



Carbon market laws in the global South set to increase corporate control over community forests

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Table of Content

Hurdles that set the stage for capture of community forests	4
A quarter century of World Bank initiatives for carbon offsetting in the global South	10
Cause for concern: Carbon laws pave way for corporate profits and community pain	10
Colombia	10
Carbon projects and violation of community rights	12
Chronology of carbon tax and carbon market laws in Colombia	12
How vested interests have shaped Colombia's carbon market legislation	16
Indonesia	18
Carbon trading regulation focus on corporate concession system puts squeeze on life spaces for communities	19
Who gets to count the carbon in trees and forests?	20
Chronology of key carbon market regulations with relevance for forests in Indonesia	22
Liberia	27
Chronology of REDD and carbon trading-related policies and laws in Liberia	28
Role of external agencies and consultants in drawing up Liberia carbon and REDD policies	30
Malaysia	32
Malaysia Forest Fund sets out framework for dividing forest carbon funding	35
Chronology of climate change and carbon trading-related policies and laws in Malaysia	36
Systemic nature of the violations of the indigenous customary land rights in Malaysia	38
ANNEX I	
Offsetting: a brief history of overwhelming failure	40
Human rights abuses and conflicts a common occurrence in offsetting	40
Failure to reduce destruction and pollution	41
ANNEX II	
World Bank funding to advance carbon markets	42
Endnotes	44

Hurdles that set the stage for capture of community forests

Governments and companies the world over are touting carbon offsetting as a solution in the fight against climate change. Instead of taking urgently needed decisive action to phase out the burning of coal, oil and gas and cut fossil carbon burning down to real zero, they merely promise to reduce greenhouse gas emissions to "net-zero". The seemingly small difference between "net"-zero and real zero hides a dangerous gamble: a promise of "net"-zero emissions allows companies to keep pumping up oil and gas – as long as they can pretend that emissions are cancelled out by savings elsewhere or that someone elsewhere takes an

equivalent amount of carbon out of the atmosphere. This theory of offsetting is deeply flawed and leads to rising greenhouse gas concentrations in the atmosphere, not least because alleged savings claimed by carbon offset projects purporting to reduce emissions have time and again been found to be based on spurious and implausible assumptions. This has resulted in millions of phantom credits having been issued to carbon projects and sold to polluting companies who claimed that their emissions had been compensated – when in reality that was not the case¹. The inconvenient truth is that carbon offsetting exacerbates the climate crisis².

Fake solution: Carbon offsetting

- Carbon offsetting does not reduce overall emissions. By buying carbon credits, polluters can keep polluting because greenhouse gas emissions allegedly reduced or avoided elsewhere allow continued release of greenhouse gases – and all the other pollution – at the polluter's operations.
- Carbon offsetting lets polluters responsible for historic emissions off the hook. Most carbon offset projects take place in the global South. Thus, communities in the global South are made to reduce emissions even though they are not responsible for the mass release of fossil carbon that is causing climate chaos. The purported savings are then bought as carbon credits by corporate polluters, i.e., those responsible for the massive release of greenhouse gases over the past 200 years, so they do not have to reduce their own emissions.
- Carbon offsetting is intrinsically prone to manipulation and exaggeration of purported emission reductions. In addition, land-based offsets in particular have caused countless conflicts and land grabbing on a large scale where outside carbon companies impose land use and access restrictions on communities whose territories are declared carbon project areas.
- Carbon offset profits are not climate finance. Financial benefits from carbon offsetting accrue overwhelmingly to entities in the global North. Among the profiteers of carbon offsetting are the buyers of carbon credits paying to claim other countries' climate action as their own and project developers, investors, traders, consultants, certification schemes and financial service companies involved in the generation and trading of carbon credits. Communities in the global South, whose historical and actual emissions are negligible in comparison, meanwhile, are expected to change their way of life and reduce emissions so big polluters in the global North don't have to make these changes. Carbon offsetting is therefore the opposite of climate finance. Yet, a growing number of (industrial country) governments are now advancing the fake claim that carbon markets will deliver billions in 'climate finance'. Real climate finance would see countries of the global North with a responsibility for the historic accumulation of greenhouse gases in the atmosphere – not only drastically cut fossil fuel use but also provide predictable funding to countries in the global South in need of resources to fund action to adapt to the rapidly changing climate and to address loss and damage, the already existing unavoidable harm caused by climate change.

For more information, see: Milieudéfensie [Factsheet Series False Solutions](#) - Offsetting

At the 29th UN climate conference in Azerbaijan in November 2024, governments nonetheless agreed to keep promoting this fake solution by adopting rules for carbon trading under the UN Paris Agreement's Articles 6.2 and 6.4. In a context where the global North has been failing to commit and deliver adequate financial support to address the impacts of a rapidly changing climate to the global South³, governments are preparing to take part in carbon trading. By introducing new carbon market laws, they hope to 'cash in' on projected billion-dollar carbon trades now that the Paris Agreement negotiations have cleared the way for carbon offset markets under the UN climate treaty.

There is thus a clear link between the increase in carbon offset regulation across the global South and Article 6 of the UN Paris Agreement: to take part in government-to-government carbon credit trades under Article 6.2 or to facilitate private sector companies' profiting from Article 6.4 offset credit sales, governments need to show that they have the legal framework in place to ensure smooth trading, define who holds the legal rights to carbon sold as credits and monitor the trades.

This briefing takes a first glance at legal changes underway in countries in the global South to facilitate the trading of carbon stored in forests and trees and identifies some worrying trends:

Forestry laws are being amended so that corporate concession holders can use their concessions for carbon credit generation. Laws introducing national carbon markets, meanwhile, contain at best weak and non-binding requirements for carbon project operators to respect the rights of Indigenous Peoples and communities' customary rights to lands. In combination, these trends are already driving an expansion of corporate control over Indigenous Peoples' territories and community lands.

Analysis of carbon market legislation in Colombia, Indonesia, Liberia and Malaysia reveals that:

- In Colombia, offsetting provisions in the carbon tax law protect profits of extractivist companies exploiting the country's territory. Companies can substantially reduce their carbon tax payments on fossil fuel use by buying carbon credits. These must have been generated by projects in Colombia and can be used instead of paying (part of) the carbon tax adopted in 2016. Buying carbon credits has been the far cheaper option for corporations than paying the tax. According to the carbon markets lobby group International Emissions Trading Association (IETA), companies used offsets to cover 37 percent of the 2017-20223 emissions covered by the carbon tax⁴. The offset option also generates profits for private companies and big conservation NGOs operating carbon projects while it deprives the state of tax revenue, and consequently, reduces funding available for targeted action to tackle root causes of deforestation⁵. Prodeco, for example, the Colombian subsidiary of Swiss mining corporation Glencore, reduced its carbon tax payments by two-thirds this way⁶. Carbon credits from projects purporting to protect forests also helped the company greenwashing its public image and conceal impacts of its dirty coal mining operations.

A similar scenario seems to be emerging in Gabon where a January 2025 presidential decree introduces a 'carbon fee' on 50 percent of the emissions released by each airplane and cargo ship arriving in or departing from Gabon. As with the carbon tax in Colombia, the presidential decree in Gabon announces that from 2026, companies will have the option to buy carbon credits in lieu of paying (part of) the carbon fee. These credits would come 'from sequestration or avoidance projects, prioritising projects developed in Gabon', the decree states⁷.

- In Indonesia, changes to forestry laws allow companies to use existing logging and plantation concessions to generate carbon credits. In

Malaysia, the state government of Sarawak has created a "Forest Carbon Activity" license which grants rights to the carbon stock found within a project area (defined as "Carbon Forest Area"). Changes such as these are likely to exacerbate land conflicts, increase greenhouse gas concentrations in the atmosphere and expand corporate control over customary lands:

- **Exacerbating land conflicts.** Large-scale corporate land concessions regularly lead to conflict when state institutions issuing concessions ignore Indigenous Peoples' and community rights to their customary lands. Legal changes aimed at establishing national frameworks for carbon markets are allowing companies to generate carbon credits from concessions already issued to them. The legal changes introduce carbon storage as legitimate use in concessions. This will provide profits from carbon credit sales to corporate concession holders while communities risk being locked out of their customary lands. Indigenous Peoples, peasant farmers and fisherfolk will face security guards preventing them from accessing their customary lands that a company declares as carbon storage area where community use is prohibited or severely restricted. This is already a reality for communities whose life spaces are affected by the Rimba Raja and Katingan REDD carbon projects in Indonesia and in many other places across the global South⁸. Carbon offset regulations being developed are set to significantly increase such conflicts and restrictions on community use of their customary lands.

- **Increasing greenhouse gas concentrations in the atmosphere.** Phantom credits have been a reality ever since offsetting was invented over 40 years ago. Phantom credits increase the concentration of emissions in the atmosphere because they are not backed by actually avoided or reduced emissions (see box). If they are used e.g. by an oil company to sell allegedly carbon-neutral petrol, overall emissions in the atmosphere

increase because the real emissions from the petrol are not compensated if the carbon credit is a phantom credit.

Forest and tree plantation offset projects have been particularly prone to generating phantom credits (and causing conflicts with communities⁹). There is no indication that legal frameworks now introduced in countries in the global South to 'scale up' carbon markets will magically prevent the issuance of phantom credits. Under emerging legal frameworks, companies will be able to receive credits for carbon storage in parts of existing or newly created concessions where they may have had no intention to log or convert to plantations because the commercially valuable trees had already been taken out, the land is too swampy, too steep or otherwise unsuitable. This creates phantom credits because no deforestation or forest degradation is avoided. A case in point is a carbon project being set up by the notorious logging company Samling in Malaysia¹⁰. Jurisdictional carbon programmes in Gabon and Guyana show that phantom credits are also a reality in government-led carbon offset programmes¹¹. In the so-called voluntary carbon market, offset projects purporting to reduce emissions from commercial logging also have a long record of over-estimating emission savings and generating phantom credits¹². Analysts found that a logging operation in Alaska received carbon credits for trees "that were probably never in danger of being cut down, in an already extensively logged area¹³."

- **Expanding and reinforcing corporate control over public lands.** Governments have already handed out concessions over large community territories across the global South, often ignoring Indigenous Peoples' and community rights to their customary lands or issuing illegitimate concessions over customary territories of Indigenous Peoples and forest-dependent communities. Not all concessions are immediately actively used by companies, for a variety of reasons. Laws sanctioning the use of such concessions for the generation and

sale of carbon credits allows corporate concession holders to profit from concessions already granted to them but that they were not yet actively using – or not planning to ever use for the stated concession activities that would imply deforestation. By inventing a story that without the revenue from carbon credit sales they would carry out the deforestation legally permitted in the concession agreements, even if they had no intention to do so, they can pocket extra profits. As a result of such changes in forestry laws that allow companies to generate carbon credit from concessions they already hold, communities risk being locked out for longer and lose access to more of their customary lands (often illegitimately) assigned to corporate concessions.

