINE EXPANSION

Rio Tinto is involved in the Warkworth coal mine in the Hunter Valley in New South Wales, Australia. The mine is part of the larger Mount Thorley Warkworth mining complex managed by Coal & Allied Operations Limited. In 2015, Rio Tinto received approval from the environmental authority to destroy 611 hectares of woodland, including bushland and woodland areas that contain rare habitat. "The chair of the NSW Scientific Committee stated that the destruction of the Warkworth Sands Woodland by the mine will likely lead to the irreversible extinction of the ecological community," notes a report on the controversial approval.[63]

Yet this site was itself the subject of a biodiversity offset that was guaranteed through a Deed of Agreement by the Planning Minister in 2003. Rio Tinto had promised to protect it in perpetuity to offset the loss of biodiversity caused by an already existing coal mine.[64]

4 Offsetting | Instrument of choice for corporations losing social license to operate

Almost all corporations in the extractive, energy, infrastructure and global food industries publish 'Corporate Social Responsibility' reports and have adopted environmental or biodiversity policies. Increasingly, these include a commitment to biodiversity offsetting and similar 'zero net destruction' or 'net positive impact' pledges. Those pledges are little more than public relations tools that help secure a social license for corporate destruction, especially for activities that are particularly controversial. Expansion of airports to facilitate climate-wrecking growth for international flight traffic, building of mega-hydropower dams, drilling for oil and digging mines that destroy culturally, spiritually and ecologically important areas are all subjects of attempted greenwash through the use of biodiversity offset pledges.

> By engaging in voluntary pledges, companies may also hope to delay if not prevent legally binding regulation

One such example is the biodiversity offsetting pledge from Rio Tinto's mining operation in Madagascar. Rio Tinto was among the first in the mining industry to actively engage with biodiversity offsetting, through partnerships with conservation NGOs including IUCN, Fauna & Flora International and Birdlife International. In its 2008 position statement on biodiversity, Rio Tinto, wrote: "We want to be biodiversity leaders within the mining industry, for the competitive advantage and reputational benefit this provides. Our performance on biodiversity conservation and management issues will create benefits for our business."[65] Their biodiversity offset program in the south-east of Madagascar helped turn fierce NGO opposition into endorsement by a sufficient number of conservation NGOs to obtain the go-ahead and financial support for ilmenite mining which is now destroying 1,600 hectares of coastal rainforest containing many endemic species (see also page 7).[66]

More recently, the global food and industrial agriculture industries have begun to explore REDD+, in connection with corporate 'zero-net deforestation' pledges. These claims suggest that the agroindustry can transform itself from a problem into a solution to the climate and biodiversity crisis.

Often, there is no regulatory or financing agency requirement for such pledges. But they can still provide regulatory certainty and allow companies to carry out destructive activities that may be legal but which are no longer socially tolerated when companies point to their 'good will' commitments and pledges to engage in biodiversity offsetting or promise 'no net loss' destruction. By engaging in voluntary pledges, companies may also hope to delay if not prevent legally binding regulation.

A prime example for this approach is the unwavering corporate support for the international forest policy instrument REDD+. REDD+ plays an important role in many corporate

'zero deforestation' and 'carbon neutrality' pledges, even though the instrument is widely acknowledged to have failed to contribute to curbing deforestation (see below). This failure, however, is secondary if the motive to support REDD+ is to stall more effective approaches to ending forest loss or tackling excessive corporate greenhouse gas emissions– approaches that would cause a bigger dent in corporate profits than the voluntary purchase of REDD+ offset credits. From a corporate point of view, therefore, REDD+ can be seen as a success: it has enabled corporations to continue to profit from deforestation.