The legal changes may also undermine land reform processes. Organisations in Brazil have long warned that carbon offsetting provisions introduced in the 2012 Forest Code might be undermining land reform efforts¹⁴. In a context of extremely unequal land ownership, land owners in Brazil are obliged to show that land they claim ownership over fulfils the 'social function' as defined in the country's Constitution of 1985. Where this 'social function' of the land cannot be proven by the land owner, state institutions are able to assign the land to the land reform process, making it available for the settlement of landless peasants. The introduction of carbon offsetting in the 2012 revision of the Forest Code allows individuals claiming ownership over hundreds of thousands of hectares of land to fend off attempts to assign areas to the land reform process by claiming these vast areas of land are being used for carbon storage – and that therefore the constitutionally required 'social function' of land is met.

- The government of Liberia is in the process of defining the role of carbon trading in its climate policies and laws. It has, however, already entered into initial agreements that might allow foreign companies to trade carbon stored in forests in Liberia. **Communities holding customary rights were not consulted** before the

government signed a Memorandum of Understanding in 2023 with Blue Carbon LLC., a company established in October 2022 by Sheikh Ahmed Dalmoock Al Maktoum, a member of the Dubai Royal Family¹⁵. Had it gone ahead, the deal would have given Blue Carbon LLC rights to manage one million hectares of land, approximately 15 percent of the country's forests, for 30 years. The deal is widely seen as breaching the 2009 Community Rights Law with Respect to Forest Lands and the 2018 Land Rights Law. Both laws grant communities the right to free, prior and informed consent for any activity that may impact their customary lands.

- The World Bank, UNDP and international conservationist NGOs like The Nature Conservancy (which recently reported net assets worth nearly 10 billion USD¹⁶) often claim that communities stand to benefit from 'scaled-up' carbon markets. There is little evidence to support this claim. Emerging laws paving the way to 'scale-up' carbon offsetting are unlikely to change this situation; they contain only vague and mostly optional provisions to protect communities' territorial rights.

For example, carbon laws in Colombia and Indonesia cover technicalities of carbon quantification and the tracking of carbon trades in online registries in great detail. By contrast, provisions to protect Indigenous Peoples' and peasant community rights to their territories are either absent or inadequate, contain vague language and application is non-binding. In Malaysia, emerging carbon market legislation, in combination with federal and state governments' longstanding failure to recognize Indigenous Peoples' legal rights to customary lands, is likely to effectively shut Indigenous Peoples out of active engagement in what is touted as big opportunity for communities to generate revenues. Legislation under way suggests that doing so would require governments to recognise Indigenous Peoples' rights to land– which to date they have refused to do, limiting recognition of Indigenous Peoples' rights to usufruct rights to their territories¹⁷.

In Papua New Guinea, a coalition of environmental groups raised alarm in May 2024 when the government revised the country's draft carbon law and deleted the requirement for the relevant Minister to obtain the Free, Prior and Informed Consent (FPIC) of customary landholders before

entering into REDD credit sales¹⁸. In Brazil's Amazon states Pará and Amazonas, civil society organisations (Pará¹⁹) and the public prosecution agency (Amazonas)²⁰ are challenging state governments' signing of carbon trade agreements over Indigenous Peoples' territories and public lands without prior consultation of Indigenous Peoples and forest-dependent communities.

- Complexities involved in making carbon storage in forests and trees a tradable financial product, the persistent emergence of contradictions involved in this endeavour and the ease for vested interests to manipulate carbon trading rules have seen carbon market laws change frequently, **with regulations often accommodating priorities pushed by vested interests**. The volume of regulation that carbon trading involves and the frequent changes are likely to overwhelm civil society and community organisations' capacities to meaningfully monitor these processes. Intergovernmental agencies, private sector companies and international conservationist NGOs, meanwhile have the financial and staff capacity to lobby for their priorities in the process of developing national legislation for carbon offset trading in the global South. This is already evident in the development of carbon market laws in Liberia (Flora & Fauna) and Colombia (Conservation International).

This initial assessment suggests that national laws and regulations that are being put in place to advance carbon markets and trading of forest carbon credits will deliver profits to corporations that have long been implicated in conflicts with communities and are responsible for environmental destruction. International consultancies, financial market firms and speculators, many based in the global North, also stand to profit from 'scaled-up' carbon markets. Communities, meanwhile, risk facing empty promises of 'fair benefits', a substantial loss of autonomy over customary lands and restrictions imposed on how they use their territories.

Initiatives run by intergovernmental agencies like the World Bank and the United Nations Development Programme (UNDP) have shaped emerging carbon market laws and regulations. This, in turn raises the question of whose interests are taking priority in carbon market laws that are being put in place in the global South. First experiences suggest that these carbon market laws risk undermining hard-won advances in the recognition of Indigenous Peoples' rights and community control over the customary lands they depend on. Offsetting initiatives eligible under existing carbon pricing regimes such as in Colombia, or underway, as in Indonesia and Malaysia, stand to aggravate violation these rights.²¹

UN Paris Agreement fuels carbon offset regulation in the global South

The UN Paris Agreement was adopted in 2015. Under the Agreement, countries commit to take action to limit the average global temperature increase to 1.5 degrees above pre-industrial levels. To achieve this commitment, they pledge to balance out greenhouse gas emissions with "removals by sinks" in the second half of the century. The longer governments drag their feet in ending fossil fuel emissions, the stronger they will come to rely on unproven and risky technologies they hope will permanently "remove" greenhouse gases from the atmosphere. They also introduced carbon trading into the Paris Agreement. The Agreement's Article 6 sets out two mechanisms that allow governments or companies to avoid the necessary domestic emission cuts by paying someone elsewhere to balance out their emissions with (purported) additional emission reductions or by removing carbon from the atmosphere²². Article 6.2 allows countries to trade offset credits - called Internationally Transferred Mitigation Outcomes (ITMOs) - with one another through bilateral agreements. Article 6.4 will function much like the CDM under the Kyoto Protocol: Private sector project developers obtain a letter from the country in which they are running their project and then register their carbon project with an entity called Art.6.4 Supervisory Body, created and overseen by

the UN climate change convention. Organisations such as Verra and the GoldStandard, which operate controversial methodologies developed in the voluntary carbon market to turn project owner's stories of emissions that would have been released without their carbon project into carbon credits, are pushing for their methodologies to be used to calculate Article 6.4 credit volumes.²³

As with credits generated by CDM projects, carbon credits from Article 6.4 offset projects can be bought by countries, companies and individuals. There is, however, a crucial difference to the CDM: Under the Paris Agreement, all countries that ratified the agreement are preparing national greenhouse gas balances where they record national emissions and submit reports to the UN climate conference on how they are reducing emissions in accordance with their national pledges. Trading carbon credits therefore takes place in a very different context than at the time of the CDM. It may lead to an (alleged) greenhouse gas emission being counted or claimed twice, in the national greenhouse gas balance sheet of a country hosting a carbon project (e.g., showing a decrease in nation-wide deforestation) and by the carbon credit buyer (claiming that a product is carbon-neutral because a carbon project elsewhere reduced deforestation). To avoid such 'double-counting', the country in which the offset project is located must confirm that it is not counting credits sold by a carbon project operating on its territory in its national greenhouse gas balance (and may charge a fee for this from those claiming the alleged emission saving). Different from the CDM, the sale of carbon credits under the Paris Agreement therefore directly affects the national greenhouse gas balance of the country hosting a carbon project. Because forest carbon projects typically alter land use in the global South while project investors and buyers of the credits typically are linked to capital in the global North, Article 6 enshrines colonial power and profit relations and undermines climate justice.

Another aspect turns Article 6 into an irresponsible climate gamble: Underlying the eligibility of land-based carbon storage²⁴ in Article 6 trading is the unfounded claim of equivalence between geological and biological carbon storage. The fossil carbon has been locked away from contact with the atmosphere for millions of years while carbon stored in trees circulates between vegetation, soils and atmosphere over much shorter periods of time²⁵. Inventors of the 'net-zero' emissions concept recently reiterated their warning that it "was never intended to refer to land-use change, but geological carbon²⁶".

First Article 6 project already exposed

One of the first government-to-government carbon trades linked to the Paris Agreement's carbon trading mechanisms was announced even before the rules were agreed. Switzerland provides funding to replace diesel busses in the Thai capital Bangkok with electric busses. In return, a substantial part of the alleged emission savings from the bus replacement in Thailand will be booked in Switzerland's national greenhouse gas balance sheet, not that of Thailand. A media investigation revealed that fewer busses than claimed had been replaced and that the project owner was readying the old diesel busses for sale rather than taking them out of service altogether, as was assumed in the carbon credit calculations²⁷. The example highlights how private companies profit from carbon trading under Article 6 of the Paris Agreement (the Swiss financing of the buses goes to a private company) while more public funds will have to be spent by the Thai government to fulfil its own national emission reduction targets; this may be harder to achieve, and be more expensive, compared to replacing diesel busses with electric busses - for which the government of Switzerland is counting the savings.

A quarter century of World Bank initiatives for carbon offsetting in the global South

The World Bank is a long-term proponent of carbon offsetting, supporting CDM projects through funds like the Prototype Carbon Fund even before the ink on the CDM rules was dry. Following the decision by governments in 2001 to not include forest carbon projects in the CDM²⁸, the World Bank became a key lobbyist for forest carbon markets, setting up two pilot initiatives, the Forest Carbon Partnership Facility (FCPF) and the BioCarbon Fund.

These funds raised expectations among participating governments in the global South that substantial sums in “results-based payments” would be available to them if they went through World Bank and UNDP-assisted “carbon market readiness” procedures. These included hiring external consultants to set up forest carbon monitoring schemes, run ‘capacity building’ workshops and prepare reams of documents. Widely seen as costly failures, the FCPF and the BioCarbon Fund nonetheless paved the way for legislation now emerging in many countries such as Ethiopia, Indonesia, Colombia, Zambia, Liberia and Mexico, to name just a few (see Annex II for a list of World Bank

initiatives promoting carbon markets in the global South).

These World Bank funds piloting carbon credit projects and programmes were not the only initiatives the World Bank used to promote carbon offsetting over the last quarter century. Their country programme funding was also used to advance carbon market regulations through what they call ‘technical assistance’. This provided another avenue to push the claim that carbon markets are the only way for governments in the global South to access climate funds “at scale”.

The World Bank has not been alone in pushing carbon markets into the regulatory frameworks of the global South. UNDP and development institutions of industrialized countries such as USAID, Norway’s NORAD, Germany’s GIZ and others have equally been promoting carbon markets in the global South with a raft of initiatives over the past 20 or so years²⁹. Regulatory frameworks bear those institutions’ handwriting, directly or indirectly, as documents such as the BioCarbon Fund Initiative for Sustainable Forest Landscapes 2023 annual report show³⁰.

Cause for concern: Carbon laws pave way for corporate profits and community pain

Colombia

Colombia is seen as a front-runner when it comes to introducing carbon pricing laws in the global South. The government established carbon pricing as a central tool to achieve the country’s commitment to reduce greenhouse gas emissions by 51 percent by 2030 and approach carbon neutrality by 2050³¹. It adopted a carbon tax on some fossil fuel uses in 2016. An amendment to the law in 2017 made continued burning of taxed fossil fuels cheaper because companies could significantly cut their carbon tax payment by buying carbon credits from

domestic offset projects instead. This is referred to in the law as “non-causation of the carbon tax”, meaning that emissions from taxable fossil fuel use are not considered in the calculation of the tax if the user has bought an equivalent amount of carbon credits. Colombia’s experience with carbon markets thus provides some clues on who stands to really benefit from carbon trading under the Paris Agreement’s carbon market mechanisms and how vested interests shape legal frameworks for carbon markets in the global South.