> These pledges are little more than public relations tools that help secure a social license for corporate destruction

Global food corporations and agroindustry pledge to 'end deforestation'

Global food corporations and the agroindustry have been under growing public and policy pressure to tackle their carbon footprint as well as their role in deforestation and the loss of forest biodiversity. The past decade has seen individual companies such as Unilever or Danone and industry associations issue pledges to do their bit. The Consumer Goods Forum, which brings together more than 400 large consumer goods companies, including Mars, Danone, Unilever, Cargill and Bunge, adopted a resolution in 2010 which includes the aim of achieving "zero-net deforestation by 2020 through the sustainable sourcing of key commodities like soy, palm oil, cattle and paper and pulp." [67]

'Zero-net deforestation' does not mean that companies commit to ending deforestation in their supply chains. Rather, they commit to offsetting deforestation caused by the production of their products with engagement in REDD+ or restoration initiatives elsewhere.[68,69] Even though the large majority of companies are likely to fail to meet their pledges, they have benefited for years from the positive PR associated with a commitment which has been widely marketed as an industry commitment to 'ending deforestation'.[70]

REDD+ | A tool for greenwashing corporate land use

REDD stands for Reducing Emissions from Deforestation and Degradation of Forests, the 'plus' indicates that activities involving forest conservation, forestry management and tree planting also qualify for REDD+ payments.

REDD+ was introduced at the UN climate negotiations more than a decade ago, with the objective of curbing net emissions of greenhouse gases by raising money to fund actions that prevent forest loss or degradation in developing countries. The expectation was that it would generate large sums of private sector funding from industries that profit from continued fossil fuel use. The money generated through selling carbon credits was to be used to help end deforestation and finance forest conservation by providing a financial incentive to forest owners and those with permits to destroy forests so they would keep trees standing.

The development of REDD+ was strongly influenced by the *financialization of nature* discourse and forest carbon storage is now regularly cited as the ecosystem service. The climate change debate now reduces forests to their function as a carbon store.

While proponents of *financialization of nature* continue to praise the supposed success story of forest carbon storage as an 'ecosystem service', the past decade of experience with REDD+ has dashed the high hopes of REDD+ advocates: forest loss continues unabated and the large sums of private sector funding never materialized.[71]

REDD+ has also shown to be prone to inciting conflict at local level and causing harm to peasant communities in REDD+ affected areas. And the assumption that it will provide a financial incentive that is sufficient to 'make forests worth more standing than cut' and deter those behind large-scale and often illegal deforestation has also turned out to be wrong.[72]

REDD+ finance remains largely public sector funding for private sector enterprises and international consultants. Moreover, REDD+ is increasingly presented as 'payment-for-performance' or 'payment-for-results' mechanism rather than an offset instrument. This language tries to link REDD+ to 'payment for environmental service' schemes which were popular in the Amazon region and

elsewhere in the 1990s and have been less criticized than offsetting and carbon trading. However, the REDD+ core architecture remains that of an offset mechanism and that is what makes it attractive for the aviation, extractive industries and industrial agriculture companies. The aviation industry in particular is eyeing the use of REDD+ offset credits to cancel out greenhouse gas emissions from unlimited growth post 2020. The 'action plan' at the center of the International Civil Aviation Organization (ICAO)'s climate policy largely relies on offsetting (see below).

But why does REDD+ continue to attract so much attention despite the dismal track record? Some have suggested that, as with biodiversity offsetting, "the constitutive force of these mechanisms probably lies in their ability to redefine control, power and the distribution of costs and in their impacts in terms of land use rather than in their efficiency."[73] In this case, success or failure of REDD+ is not determined by its contribution to halting deforestation, but whether it helps further shift control over territories from communities to corporations and governments. The extent to which REDD+ is redefining control over land use is thus perhaps the most troubling consequence after a decade of experience with this latest international forest policy.[74]

It may also explain the attraction of the mechanism for the global food corporations and agroindustries. The payment for a tonne of carbon dioxide allegedly not released through REDD+ has been around 5 USD. This pales in comparison to the profits companies can make producing commodities like palm oil, soy or meat on an industrial scale, and involving massive deforestation. As a result, REDD+ projects and programs have overwhelmingly focused on restricting peasant agriculture ("modernizing" it, in the view of REDD+ advocates) and criminalizing indigenous peoples' forest use, rather than the agroindustrial companies profiting from large-scale deforestation.

Thus, on the one hand, REDD+ is presented as the mechanism to halt deforestation and at the same time, just about every REDD+ publication connects REDD+ to peasant agriculture and indigenous peoples' use of the forest, not large-scale deforestation for agriculture commodities. The result: REDD+ reinforces the false perception that peasant agricultural practices, and shifting cultivation in particular, are causing deforestation while those responsible for large-scale deforestation are made invisible by their lack of engagement in the dominant international forest policy instrument of our time.

Supporting REDD+ thus is a triple-win for the global food companies and agroindustry:

1. It makes the role of agribusiness and global food companies in deforestation invisible;

2. It blames deforestation on peasant families who are already suffering from ever-growing corporate control over agriculture land;

3. It provides agribusiness and global food companies with a mechanism that allows them to expand their destruction of forests and increase corporate profits from selling ever more industrial soy, palm oil, meat and dairy products, while advertising this growth as coming from 'zero-net deforestation' supply chains. This claim is not met by halting deforestation in industrial agriculture but by buying REDD+ credits from projects which restrict peasant agriculture.

Community agroecology and agro-forestry project, Sungai Buri, Sarawak, Indonesia
Amelia Collins / Friends of the Earth International

> Success or failure of REDD+ is not determined by its contribution to halting deforestation, but whether it helps further shift control over territories from communities to corporations and governments

Green airports? Biodiversity and carbon offsetting in the aviation industry[75]

By the turn of the millennium, less than 5 per cent of the world's population had ever taken a flight. This minority keeps flying more and more, and the volume of international passenger flights has grown substantially over the past decades. Just-in-time industrial production and consumption preferences in the global North have pushed the transport of electronic goods, perishable foods, cut flowers and fashion products increasingly into the air, driving the growth in international freight flight traffic. Greenhouse gas emissions from aviation have consequently been rising rapidly. Near-exponential growth projections presented by the industry for the coming decades make a mockery of international commitments to limiting global temperature rise to well below 2 degrees Celsius.

International aviation is exempt from greenhouse gas reduction targets adopted through the UN climate negotiations, and the industry has been delaying action to address the sector's rapidly growing greenhouse gas emissions for years. In October 2016, in response to the threat of government regulation if no industry plan was forthcoming, the UN body responsible for international aviation, ICAO, adopted a climate 'action' plan to address the industry's carbon dioxide emissions caused by international aviation. The package of measures came to be known as CORSIA, the Carbon Offsetting and Reduction Scheme for International Aviation. Offsetting emissions is at the heart of CORSIA.

Some airlines and airport operators already use carbon offsetting to advertise green, supposedly carbon-neutral flights and airports. 219 airports worldwide, 117 of them in Europe, are currently marketing themselves as sustainable, referring to their membership in the Airport Carbon Accreditation scheme. The scheme includes carbon offsetting as one of the options for airport operators to tackle their greenhouse gas emissions.

Airports have also begun to promote biodiversity offsets in response to growing opposition to airport expansion and the associated destruction of natural habitat. Airports take up large tracts of land, often in socially marginalised areas at the outskirts of cities, where remnants of green spaces are vital to recreation, air quality and well-being or where land is important for food production and nature conservation. Airport operators use the promise to offset the loss of biodiversity caused by airport expansion to push back opposition to their expansion plans. In some cases, such as for the expansion of Heathrow Airport near London, in the UK, presenting a biodiversity offset plan is a prerequisite for obtaining environmental licenses to expand.

Biodiversity and carbon offsetting claim to turn London Heathrow into "green" airport

In June 2018, the UK government announced its support for the controversial expansion of Heathrow Airport. Expansion involves construction of a third runway, which will increase capacity by 54 per cent to at least 740,000 flights departing and arriving each year from the airport. This will make Heathrow airport the UK's largest source of carbon emissions, yet emissions from flights are not included in the operator's claim that it will achieve carbon neutrality by 2020.