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US-based conservation NGOs such as Conservation International, carbon market proponents and companies from the extractive industries sector championed the 2017 amendment which opened the door for companies to significantly cut their carbon tax³². The amendment also allows private sector operators to profit from selling credits from their carbon projects while less tax revenue accrues to the state.

The example of Prodeco, the Colombian subsidiary of Swiss mining giant Glencore, shows how a polluting mining company profits from this amendment; it also highlights the role of conservationist NGOs such as US-based conservation group Conservation International in facilitating corporate profiteering from the offset option introduced by the 2017 amendment. The company is greenwashing its diesel pollution at the mining site in Colombia's Cesar region by buying carbon credits from a

REDD+ project supported by USAID and conservationist NGOs on Colombia's Pacific coast. According to Prodeco, Conservation International was instrumental in putting the company in contact with the carbon project operators (see below). Both, the mine and the carbon project affect Afro-Colombian communities and the land they depend on. Prodeco profits from spending around 2/3 less compared with paying the carbon tax in full. Buying carbon credits also enables the company to greenwash the pollution from running diesel generators at the mining site by declaring them 'carbon neutral'³³. Meanwhile, Afro-Colombian communities near the coal mining site continue to experience serious health impacts, dispossession, water scarcity and contamination, and loss of their cultural and ethnic rights³⁴ while Afro-Colombian communities near carbon project sites are struggling to protect their territorial, ethnic, and cultural rights and face restrictions on how they can use the land³⁵.

Carbon projects and violation of community rights

The chronology below shows that carbon market laws in Colombia have frequently been amended since they were introduced. Several of these amendments followed external lobby to introduce or expand opportunities for carbon offsetting. Community and Indigenous Peoples' rights, by contrast, had no such lobby; they are referenced merely in a non-binding collection of existing laws. Little surprise perhaps that conflicts ensue, particularly because REDD+ carbon projects by definition involve a change in how the land inside the project area is used. This often translates into restrictions imposed on community use of their territories.

Three examples highlight this risk. The Pirá Paraná Indigenous Peoples saw their territorial rights violated by the operator of the Baka Rokarire REDD project who obliged the community to reduce their chagras (communal fields) by 30 percent³⁶. In 2024, the country's Constitutional Court ruled in favour of the Pirá Paraná. It ordered the environment ministry (MADS), which is in charge of overseeing the offset provisions, to amend existing legislation to better protect Indigenous Peoples and Afro-Colombian communities constitutional rights to their territories.

Similarly, a provision in the USAID-funded Colombian BioREDD+ programme contract states that communities must restrict their hunting and fishing³⁷. The programme includes REDD projects in eight communities in the Colombian Pacific region; conservation NGO Fondo Acción is the contract operator of the BioREDD+ projects for USAID. Prodeco buys carbon credits from a BioREDD+ project. In an interview, Prodeco's director also revealed the

importance of the conservation NGOs in helping his company access carbon credits. "They [Conservation International] made contact with USAID and with Fondo Acción, which had been working on the REDD project in the Pacific for more than five years, even before carbon taxes were generated in Colombia. There is a USAID project which is a very, very large project, which is called the BioREDD project, which was basically the impulse that generated the structuring of the REDD project in the Pacific, by replicating the model of the REDD Project, that was a pioneer in the country."³⁸

The company behind the Tángara REDD+ Conservation project, which covers more than 10,000 hectares of the Mayorquín, Raposo and Anchicayá communities in the Valle del Cauca claimed to hold land titles for the community territories holding collective titles under Colombian regulations³⁹. Where carbon projects operate on lands where land tenure is disputed, the risk of communities being exposed to conflict as a result of carbon projects operating on their lands is even bigger⁴⁰.

There are also indications that illegal armed groups in Colombia have used proceeds from REDD+ projects to fund themselves. In 2024, the Colombian Ombudsman's Office released early warning No. 007-24 which confirms that at least in one case, a dissident faction of the First Armando Ríos Front had benefitted financially from a REDD+ project in the Colombian Amazon. The Ombudsman's Office reports that a company operating a REDD project had sought and obtained the armed group's endorsement to enter the territories.

Chronology of carbon tax and carbon market laws in Colombia

2015:

Law 1753 is the first carbon pricing law to be passed in Colombia. The law's **Article 175 creates RENARE, a virtual repository for information related to greenhouse gas mitigation initiatives in Colombia**. It also incorporates the National System of REDD+ programmes and projects. RENARE is envisaged as a public monitoring, reporting and verification (MRV) system and tracking platform, including for REDD initiatives (Article 10 of Resolution 1447/2018). An operational MRV

platform is a prerequisite for a country to take part in carbon trading under the Paris Agreement's Article 6. To be eligible for (results-based) payments or to sell carbon credits, REDD+ initiatives in Colombia must register with RENARE. The platform is administered by IDEAM, the Colombian Institute of Hydrology, Meteorology, and Environmental Studies (Law 2294 of 2023⁴¹); RENARE has been inoperational or offline for extended periods since it was created, limiting public access to REDD project information.

Article 171 of Law 1753 calls on the environment ministry (MADS) to **develop a policy to halt deforestation**. The policy, presented in 2017, is strongly influenced by the country's participation in the UN-REDD Program and commits the government to achieving zero **gross** deforestation by 2030.

2016:

Through **Law 1819**, the government of Colombia introduces a **carbon tax** (Impuesto Nacional al Carbono, INC), as part of a general tax reform. The carbon tax is initially set at 15,000 Colombian pesos (USD 5.50) per tonne of CO₂. In 2024, the tax stood at 25,799 pesos per tonne of CO₂; in 2025, it amounts to 27,399 pesos. The tax initially covers emissions⁴² from burning liquid fossil fuels and fossil gas use in some industrial sectors, which make up around 28 percent of the country's total emissions. The government expects the carbon tax to lead to a reduction of CO₂ emissions by 4.3 million tonnes between 2017 and 2030 as companies cut emissions to reduce their carbon tax bills.

2017:

Extractive industries and US-based conservationist NGOs lobbied for the government to amend the carbon tax law of 2016 only one year after it was adopted⁴³. Decree 926/2017 introduces the possibility for companies to buy carbon credits instead of paying the carbon tax. If a company fulfils the provisions detailed in **Decree 926, it can claim 'carbon neutrality' and avoid paying the carbon tax**⁴⁴. The Decree stipulates that carbon credits must have been generated after 1 January 2010 and come from carbon projects implemented in Colombia.

As in Mexico, the initial carbon tax law was later amended to introduce carbon offsetting. REDD+ projects are one of the project types from which companies can buy carbon credits in Colombia and Mexico and avoid carbon tax payments altogether or reduce their carbon tax bills. In Colombia, the introduction of the carbon credit option into the carbon tax law triggered a noticeable increase in REDD+ projects across the country⁴⁵. One publication notes an average increase in carbon projects of 42 percent per year following the adoption of Decree 926/2017⁴⁶. As of November 2024, the Colombian government's RENARE monitoring system lists over 80 REDD+ projects; a

database (<https://geo-grafiarmc.com/>) maintained by Censat Agua Viva mentions over 90 projects.

Adopted in 2016, the **carbon tax becomes operational** in January 2017. With the passing of Decree 926/2017 in June 2017, companies can avoid 100 percent of their carbon tax payment by buying carbon credits from domestic offset credits.

The environment ministry (MADS) introduces the **National Safeguards System (SNS)**.⁴⁷ The stated objective of the system is to 'prevent that fundamental rights are affected, ensure that fair benefits accrue to communities from REDD+ activities on their territories and that rights and the integrity of ecosystems is maintained⁴⁸.' The SNS, strongly influenced by WWF, the Natural Heritage Foundation and the UN-REDD program merely compiles existing policies and measures to protect Indigenous Peoples' and Afro-Colombian community rights and calls on carbon project developers to comply with this non-binding National Safeguards System.

The **National REDD+ Strategy**, officially called the Comprehensive Strategy for Deforestation Control and Forest Management (**EICDGSB**) is also adopted in 2017. Article 171 of Law 1753/2015 mandated the environment ministry to elaborate a policy to halt deforestation. The resulting National REDD+ Strategy is strongly influenced by the country's participation in the UN-REDD Program. It defines the goal of achieving **zero gross** deforestation by 2030 and thereby (supposedly) avoiding the release of 32.4 metric tonnes of CO₂e (MTCO₂e) into the atmosphere⁴⁹.

In 2017, the government of Colombia also launches the **Bolsa Mercantil de Colombia** or Colombian Mercantile Exchange, a voluntary carbon market platform aiming to attract investors to set up carbon projects in Colombia. Also in 2017, it joins fellow Pacific Alliance Countries Chile, Mexico and Peru in signing the **Cali Declaration** in which the countries commit to strengthen offset markets in the region. 2017 also sees the Colombian government join the World Bank **Carbon Pricing Leadership Coalition** and attend the **One Planet Summit** in Paris where the **Carbon Pricing in the Americas** cooperative framework is launched. As part of the framework, countries including Colombia, Canada, Chile, Mexico, Costa Rica and seven states from the US and Canada announce plans for a trading platform to link carbon markets across the Americas.

2018:

Climate Change Management Law 1931/2018 is adopted. Article 30 of Law 1931 outlines a national emission trading scheme, the National Programme of Tradable Emission Quotas of Greenhouse Gases (**Programa Nacional de Cupos Transables de Emisión de Gases de Efecto Invernadero, PNCTE**). The law includes provisions to link trading of emission quotas introduced through the PNCTE with the carbon tax and the carbon offset option introduced into the carbon tax law in 2017. The PNCTE is still under construction as of January 2025.

Resolution 1447/2018 defines **minimum requirements for how projects** aiming to sell carbon credits or receive 'results-based payments' **calculate their emission reductions.** The resolution demands that these initiatives use Colombia's Forest Reference Emission Levels (NREFs, developed with support from the UN-REDD Program) as baseline from which they calculate emissions that the activity supposedly prevents. By mandating the use of the NREFs for the calculation of emissions supposedly prevented by forest carbon projects, the

government of Colombia hoped to prevent that project developers continue to use implausible assumptions for their calculations. With Resolution 1447/2018 covering only one of several variables used in these calculations, project developers are still able to choose inadequate reference regions and historical periods that maximize the volume of carbon credits they can sell. Unsurprisingly, research published in 2021 found that forest carbon / REDD+ project developers had chosen reference regions and historical periods that were not the most plausible but maximized carbon credit volumes⁵⁰. For carbon projects that calculated their baselines before 2019,

Resolution 1447 provides an exemption and allows the use of what is referred to as "Maximum Mitigation Potential (PMM)", a figure determined by the Colombian Institute of Hydrology, Meteorology and Environmental Studies (IDEAM). The resolution also introduces an **Emission Reduction and Removal Accounting System** which is connected to the RENARE platform and keeps track of emissions avoided or reduced in the different GHG mitigation programs and projects on a national scale.



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Resolution 256/2018 amends already existing environmental licensing processes in Colombia as well as the procedures to change the status of forest reserve areas and the issuance of logging permits. The **environmental compensation manual** connected with these licensing processes is amended so that once the legal environmental compensation requirements are fulfilled, the entity applying for an environmental license can also generate carbon credits from the forest for which an environmental license is requested⁵¹. This procedural change is enshrined in **Article 19 of Law 2169 in 2021**⁵².

2020:

The Colombian government updates the Nationally Determined Contribution under the UN Paris Agreement. It introduces provisions to use Article 6.2 carbon credits (ITMOs) to achieve the country's target of halting deforestation by 2030. Crucially, this update changes the government's target to halt forest loss by 2030 from **zero-gross** (halting the loss of forest cover) to **net-zero** deforestation by 2030. By introducing this change, the target would still be achieved even if deforestation continues post 2030, as long as any forest destruction is balanced out by an increase in forest cover or tree plantations⁵³. The Colombian government has set the goal of expanding tree plantations by 300,000 hectares by 2030⁵⁴.

2021:

Article 17 of Law 2169/2021 clarifies that projects interested in selling carbon credits through the Paris Agreement's Article 6 must be registered on the RENARE platform⁵⁵. Article 21 of the same law introduces the possibility for the environment ministry MADS to request additional information from those operating carbon projects, visit project sites if irregularities are found, request investigation by the competent authorities⁵⁶. Referring to this Article, the ministry created a working group on social and environmental safeguards with a mandate for the group to 'seek to create, strengthen and streamline the institutional arrangements required in this area'.⁵⁷ The working group, which is part of the Directorate of Climate Change and Risk Management at the MADS, has been looking into seven carbon projects with alleged violations of the

fundamental rights of communities whose territories overlap with the carbon project area.

2022:

Carbon tax law 1819/2016 is amended by Law 2277/2022 to cover emissions from burning thermal coal⁵⁸. Starting in 2025, emissions from burning thermal coal are covered by the carbon tax, though with exceptions. No carbon tax is applied for coal exports and coal used in coking plants. There continues to be no carbon tax levied on fossil fuel exports, on the production of fossil fuels on national territory for domestic use, on industrial fossil gas use and on fossil fuel use in aviation and maritime navigation. **Law 2277 also limits the use of carbon credits to 50 percent of an operator's taxable carbon emissions**, down from the option introduced by Decree 926/2017 to avoid the carbon tax payment altogether and buy carbon credits to cover 100 percent of the taxable emissions.

Also in 2022, the government of Colombia and the Ministry of Trade and Industry of the Republic of Singapore sign a **Memorandum of Understanding to 'exchange of experiences and information on carbon credits and negotiate "a legally binding Implementation Agreement** that establishes a bilateral framework for the authorization and transfer of internationally transferred mitigation outcomes ('ITMOs')." In other words, the government of Colombia will – presumably for a fee - transfer the right to count emission reductions from activities taking place in Colombia to the government of Singapore⁵⁹.

2024:

Following a legal case by Indigenous Peoples against a carbon project operating on their territory without their consent⁶⁰, the Constitutional Court, through judgement 248, suspends the project for six months and orders the environment ministry MADS to create 1) a protocol to ensure project developers operating REDD+ projects in Indigenous Peoples' territories respect peoples' constitutionally protected rights; 2) a strategy to monitoring and control carbon projects in collective territories; 3) a process to inform indigenous communities involved about the complexities of carbon projects; and 4) establish a monitoring committee for compliance with this ruling⁶¹.

How vested interests have shaped Colombia's carbon market legislation

Vested interests promoting carbon offsetting have shaped key aspects of carbon pricing in Colombia, such as the legal processes listed above. This includes a range of foreign carbon market proponents such as like USAID, the World Bank and UNDP, the key agency involved in the UN-REDD programme; US-based conservation NGOs and investors in carbon projects⁶².

Intergovernmental agencies

The Colombia country page on the UN-REDD website, for example, makes reference to the UN-REDD programme having provided 'technical input and support to increase the commitment to reduce emissions from deforestation in Colombia's updated NDC and expanding 'safeguards information' in the national greenhouse gas registry platform, RENARE⁶³. The UN-REDD programme, along with WWF and the US-based Natural Heritage Foundation, was also involved in the preparation of the National Safeguards System (SNS) which integrates 'safeguards' that in theory must be complied with in REDD+ programmes and projects⁶⁴.

As part of the "Colombia Partnership for Market Readiness (PMR) technical assistance project", the World Bank coordinated a number of consultancies and reports carried out by international organisations such as Environmental Defense Fund, World Resources Institute and Climate Focus on the design of carbon pricing legislation in Colombia⁶⁵. In 2020, the World Bank carried out a consultancy for the environment ministry MADS, the National Planning Department (DNP) and the Ministry of Finance and Public Credit (MHCP, by its Spanish acronym). As part of the consultancy, the Bank provided policy recommendations regarding changes to the carbon tax law and its offsetting provision. The World Bank recommendations include changing legislation so carbon credits sold to companies to cover taxable emissions could also be counted towards the governments NDC commitment to halt deforestation by 2030. It also recommended an expansion of the list of carbon projects eligible to sell carbon credits to companies with emissions covered by

the carbon tax law, and/or inclusion of additional emission sources such as emissions from natural gas and LPG consumption. Carbon tax revenues, the World Bank proposed, should be used to support carbon projects and the development of national carbon standards⁶⁶. Several of the suggestions were taken into account in the 18 July 2022 draft decree prepared by the MHCP, which sought to modify Article 221 of Law 1819/2016 which introduced the carbon tax.

Through the Partnership for Market Readiness, the World Bank has also been actively involved in the preparation of the draft decree introducing the PNCTE which was adopted as part of Law 1931/2020. The draft decree proposed the methods for assigning emission allowances (by auction or free of charge) and included a provision allowing the use of carbon credits from the voluntary carbon market for up to 10 percent of emissions regulated under the PNCTE, along lines proposed by reports prepared in the context of the Partnership for Market Readiness⁶⁷.

More recently, the environment ministry MADS, together with the DNP, the MHCP and the Financial Superintendency of Colombia (SFC by its Spanish acronym), and the World Bank have started work to define the legal nature of carbon credits and tradable emission quotas⁶⁸. These definitions are expected to have far-reaching implications for the trade in carbon credits and resolution of disputes (see BOX – Page 25).

Conservation and carbon market industry

For over a decade, US-based conservationist organisations Conservation International and The Nature Conservancy as well as USAID have promoted forest carbon projects in different parts of Colombia. Together with extractive industries, they led calls for the government of Colombia to pass Decree 926/2017 which added the carbon offset provision to the carbon tax law⁶⁹. As operators of REDD+ projects eligible to sell carbon credits that companies could use instead of paying the carbon tax, the conservation industry stood to benefit financially from the offsetting provisions introduced by Decree 926⁷⁰.



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Once Decree 926/2017 had introduced carbon offsetting into the carbon tax law, conservation NGOs and other proponents of carbon projects such as the Colombian Association of Carbon Market Actors (Asocarbono) and Ecovera lobbied to protect and expand these offsetting provisions. After the government limited the use of carbon offsets to 50 percent of a company's taxable carbon emissions with carbon tax Law 2277/2022, Conservation International Colombia and Asocarbono were among the groups which published a report claiming that deforestation could be reduced more if carbon credits could be

used to cover 70 or even 80 percent of a company's taxable emissions.

In the same report, the groups call for carbon credits from industrial tree plantations to count towards the country's 'net-zero' deforestation goal. Their spurious claim: 'only' 1.2 hectares of monoculture tree plantations would be required to offset the loss of carbon from each hectare deforested whereas limiting activities counted towards the 'net-zero' deforestation by 2030 target to forest restoration initiatives would require 13 hectares for each hectare of natural forest that is destroyed⁷¹.

Indonesia

The government of Indonesia has committed to reducing greenhouse gas emissions by 31.89 percent by 2030. It pledged to increase the target to 43.2 percent if it receives funding support and it aims at a net-zero emissions economy by 2050⁷². Emissions from forestry and agriculture make up nearly half of Indonesia's total emissions. The government is hoping that reducing deforestation will contribute some 17 percent of the reductions towards its national greenhouse gas targets.

Among the measures the Indonesian government is introducing to drive down greenhouse gas emissions, carbon pricing instruments play a prominent role. Presidential Regulation (PR98/2021) on Carbon Economic Value (the "CEV Regulation") was published in 2021 and provides the legal basis for establishing these carbon pricing instruments. This umbrella regulation mentions carbon taxes/levies, emissions trading, carbon offsetting and 'results-based' payments for reducing emissions as possible instruments.

Ministerial regulations have provided more details. Several of these regulations stand to impact forest-dependent communities, even without mentioning them.

They include (1) Regulation 2/2021 on the Job Creation Law adopted in 2020 (11/2020) which creates a multi-forestry use business permit allowing land concession holders to combine different activities such as logging and operating a carbon project in one concession; (2) Ministry of Environment and Forestry Regulations 21/2022 on implementing procedures for the carbon pricing instruments introduced in the umbrella presidential regulation 98/2021 and (3), particularly MOEF **7/2023** on 'Procedures for Carbon Trading in the Forestry Sector'. According to Regulation 7/2023, an entity wishing to operate a carbon project must have a forest business license (perizinan berusaha pemanfaatan hutan (PBPH)) or be engaged in social forestry or community forestry – with the latter two required to "partner with a party that has expertise or experience in carbon measurement, project planning and implementation, and accessing carbon markets⁷³." An annex to 7/2023 provides a formula to calculate the maximum quota of carbon credits a company operating a carbon project can sell into international carbon offset markets. The remainder of the calculated emission reductions the government may count towards the national emission reduction target; for this portion, the operator might be eligible for a 'results-based payment'.



Peat Ecosystem in Central Kalimantan
WALHI Central Kalimantan

In early 2023, the Indonesian government also introduced a carbon trading system for the power sector. In a first phase, the system requires 99 coal-fired power stations with a capacity of more than 25 MW to reduce emissions per unit of power produced. The government has announced that it will combine this carbon trading system with a carbon tax in 2025. Companies that fail to meet the carbon intensity targets will be subject to a carbon tax at a rate in line with the carbon quota price of the power sector emission trading scheme.

Ministry of Environment and Forestry Regulation **07/2023**, mentions the **possibility of introducing a similar carbon trading system for the forestry sector**⁷⁴. This could see logging and plantation companies combine extractive and conservation activities in different blocks of

their concessions and sell carbon credits for emissions reduced beyond government-set reduction targets that would be counted towards the national emission reduction target⁷⁵.

In 2024, the government also inaugurated a **National Carbon Exchange (IDX Carbon)** which is authorized to auction "correspondingly adjusted carbon credits", i.e., the government of Indonesia guarantees to not count the emission reductions auctioned towards its own national emission reduction target. The credits auctioned are referred to as "**Indonesia Authorised Carbon Credits (IACC)**"⁷⁶. Auctions have so far not included carbon credits from tree planting or REDD+ projects, among others because the government has not yet determined the proportion of carbon credits it will allow to be sold internationally as "correspondingly adjusted" forest carbon credits.