Glossy brochures describe the airport operator's engagement in restoring degraded peatlands and how rewetting these areas helps reduce greenhouse gas emissions. The problem is less the restoration project itself but rather, the operators' questionable attempt to portray the operations of the airport as 'carbon neutral' even though the largest source of emissions – the flights – is not included in the calculations.

A government 'Appraisal of Sustainability' report issued in June 2018 compares different airport expansion options around London. It refers to the mitigation hierarchy and biodiversity offsetting as important aspects in its assessment of the different options. The report also states that the detailed plans which the airport operator will now have to present to obtain the necessary environmental licenses are expected to include biodiversity offsetting.[76]

In a report published in January 2018, the Heathrow Airport operator promised to ensure that the planned expansion will result in 'no net loss' of biodiversity: "In order to demonstrate no net loss (i.e. the basis of Government policy) and value any biodiversity enhancements, we are working with Natural England towards the use of a biodiversity offsetting metric that can value both losses and gains to biodiversity." The company also notes that: "It is our aim to provide biodiversity offsets within the general vicinity of the airport to ensure that the populations of animals and plants present can be maintained. However, due to the scale of the project and potential limits on local land availability, the strategic biodiversity measures may need to be delivered further afield."[77]

Biodiversity offset illusion exposed and airport plans shelved | Notre-Dame-des-Landes, France

In France, persistent opposition by activists eventually prevented the building of a new airport at Notre-Dame-des-Landes.[78]

The airport was first proposed nearly 50 years ago and would have destroyed more than 1,000 hectares of wetland and grasslands under agricultural use. A broad alliance against the proposed airport engaged in a variety of actions and activities of resistance. This included a critique by conservationists and academics of the biodiversity offset plans presented by Vinci, the global construction company behind the proposed airport. Because building the airport would have meant the destruction of hundreds of wetlands, and thousands of protected species typical of former French rural landscapes, several environmental licenses would have required biodiversity offsets.[79] The 'Naturalistes en lutte' presented a comprehensive assessment of a consultancy firm's biodiversity offset proposal in which they set out in detail the contradictions and flaws of biodiversity offsetting in general and the proposed biodiversity offsets for Notre-Dame-des-Landes.[80]

Activists also informed peasant families cultivating land around the proposed new airport about Vinci's biodiversity offset plans, focusing on areas that Vinci had identified for inclusion in their biodiversity offset plans. Several dozen peasant families refused to participate in the biodiversity offset activities, and in the end, Vinci was unable to find sufficient land for its biodiversity offset proposal. Direct actions and demonstrations at the offices of companies, organisations and universities involved in preparing the biodiversity offsetting plan for Vinci, including the University of Angers and the consultancy Biotope, which developed the biodiversity offset plan. They exposed publicly how these entities supported an absurd compensation system and helped Vinci comply with its legal requirement for biodiversity offsetting.

Creative resistance offered by a broad local alliance in the end led to the plans for the new airport to be cancelled in 2018.[81]

Notre-Dame-des-Landes airport campaign
Jim Delémont

5 Final reflections

The following quote from a New Zealand-based law firm neatly sums up why corporations are interested in biodiversity offsetting: "Biodiversity offsets can help companies manage their risks more effectively and strengthen their license to operate by showing regulators that operations can be based on a 'no net loss' or 'net gain' approach to biodiversity and by securing the support of local communities and civil society. Companies are increasingly seeking to demonstrate good practice on environmental issues to secure their license to operate and access to capital, to obtain consent in a timely way, to operate cost effectively, and to maintain a competitive advantage."[82]

It also explains why corporate pledges assuring 'no net loss' of biodiversity, 'zero-net' deforestation or green airports that will provide a 'net positive' impact on biodiversity are on the rise. The examples from the global food and aviation industry in chapter 4 have shown how closely linked offset pledges for carbon and biodiversity are and that corporate pledges, even where they are made and marketed as voluntary, can influence the licensing and financing of corporate destruction, especially in areas of special importance to biodiversity.