Indonesia sees forests the size of Ghana destroyed between 2000 and 2017

Across Indonesia, 23.5 million hectares of forest have been destroyed between 2000 and 2017 – that's more than the entire land area of Laos or Ghana. This deforestation has released large quantities of CO₂ into the atmosphere, with mining, logging and plantation industries among the largest CO₂ emitters in the country. The mining of 707,000 hectares of forested land between 2013-2017 has caused 49 percent of this deforestation; converting 586,000 hectares of forests into oil palm plantations, logging out 400,0000 hectares of natural forests (IUPHHK-HA concessions), converting 328,000 hectares of forests into timber plantations (IUPHHK-HT) also contributed to this deforestation, with the remaining 787,000 hectares of forests destroyed by activities in overlapping licences legalizing deforestation⁷⁷.

Carbon trading regulation focus on corporate concession system puts squeeze on life spaces for communities

The operations of existing concession holders are a key driver of deforestation. Yet, the government has seen the carbon and climate discourse as an opportunity to introduce additional revenue opportunities for corporate concession holders. From 2002 until around 2014, Ministry of Environment and Forestry regulations on carbon trading highlighted two points: (1) a concession and business permit are required to operate a carbon offset project and (2) carbon storage and carbon sequestration through tree planting are recognized as legitimate uses in logging and plantation

concessions. Companies already in possession of such concessions could apply for an "Environmental Services Business License" that specified carbon storage or sequestration as use activity and set up carbon projects on all or part of the concession (since 2022, logging concessions in Indonesia are multi-activity, allowing a company to use one part of the concession e.g. for logging and operate a carbon project in another part of the concession).⁷⁸ To operate carbon projects and sell carbon credits, the companies also require an 'environmental services' business permit.

What these early regulations made clear: no carbon project without a business permit. A law firm published an analysis on Ministerial Regulation 7/2023. It notes that to operate a carbon offset project, 'customary law communities, social forestry management approval holders, and communities holding forest ownership land rights (hutan hak) will require "assistance from the MOEF or be required to partner with a party that has expertise or experience in carbon measurement, project planning and implementation, and accessing carbon markets"⁷⁹'. Thus, **carbon market regulations in Indonesia effectively prevent Indigenous Peoples and peasant communities from independently operating REDD projects.** Worse, communities have seen their traditional farming practises and access to

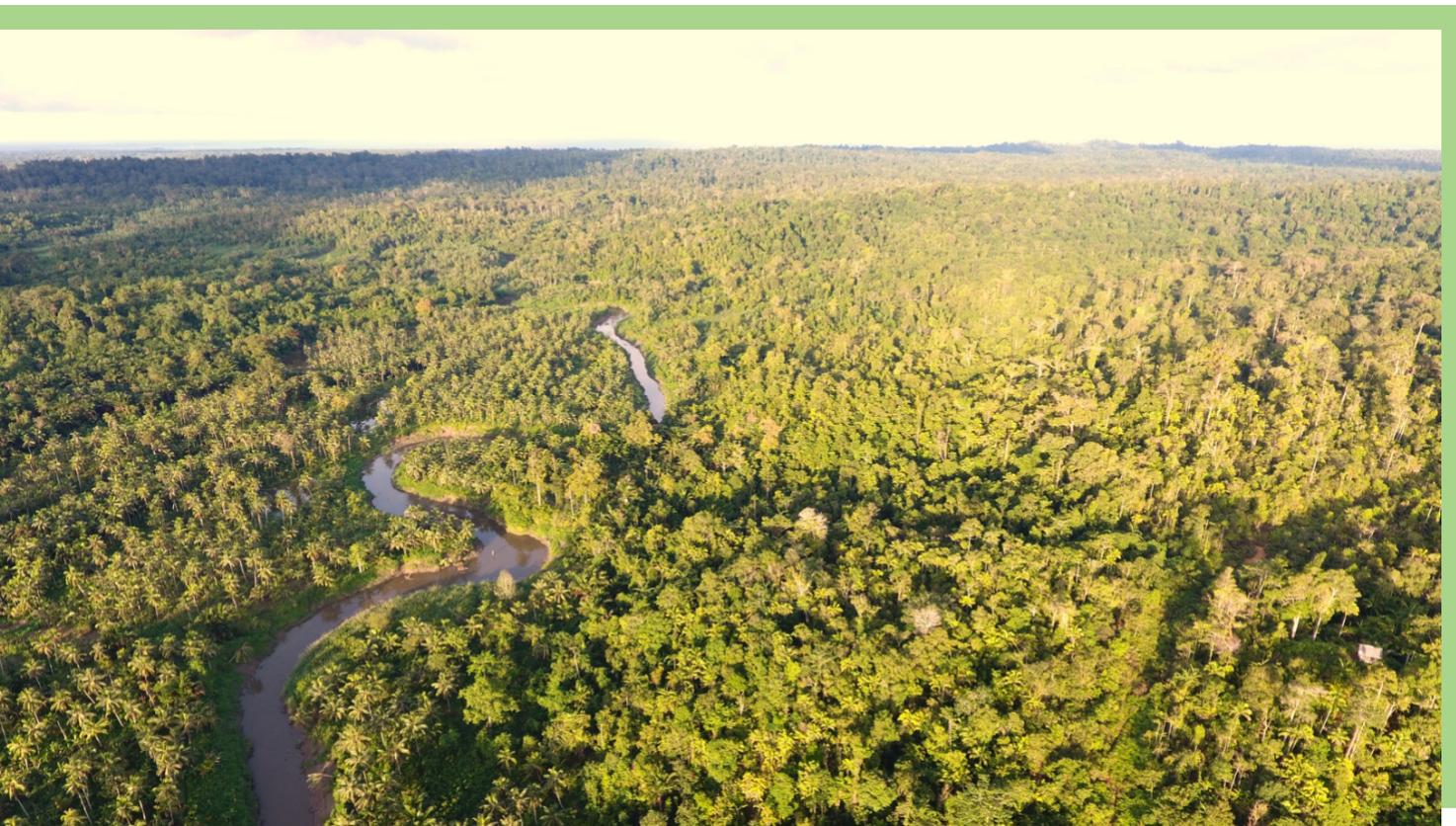
forests restricted by private sector and conservation groups operating REDD projects on community lands and profiting from carbon credit sales.

Ministerial Regulation 7/2023 revoked three of the earlier regulations and introduces an outline for a carbon pricing system for the forestry sector. The regulation maintains the focus on concession holders as operators of carbon projects but introduces restrictions on selling carbon credits into international carbon offset markets and confirms the requirement for operators of carbon projects to register their credits in the **National Registration System SRN PPI**. However, no details have been published as of March 2025.

Who gets to count the carbon in trees and forests?

The Indonesian government's approach towards forest carbon projects operated by the private sector changed with the adoption of the UN Paris Agreement. Presidential Regulation PR

98/2021 provides the basis for government measures that will determine the extent to which carbon project operators can sell carbon credits (internationally).



The Last Jungle in the Mentawai Islands
WALHI National

Ministry of Forests and Environment regulations that have been issued since PR 98/2021 was published, request existing forest carbon project operators to register their projects in the **National Registration System SRN PPI** and **seek government authorisation before selling carbon credits**. "If Indonesia misses its NDC target due to double counting, it will cause both us and the wider world enormous difficulties," a spokesperson for the ministry said in April 2022⁸⁰. The legal framework outlined in ministerial regulations 21/2022 and 7/2023 aims to avoid these "enormous difficulties" from arising. From 2021/2022, the government effectively put a moratorium on the issuance of any new credits to existing forest carbon offset projects. This moratorium is expected to be lifted in 2025 but was still in place by March

2025. The government hopes the moratorium will avoid that forest carbon project operators sign contracts committing them to future sales of carbon credits – credits the government might want to count towards its own national emission reduction target⁸¹.

Ministry of Environment and Forestry Regulation 21/2022 sets out the conditions under which operators of forest carbon projects can sell carbon credits internationally. They will among others be required to maintain an 'offset buffer' of five to 10 and up to 20 percent in case the country's 2030 land use sector emission reduction target is not met and the government will want to count the emission reductions in the 'offset buffer' towards its national emission reduction target.

Millions in so-called result-based payments - but how real are these results?

One option in Indonesia's carbon pricing proposals are so-called 'result-based payments' where the government is being paid if deforestation rates can be shown to have been reduced below a level negotiated with the entity providing the payment. Since 2008, the government of Indonesia has received more than USD 250 million in result-based payments (see below). An additional USD 150 million have been committed through the World Bank Forest Carbon Partnership Facility and the BioCarbon Fund.

The calculations underpinning the scale of allegedly avoided forest carbon emissions have been widely questioned: emissions released into the atmosphere as a result of deforestation may not have been reduced by as much as the calculations suggest. One study concludes that while deforestation had fallen significantly since 2015-2016, **"the exact extent of the reduction in deforestation depends on the data set used, and the years or time periods compared, varying between 40 percent and 90 percent"**⁸². Assumptions that underpin these calculations thus have a direct impact on the amount of payment received by the Indonesian government⁸³.

Ministerial regulation 7/23 indicates that in addition to provincial governments, private sector companies and corporate concession holders might in future receive a share of result-based payments. For example, if the government wants to count carbon stored in a concession towards its national emission reduction target, the concession holder might be eligible to receive result-based payments for a portion of the forest carbon counted towards the national emission reduction targets. Depending on how further regulations being prepared address this issue, companies that have been granted concessions might be able to receive result-based payments even if they had no intention to actually cut the trees inside the concession.

Result-based payment programmes

Indonesia-Norway Partnership: USD 56 million for reporting forest carbon emissions below the level agreed as part of the partnership in 2016/2017; USD 100 million for emission reductions as a result of reduced deforestation rates in 2017/2018 and 2018/2019⁸⁴.

Green Climate Fund (GCF): USD 103.8 million for reporting that 20.25 million tonnes CO₂ were allegedly avoided as a result of reduced rates of deforestation between 2014-2016⁸⁵.

World Bank Forest Carbon Partnership Facility East Kalimantan Pilot Programme: USD 110 million for having prevented the release of 22 million tonnes CO₂ emissions as a result of having lowered the rate of deforestation in 2019-2020⁸⁶. In November 2022, the Indonesian government received the first advance payment of USD 20.9 million from the World Bank. According to a letter from the Provincial government about the distribution of the money, **"intermediary institutions" (lembaga perantara) stand to receive** as much as USD 1.4 million in so-called Performance payments and Reward payments – **about 7 percent of the total initial payment of USD 20.9 million**⁸⁷.

World Bank BioCarbon Fund ISFL Jambi Province Pilot Programme: The government of Indonesia also expects to receive a total of USD 70 million through the BioCarbon Fund ISFL Jambi Province Pilot Programme if emissions from deforestation in Jambi can be shown to have been reduced by at least 14 million tonnes by 2026. In 2024, the government of Jambi received USD 13.5 million for implementation of activities that are expected to contribute to reducing emissions from deforestation⁸⁸.

Kalimantan Forest Carbon Partnership (KFCP): the KFCP was announced in late 2007 and officially launched in 2010 through an Indonesia-Australia Forest Carbon Partnership agreement. It was part of an ambitious programme to demonstrate the potential of forest carbon offsetting. The KFCP pilot project began with big promises to demonstrate activities, programmes and policies that could reduce emissions from deforestation and land/forest degradation in Indonesia and provide sustainable livelihood incentives for local communities; it also attracted much criticism and opposition. When the government of Australia closed the KFCP in 2013, most of the project's targets remained unmet. The USD 47 million project aimed to protect 70,000 hectares of peat forest, re-flood 200,000 hectares of peat land, and plant 100 million trees. A 2012 report on the project found that only 50,000 trees had been planted and none of the peat had been re-flooded⁸⁹.

Chronology of key carbon market regulations with relevance for forests in Indonesia

2002:

Government Regulation 34/2002 on Forest Management, Preparation of Forest Management Plans, Forest Utilisation, and Use of Forest Areas states that **carbon storage is considered a legitimate use in forest conservation, plantation and logging concessions**. The Environmental Services Utilisation Business Permit (IUPJL), issued by the Ministry of Forestry includes carbon storage and carbon uptake through tree planting as legitimate uses (Articles 20/3d and 27/2d)⁹⁰.

2004:

Minister of Forestry Regulation P.14/Menhut-II/

2004 states that to register **tree planting projects in the Kyoto Protocol's CDM**, corporate concession holders must have either an Environmental Services Utilisation Business Permit (IUPJL) or a License for utilisation of Timber from Tree Plantations (IUPHHK-HT) (Articles 3-8 and 11).

2007:

Ministry of Forestry Regulations 6/2007 and 3/2008 amend Regulation 34/2002 and confirm that **carbon storage and sequestration through tree planting are legitimate environmental services in Protection Forests and Production Forests** (Articles 25/1f in 6/2007 and Article 33/1f in 3/2008).⁹¹

2009:

Ministry of Forestry Regulation P.30/MENHUT-II/2009 is the first one to specifically mention carbon trading in connection with REDD. The regulation is titled **Procedures for Reducing Emissions from Deforestation and Forest Degradation (REDD)**⁹².

Regulation **P.36/Menhut-II/2009** clarifies earlier regulations by **listing the different types of forest and plantation concessions which can be used to operate carbon projects** (with the necessary additional permits)⁹³. The regulation also clarifies that in the absence of a domestic carbon market, carbon credits can be sold on international voluntary carbon markets.

2012:

Minister of Forestry Regulation P.20/2012 on Forest Carbon Implementation regulates the trade of forest carbon generated from carbon storage, carbon sequestration and forest carbon emission reduction activities (Article 3/2). The regulation spells out that concession holders need a forest carbon implementation permit in conjunction with their forest or forest product utilisation permit (Article 7) to operate carbon projects inside their concessions. Revoked and replaced by 7/23.

2014:

Ministry of Forestry Regulation P.50/MENHUT-II/2014 regulates **the Indonesian Forest Carbon Emission Reduction Certificate (SPEKHI)** and the Indonesian Carbon Certificate Market (Articles 1 and 10).⁹⁴ This Regulation describes procedures for the certification and sale of Indonesian Forest Carbon Emission Reduction Certificates (Article 2 and Article 3). Revoked and replaced by 7/23.

2017:

Ministry of Environment and Forestry Regulation P.70/MENLHK/SETJEN/KUM.1/12/2017 adopts decisions on REDD taken at UN climate conferences COP 14 and COP 15. It specifically mentions carbon trading as possible funding mechanism (Article 20/3) and describes **procedures for accessing 'Result-Based Payments'** for reducing emissions from deforestation (RBP).⁹⁵

Ministry of Environment and Forestry Regulation P.71/MENLHK/SETJEN/KUM.1/12/2017 defines the functioning of the **National Registration System (SRN)** which was introduced in November 2016. The SRN is meant to avoid double counting of emission reductions and keep track of private sector carbon projects and their carbon credit sales⁹⁶.

2018:

The World Bank's Partnership for Market Readiness publishes a report outlining four market-based mechanisms for Indonesia: an emissions trading scheme for the power and industrial sectors, an energy efficiency certificate scheme for industry, an emissions trade-and-tax system and a carbon offset mechanism. **Several elements of the World Bank study are reflected in subsequent government regulations on carbon pricing**⁹⁷.

2021:

Presidential Regulation PR 98/2021 on the Implementation of Carbon Economic Value (NEK) to achieve national emission reduction targets establishes the **legal framework for domestic carbon pricing regulations** the government will adopt to meet its commitments⁹⁸. PR 98/2021 also **requires that companies already operating carbon projects and selling carbon credits record and report their carbon credit volumes in the national registry SRN PPI** within one year from the release of PR 98/2021, i.e. by October 2022. If they fail to report their credit volumes and comply with SRN PPI reporting rules, they would not be able to sell their remaining carbon credits.

2022: Ministry of Environment and Forestry regulation **21/2022** (Permen LHK No.21/2022)⁹⁹ sets out details of PR 98/2021. The regulation covers the different carbon pricing systems already mentioned in the Presidential Regulation: emissions trading systems (ETS), results-based payments (RBPs) and carbon offsetting as well as a carbon tax/levy. It also lists the sectors that might become subject to carbon pricing (Article 3) and notes that like regional governments, companies operating forest carbon offset projects might receive 'results-based payments' for a portion of the emission reductions the government intends to count towards the national target.

The regulation contains a section on public participation (section VII, Articles 56 and 57) which outlines in general terms how information about implementation of carbon pricing instruments will be shared by the government, that the public can make suggestions for improvement, access a grievance procedure and 'obtain information related to benefit sharing in the implementation of NEK' – though the latter is only 'in accordance with the relevant laws and regulations', hence may not be information that is available to the public. The regulation does not seem to include any reference to ensuring effective participation of Indigenous Peoples or forest-dependent communities where implementation of the NEK affects their lands. It does also not mention procedures to ensure free, prior, informed, consent (FPIC) is obtained from or can be withheld by Indigenous Peoples and communities whose lands might be affected by carbon projects or other carbon pricing instruments.n international voluntary carbon markets.

2023:

Minister of Forestry Regulation P.20/2012 Ministry of Environment and Forestry Regulation **7/2023 on Forestry Sector Carbon Trading Procedures** is the first regulation to specify how the government envisions the forestry sector to contribute to Indonesia achieving its national emission reduction targets (NDC¹⁰⁰). It updates existing and introduces new rules on carbon offsetting and mentions a possible emission trading scheme in the forestry sector. The regulation revokes three earlier ministerial regulations on carbon trading in the forestry sector (P.68/MENHUT-II/2008 on REDD Demonstration Activities; P.20/MENHUT-II/2012 and P.50/MENHUT-II/2014 on trade in Indonesian Certified Emission Reductions). In essence, the regulation specifies details on the implementation of Presidential Regulation 98/2021 and the related ministerial Regulation 21/2022 (on Procedures for the Implementation of Carbon Economic Value) for the forestry sector.



Drought in Gunung Kidul, Yogyakarta
WALHI National

The regulation also mentions that carbon projects can be implemented by Indigenous Peoples on customary forest (Hutan Adat), but requires that communities 'be accompanied by external experts'. **The regulation does not contain references to FPIC or procedures to guarantee forest peoples' rights where other parties implement carbon projects on customary lands.** The regulation also sets out different procedures for peat and mangrove management.

2024:

Law 32/2024 amends the 1990 conservation law 5/1990 (KSDAHE Law). Stated objectives of the amended law include **expanding conservation networks beyond formally protected areas and introducing new funding mechanisms for protected areas**¹⁰¹. Article 1/16 of the amended KSDAHE Law introduces a new area classification, the "preservation area" – areas outside formally protected areas but with 'high biodiversity value' or 'strategic importance'. Preservation Areas will be declared e.g. **to establish 'forest corridors' between protected areas.** Preservation areas can also include land

inside Production Forest (HP), Protected Forests (HL), and Other Use Areas (APL). Article 26/2 of the amended KSDAHE Law **defines carbon storage and sequestration as activities compatible with the "KSDAHE law"**. This might enable companies to turn these areas into carbon projects.

While the amendment might open new business opportunities for companies with 'preservation areas' inside their concessions, the law puts communities at risk of evictions if they are 'not willing to carry out KSDAHE activities as stipulated in Article 9 of the KSDAHE Law'. Like the original KSDAHE Law of 1990, the amended law does not mention FPIC when Indigenous Peoples' lands are declared protected areas by the state or when conservation activities by third parties are approved by the state. Indigenous Peoples and forest-dependent communities thus face the risk of eviction in the name of conservation while private sector companies profit from carbon projects and geothermal exploration and extraction (also recognized as a legitimate use in protected areas) operated in the newly created 'preservation areas'.¹⁰²

Carbon sales contracts may carry risks of large financial penalties

Governments rushing into carbon sales contracts and communities tempted to enter into carbon projects on their lands may face significant risk of becoming liable to pay damages when disputes over changes in legislation materially affecting contract formulations that lead to financial carbon market participants filing claims before arbitration committees or courts.

An example from the so-called voluntary carbon market shows this is not just a theoretical risk: Canada-based company Carbon Streaming negotiates advance-purchase agreements with carbon offset project owners and then sells the carbon credits at a profit. Three projects from which the company had been expecting to receive carbon credits have, for various reasons, been unable to generate the promised offsets. In two of the cases, Carbon Streaming has already announced that it will "strictly enforce its legal and contractual rights"¹⁰³.

One of these legal disputes involves the Rimba Raya REDD project in Indonesia¹⁰⁴. In October 2024, Carbon Streaming announced that it had launched arbitration proceedings and a court action in Canada against the two companies involved in the REDD project, one of them based in Indonesia, the other in Hong Kong¹⁰⁵. Carbon Streaming wrote off the value of the carbon credits it was expecting to receive from the Rimba Raya REDD project when the Indonesian project operator had its 'Forest Utilization Business Licence' (PBPH) cancelled by the Ministry of Environment and Forestry.

What seemed to be at issue is, among others, whether the project operator registered in Indonesia had correctly calculated non-tax fees due on carbon credit revenues and whether it had authorization from the government to agree to an advance-purchase agreement which the Hongkong-based business partner signed with Carbon Streaming, for nearly 100 percent uptake of future carbon credits. A court in Indonesia reinstated the project's licenses, a decision which the government is appealing¹⁰⁹.

In addition to the government risking to not be able to count the carbon credits from the REDD project towards its own target, it felt cheated out of revenue by the deal. The pre-purchase agreement with Carbon Streaming changed how many carbon credits the Indonesia-based company reported as revenue in its accounts in Indonesia. Reports mention that the project operator paid a 10 percent fee while the table below suggests a 20 percent fee applies, though these may be negotiable.