Looking more closely at the proliferation of biodiversity offset provisions in environmental regulation around the world, some trends are noticeable. They show how biodiversity offsetting and similar forms of compensation offsets weaken environmental protection.

- Revisions of environmental regulations that allow the use of compensation offsets in countries such as Brazil, India and Germany have expanded offsetting. Offset sites are now allowed to be located further away from the site of impact and banking mechanisms are favoured over offsets where the responsibility for long-term management of the site remains with the developer. The changes have gone hand-in-hand with deregulation and the cutting of staff and budgets of environmental protection agencies. This has resulted in low levels of monitoring and easier access to licenses to pollute and destroy for companies. Where such monitoring exists, reports indicate that biodiversity offsets are not working even on narrow environmental terms.[83] These revisions of existing biodiversity offset regulations undermine environmental protection because they make it easier for corporate land users to access biodiversity-rich areas. Allowing a greater distance between the site of impact and the site of the compensation offset reduces corporate cost of identifying offset areas that comply with the requirement to be sufficiently similar in species make-up and ecological functioning to the site where the destruction will happen.

- There is a noticeable increase in cases where biodiversity offsetting is used to justify corporate destruction in formally protected areas or areas identified as particularly worthy of protection.

- As the example of Costa Rica shows, the absence of national environmental regulation that allows biodiversity offsetting is no obstacle to its use. In such cases, the IFC Performance Standard 6 is used to justify financing of corporate destruction and issuance of the necessary environmental licenses and permits in return for offset schemes.

- The example of the Bujagali hydro power biodiversity offsets in Uganda described in chapter 3 shows how unreliable biodiversity offset commitments can be even where they are promoted as ensuring protection in perpetuity.[84]

- Environmental licenses are often issued without suitable land for the offset having been identified, as the examples from India and Colombia in chapter 2 show.

- The influence of the IFC Performance Standard 6 of 2012 must not be underestimated. All regional development banks as well as private sector banks that adhere to the 'Equator Principles' have adopted biodiversity offset requirements similar to the IFC's Performance Standard 6. Increasingly, the biodiversity offset provision in the Standard is used to enable IFC financing – often crucial for projects that destroy protected areas, iconic national parks and other 'critical habitat'. The Standard also contains major loopholes which turn what is presented as a tool for biodiversity protection into even more of a smokescreen for financing corporate destruction where IFC and World Bank funding of destruction has previously been restricted.

The research for this report is also prompting reflection on the changing language around biodiversity offsetting. It is becoming harder to locate information on biodiversity offsets, and on the location of biodiversity offset projects in particular. This is in part because the expression "biodiversity offset" is used less frequently. Instead, industry publications, government policies, planning documents, licensing decisions and funding commitments refer to quantifying 'losses and gains', achieving 'net biodiversity gains' or ensuring 'no net loss' of biodiversity or the application of mitigation hierarchies, biodiversity banking and conservation trust funds. However, moving away from using the term 'biodiversity offsetting' must not be mistaken for the instrument losing appeal in the extractive industries, among the conservation industry, or in institutions like the IFC and the World Bank.

What this report has shown clearly is that the global push for offsetting schemes is not in the interest of environmental protection, that it will lead to more destruction and pollution, not less. The offset story might by sufficiently appealing to policy makers and distracting the general public, particularly with the conservation industry lending a helping hand. The appeal for policy makers: the story line suggests that policies are in place which will eventually stop environmental degradation and the loss of biodiversity – without unduly hurting corporate profit. But the reality exposes offsetting as the instrument that allows corporate environmental destruction to advance into places of particular importance to biodiversity and people, and where a public outcry would be likely in the absence of a promise that the damage caused will be cancelled out through restoration elsewhere. Introducing offsets into environmental regulation in the end amounts to opening the door for companies to obtain a license to pollute and destroy places where otherwise such corporate destruction would have been unacceptable.

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