Permit	Government	Community	Developer
<i>IUPHHK-HA</i>	20%	20%	60%
<i>IUPHHK-HT</i>	20%	20%	60%
<i>IUPHHK-RE</i>	20%	20%	60%
<i>Protected Forest</i>	50%	20%	30%
<i>Community Forest</i>	20%	50%	30%

This example shows that Paris Agreement carbon credit sales deals may carry financial and legal risks for countries in the global South that are rarely ever mentioned by carbon offset proponents. Many of these risks will only become apparent after contracts have been signed or plans to reduce emissions from deforestation don't work as planned. The government of Bolivia for example promises to halt deforestation in a carbon contract with US-based company Laconic. Should the country not be able to halt deforestation, it will have to pay a penalty¹⁰⁷. In the case of the Tropical Forests Forever Facility, these penalties may amount to USD 400 per ha of deforestation fines, a penalty an order of magnitude higher than the payments the fund is expecting to pay per hectare of forest protected¹⁰⁸.

Liberia

The government of Liberia has pledged to reduce greenhouse gas emissions by 64 percent below projected business-as-usual emissions by 2030¹¹⁰. It commits to unconditionally reduce emissions by 10 percent; the remaining 54 percent reduction is conditional on international support. To achieve the targets, the government of Liberia plans to reduce (1) deforestation by 50 percent and (2) emissions from forest conversion by 40 percent below projected 'business-as-usual' emissions and (3) restore 25 percent of degraded forests – all of this by 2030. In addition, an increase in tree cover in urban areas is projected to remove 600 Gg CO₂e from the atmosphere.

Several policy documents related to forests and climate change in Liberia have been released over the past 15 years. Liberia's Forestry Development Authority (FDA), for example, presents carbon as a fourth pillar of what it describes as "4Cs approach to sustainable forest management in Liberia" with the 4 "C"s standing for conservation, formal and informal commercial logging, community forest management and carbon/climate change¹¹¹. As early as 2010, the office of the President set up a 16-member National Climate Change Steering Committee (NCCSC) to oversee and coordinate implementation of climate change policies and related activities. The NCCSC is now hosted by the Liberia Environmental Protection Agency (EPA). As regulatory agency, the EPA coordinates carbon policy discussions and the regulatory set-up while the FDA is mandated to operationalize forest-related carbon market initiatives that are expected to be part of the national framework under preparation. A National REDD+ Technical Working Group has been in place since 2009. Civil society organisations have a seat on both the NCCSC and the REDD+ Working Group while community organisations have no representation at either. **In late 2024, the government announced the preparation of a national carbon and climate policy and a climate law¹¹².**

No overarching policy or law on carbon markets has been adopted yet. The government of

Liberia, however, **has already entered into two agreements that open the door to the sale of credits for carbon stored in forests in Liberia. Both agreements were signed without prior consultation of communities holding customary rights to lands – communities whose ways of life stand to be materially affected if these agreements were to be operationalized.**

In 2023, the government signed a **Memorandum of Understanding with Dubai-based Blue Carbon LLC** for exclusive rights to generate and sell carbon credits for carbon stored in approximately 1,09 million hectares of forests in Liberia – roughly 10 percent of the country's surface¹¹³. **The agreement is widely seen as breaching both, the 2009 Community Rights Law with Respect to Forest Lands and the 2018 Land Rights Law¹¹⁴.** Both laws grant communities the right to free, prior and informed consent for any activity that may impact their customary lands¹¹⁵.

In early 2024, the NCCSC and the National REDD+ Technical Working Group urged the government to put in place a moratorium (via Executive Order) on carbon market-related activities. They cautioned to ensure that a national policy and law ought to be in place before carbon contracts were signed; these may otherwise be incompatible with future legislation or not in line with government priorities.

In October 2024, the EPA announced the signing of a **letter of engagement with the Coalition for Rainforest Nations (CfRN)**, of which the government of Liberia is a member¹¹⁶. The agreement with the CfRN would see the government offering "UN-approved REDD credits that will not qualify as ITMOs [carbon credits under Article 6.2 of the UN Paris Agreement]" through trading platforms operated by CfRN. A news article reporting on a NCCSC meeting in July 2024 to discuss carbon market regulation in Liberia notes the CfRN's Kevin Conrad online participation in the meeting. "Conrad offered free capacity training for 20 Liberians to manage the forest sector and access forest data, provided Liberia sells its carbon to his organization", the article states¹¹⁷.

The carbon credits marketed via CfRN are particularly controversial and have proven hard to sell¹¹⁸. They are issued on the basis of a process that was not set up to produce carbon credits for trading and is widely considered to be inadequate for this purpose¹¹⁹. Labelled "sovereign REDD results" by CfRN, they are based on the UN climate negotiation's Warsaw Framework of 2013 which was reaffirmed under Article 5 of the Paris Agreement in 2015. The UN climate conference in Glasgow, Scotland in 2021 decided to not allow counting of these purported emissions avoided before 2021 towards Paris Agreement climate targets (NDCs). The CfRN markets such pre-2021 emission reductions as carbon credits into the voluntary carbon market, with little success. The Government of Gabon, for example, failed to sell any of its "sovereign REDD results", offered through CfRN platforms, because they are widely seen as the result of accounting trickery

rather than representing actual emission reductions¹²⁰.

A statement by the Liberia Environmental Protection Agency on the letter of engagement with CfRN also mentions assistance from CfRN "in developing its Biennial Transparency Report (BTR) and the necessary technical annex required by the United Nations Framework Convention on Climate Change (UNFCCC), positioning Liberia to identify its carbon potential and establish a solid National Forest Reference Emission Level (FREL)."¹²¹ Particularly the latter is a curious point considering that the government of Liberia already submitted a National Forest Reference Emission Level to the UN climate secretariat in 2019, funded by the World Bank Forest Carbon Partnership Facility (FCPF) and prepared with input from US-based group Winrock International¹²² and the UN Food and Agriculture Organisation (FAO)¹²³.

Chronology of REDD and carbon trading-related policies and laws in Liberia

2014:

At the UN Climate Summit in New York, the governments of Liberia and Norway sign a Letter of Intent and USD 150 million grant commitment from Norway to work together to reduce deforestation and advance REDD activities in Liberia. The funds would be managed by the World Bank. In a statement, the World Bank writes that under the agreement, Liberia commits to 'improve the framework for forest governance, strengthen law enforcement and take measures to reduce greenhouse gas emissions from deforestation and forest degradation'¹²⁴. A statement by the government of Norway from 2014 notes that "in the initial years funds from Norway – up to USD 70 million – will be devoted to the implementation of policy measures and institution building necessary to reach the phase which entails payments for reduced carbon emissions. In the period towards 2020, an additional USD 80 million could be paid for verified reduced emissions¹²⁵." At the time the agreement was signed, it was anticipated that by 2018 "results-based payments" for 'verified emission reductions' would have commenced. To date, no such payments "for results" have been made under the agreement. Public information on how much of the promised funds has actually paid out, even if not in the form of payments for 'results', and how much of the pay-out was ultimately consumed by external consultancy fees, does not appear to be available.

2016:

Forestry Development Authority presents a national strategy for reducing emissions from deforestation and forest degradation (REDD+) in Liberia¹²⁶. The foreword to the strategy notes that a "very large area of Liberia's dense forest" is locked up in mining, forestry and oil palm concessions the government awarded to transnational corporations such as Arcelor Mittal, Golden Veroleum and Sime Darby. The acknowledgements section states that the "national REDD+ Strategy and Roadmap was researched and drafted" by consultancies LTS International (UK) and NIRAS (Sweden / Denmark) and others.

2017: Existing forestry, land rights regulation and concession agreements are amended.

1. *Agriculture concessions such as those held by oil palm companies Sime Darby and Golden Veroleum since as early as 2009 saw the inclusion of clauses granting the rights to carbon inside the concessions to the concession holder*¹²⁷.

2. *Forest sector laws have been amended to include references to carbon and carbon rights.*

3. *Tax law section 604 (b) makes provision to tax revenue from carbon credit trades though payments of "surface rent" and "royalty for carbon credits" at 10 per cent of the credit value*¹²⁸.



Land clearing in Liberia for industrial palm oil plantations, 2018
Friends of the Earth US

2018:

Land Rights Act signed into law. Article 32 of the Land Rights Act grants community ownership of customary lands: "Customary land is acquired and owned by a community in accordance with its customary practices and norms based on a long period of occupancy and or use¹²⁹." An FPIC policy and FPIC guideline published following the passing of the Act in 2018 reinforce villagers' right to give or withhold consent to corporate activities on their customary lands. Many communities have since started the process of having their customary lands demarcated, surveyed and approved.

2020:

Liberia submits a National Forest Reference Emission Level (FREL) to the UN climate process¹³⁰. In 2019, a National Forest Monitoring

System and a Safeguards Information System (SIS) were set up.

2024:

The government of Liberia announces the development of a national policy on carbon markets that would set out the legal and governance frameworks for Article 6 carbon trading under the UN Paris Agreement as well as a national climate law that will outline how the government intends to regulate its involvement in carbon markets.

In December 2024, the Liberian Environmental Protection Agency (EPA) issues Terms of Reference for an individual contractor to prepare a "stakeholder-informed final carbon policy document" that would enable the government of Liberia to pursue participation in carbon markets under Articles 6.2 and 6.4 of the UN Paris

Agreement. The Terms of Reference do not specify whether there is a connection between this call for an 'individual contractor' and the preparation of documents listed in the letter of engagement with CfRN. The objectives listed in the terms of reference of the EPA call include a review of existing laws and policies on climate change and resource ownership; classification of carbon resources by ownership status; design of a benefit-sharing procedure. The terms of reference moreover request that the contractor 'guide Liberia on the project development cycle, carbon project and Article 6 issuances and

transfers, any applicable fees, and redress for grievances¹³¹.'

In parallel, USAID and the UK-based conservation NGO Flora & Fauna issue Terms of Reference for a consultancy to provide "technical support to the **department of carbon harvesting and trading** at the FDA¹³². In 2023, a report evaluating the legal compliance of Liberia's forest concession process found that the FDA had been illegally issuing logging licenses, that its record-keeping was "grossly inadequate" and that communities affected by logging had only received at most 15 percent of the compensation they were owed¹³³.

Role of external agencies and consultants in drawing up Liberia carbon and REDD policies

The involvement of external donor agencies in the preparation of policy documents and initiatives piloting REDD or forest carbon trading in Liberia has been substantial. Most if not all of these agencies have vested interests in or are outspoken proponents of carbon trading. The funding has generally been tied in one way or another to consultancies and 'technical assistance' from the funding agencies or entities working closely with them. The following is merely a partial list of externally funded initiatives on REDD and carbon trading in Liberia. The question that arises in light of the extent of carbon trading proponents' involvement in these initiatives: whose interests take priority in the elaboration of the policy and governance framework on carbon stored in forests in Liberia?

UNDP has promoted forest carbon markets for more than two decades and has been a key proponent of REDD, including in Liberia. A February 2024 UNDP press release states **"We stand ready to support Liberia's readiness for the carbon market¹³⁴."** In Liberia, UNDP has been involved in numerous activities to advance carbon markets. According to a statement on the UNDP website, in April 2022, "the

Government of Liberia reached out to UNDP requesting support for enabling the country to engage in carbon markets. [...]. UNDP accepted to support Liberia in developing a carbon readiness roadmap that would help Liberia achieve the twin objective of reducing emissions from forest loss, sustainable management and protection of forests thus contributing to climate action while at the same time enabling access to carbon finance to expand Liberia's fiscal space and accelerate inclusive and sustainable development." In 2024, UNDP hosted a meeting titled "Making carbon markets work for forest communities in Liberia" which brought together "influential actors and partners to shape an inclusive national framework for high-integrity carbon markets¹³⁵." A report from the event notes that the "National Climate Change Steering Committee has tasked the EPA with leading a technical working group to develop a comprehensive legal framework for carbon markets, building on previous UNDP work and research from partners like the World Bank¹³⁶." UNDP also promotes carbon markets in communities, through its "Let's Go Green¹³⁷" project, funded by the European Union. UNDP also facilitated the preparation of a 'Forest Sector Carbon Roadmap and Actions for Liberia' and a 'Forest Sector Carbon Readiness Gap Assessment

Report'. At a validation meeting with Liberian stakeholders, however, the roadmap report was rejected.

The Liberia Forest Sector Project (LFSP) is a USD 37.5 million grant-financed project funded as part of the 2014 Letter of Intent between the governments of Norway and Liberia. The funds are managed by a World Bank Trust Fund. As part of the project, the **World Bank and Norway along with** industrialized country donors and agencies such as USAID, the **European Union and Sweden** have been pushing carbon markets in Liberia¹³⁸. In 2016, LFSP allocated USD 8 million to a "Strengthened Regulatory and Institutional Arrangements for Implementation of REDD+¹³⁹." A World Bank progress report on the LFSP notes that the NCCSC and the REDD+ Technical Working Group "are established and functional, with support from the project¹⁴⁰," taking credit for reactivating the NCCSC which had been set up already in 2010 by the government of Liberia.

The **Canadian NGO NovaSphere** is involved in preparation of the Liberian climate change law, with a grant of USD200,000 from the government of Canada¹⁴¹. The Canadian government has also funded a National University Climate Change Laboratory on the campus of the University of Liberia. According to EPA statements, **the Laboratory "will assist the Government of Liberia in generating the needed report that is required to open up the carbon market in Liberia."**¹⁴²

In recent years, USAID has funded a number of activities on carbon trading in Liberia. In December 2024, it issued a joint Terms of Reference with Flora & Fauna for a consultancy to 'provision technical support to the Department of carbon harvesting and trading at the Forestry Development Authority¹⁴³'.

Conservationist NGOs **Fauna & Flora and Society for the Conservation of Nature** not only

operate REDD carbon projects but also provide funding and technical advice to Liberian government agencies. FFI has committed at least USD 50,000 to fund climate governance activities. In 2023, it funded a "learning experience sharing" initiative. As part of the initiative, government technicians visited other countries where forest carbon regulation or REDD projects were operational.

In January 2025, the **World Bank** issued a consultancy call for the development of "REDD+ roadmaps and ER program development in selected West African countries", focused on the Upper Guinean forests, 43 percent of which is in Liberia. In its Annual Report for 2024, the World Bank writes that it is preparing a 'pipeline operation on results-based climate finance for Upper Guinean forests.'¹⁴⁴

In addition to intergovernmental and industrialized country agencies, the following carbon trading companies have been prospecting for or are operating carbon projects in Liberia:

UK-headquartered conservation NGO Fauna&Flora¹⁴⁵

UAE-based Blue Carbon LLC¹⁴⁶

US-registered BluCarbon Development Inc. (formerly BluEarth Capital, Inc.)¹⁴⁷

Italy-registered Carbonibus¹⁴⁸

Canada-based Karbon-X Project Inc. (in partnership with Revive Terra Corps)¹⁴⁹

UK-based Rebalance Earth¹⁵⁰

Switzerland-based Recov.earth¹⁵¹

France-based Aera Group¹⁵²

Malaysia

The federal government of Malaysia has pledged to reduce the greenhouse gas emission intensity of its GDP by 45 percent by 2030, compared with the emission intensity in 2005. Shortly before the UN climate conference in Glasgow in 2021, it announced its aspiration to achieve carbon-neutrality by 2050. According to its 2021 submission to the UN climate process, the government of Malaysia "does not intend to use voluntary cooperation under Article 6 of the Paris Agreement to achieve its national emission reduction target (NDC)."¹⁵³

In relation to forests, the 2021 submission to the UN lists land use, land use change and forestry (and thus carbon storage in forests), as a sector included in the NDC. Malaysia's fourth biennial update report submitted to the UN climate convention in December 2022¹⁵⁴ reports on the trend in carbon stored in forests as part of the country's national greenhouse gas balance. The 2021 NDC submission mentions conservation measures explicitly, stating that "expanding protected areas, including fisheries zones within the marine and coastal protection corridors will be given priority" while the National Energy Transition Roadmap notes that "Other sectors, such as IPPU, agriculture, waste as well as land-use, land-use change and forestry (LULUCF) will play a critical role towards achieving net-zero target"¹⁵⁵. In a joint publication published in 2023, the Third World Network (TWN) and Sahabat Alam Malaysia note that Malaysia's

national REDD-Plus Finance Framework (RFF) may include forest carbon offsets as one of the components¹⁵⁶. The government has yet to define how the different approaches to forest carbon - the government's commitment to LULUCF reporting as part of the NDC, the national REDD-Plus Finance Framework (RFF) and the Malaysia Forest Fund with its two forms of forest certificates (see below), results-based finance payments and (private sector) forest carbon offset trading through the Bursa Carbon Exchange (BCX) - will relate to each other.

In early 2025, the government of Malaysia signed a Memorandum of Understanding with the government of Singapore to sell carbon credits through the UN Paris Agreement's Article 6.2 mechanism¹⁵⁷. A seller of carbon credits, however, cannot use those same credits to achieve its own net zero because the buyer of the credits is going to use them to balance its own emissions. By selling carbon credits, e.g. to Singapore, the government of Malaysia would be foregoing to count emission reductions achieved in Malaysia towards the country's own carbon-neutrality target because it sold the (purported) reduction as Article 6 carbon credit to the government of Singapore. Whether the government of Malaysia may in future not only consider selling but also buying carbon credits under the Paris Agreement's Article 6 stands to become clear as the government develops the country's carbon pricing regulations.

Who will be in charge? Constitution grants very limited decision-making power over land and forests to the federal government of Malaysia that sets national emission targets, including pertaining to land and forests

Malaysia is a federation of three regions, Peninsular Malaysia (which contains a further nine states) and two states on Borneo Island, Sarawak and Sabah. The country's Federal Constitution grants strong rights to these two states to enforce their own policies and laws on land and forests. Those constitutional rights granted to these two state governments go beyond those the Federal Constitution lays out for the nine states of Peninsular Malaysia. This has implications for climate change-related regulation and above all, any regulation and laws on carbon markets.

For example, the Federal Constitution does not mention the word 'climate'. Invoking their constitutional rights, in June 2024, the governments of Sabah and Sarawak rejected the application of any future federal carbon, capture and storage law in their regions. While the Federal Constitution does not mention 'climate', it does mention that lands and forests are under the jurisdiction of states. Conservation of protected areas on land is under a shared jurisdiction of both the federal and state governments – which is not without its challenges. "The federal-state jurisdictional division has been identified as a key challenge when it comes to biodiversity conservation in Malaysia", a publication by Third World Network and SAM notes¹⁵⁸. The country's Federal Constitution also exempts Sarawak and Sabah from forest and land-related federal policies and laws that have been passed by the federal legislature.

This constitutional division of mandates between federal and state jurisdictions thus also applies to decisions about carbon stored in forests. The government's inclusion of the LULUCF sector in the NDC suggests that it is planning to achieve at least some of the NDC target through the carbon stored in forests across Malaysia; as noted above, its fourth biennial update report to the UN climate convention in 2022 shows how accounting for the reported LULUCF emissions and carbon uptake lowered Malaysia's total greenhouse gas emissions. Similar reporting can be expected in future biennial update reports which serve to show a country's progress towards its NDC. At the same time, Sabah and Sarawak have amended their forest laws to enable the development of carbon offset projects. The Kuamat Rainforest Conservation project in Sabah, in fact, is already selling carbon credits.

On the occasion of the launch of the Bursa Carbon Exchange (BCX) at the Malaysia trading exchange in 2022, the minister of Natural Resources and Environmental Sustainability stated that "Malaysian carbon credits traded under the Bursa Carbon Exchange shall not be authorised to meet the NDC of other countries or for other international mitigation purposes¹⁵⁹." Carbon credits from the Kuamat Rainforest Conservation project or the SaraCarbon Marudi REDD project would thus presently **not** qualify for sale to airlines buying carbon credits to comply with the aviation industry carbon trading scheme CORSIA (because to be eligible under CORSIA, a corresponding adjustment would be required). Guidance documents issued by the federal government of Malaysia on the **voluntary carbon market** provide additional information. According to the guidance, the government does not impose any limits on the trade of REDD carbon credits sold into the voluntary carbon market, but it will also not 'correspondingly adjust' its national carbon balance¹⁶⁰. There is thus a risk that the same tonne of carbon stored in a forest in Malaysia may be counted or claimed twice – in the national reporting of LULUCF emissions and by the buyer in the voluntary carbon market who bought a carbon credit from a project like the Kuamat Rainforest Conservation project on the BCX.

This same risk arises from amendments introduced to Sarawak's forest law in 2022. According to the amendment, any carbon credits generated through a "Forest Carbon Activity" will be counted towards the national reduction target (NDC). If carbon credits generated through a "Forest Carbon Activity" were to be sold to a buyer in the voluntary carbon market, the purported emission reduction represented by the carbon credit would equally risk being claimed twice, by the buyer of the carbon credit on the voluntary carbon market and as contribution to Malaysia's NDC.

The federal government has adopted two national policies on climate change, in 2009 and in 2024, but a federal law on climate change or carbon pricing has yet to be enacted. The 2009 National Policy on Climate Change also introduces the Malaysia Forest Fund (MFF) as an instrument to manage a "REDD Plus Finance Framework". The fund, established in 2021 by the Ministry of Natural Resources and Environmental Sustainability (MNRES), will, among others, manage two new funding

instruments that are part of the REDD Plus Funding Framework, the Forest Conservation Certificate (FCC) and the Forest Carbon Offset (FCO). MFF members include policymakers, industry and non-governmental organisations. Even where they participate, Indigenous Peoples' and community groups face structural exclusion from the MFF and the technical working group tasked with developing the offset project guidance, given that their customary land rights are not fully respected by executive authorities.

In late 2024, the MNRES concluded an initial public participation process on a federal climate change bill. Sabah and Sarawak have yet to establish their own regional policies; both have made steps to enact laws related to climate change, including those on carbon offsetting activities in their respective regions. The governments of Sarawak and Sabah introduced these laws without an official policy on climate change in place, and without a comprehensive public consultation process. How the mechanisms introduced in these initial regulations will relate to any parallel process at the federal level is yet unknown.

The government of **Sarawak** amended existing and introduced new climate change related laws, including legislation on obtaining licenses for forest carbon projects and land for carbon

storage and utilisation in 2022 and 2023. Amendments to the Forest Ordinance 2015 that were introduced in 2022 open the door for logging and plantation companies to generate revenue from carbon credit sales. Later in 2022, further rules were enacted under the amended forestry law to introduce specifications for a "Forest Carbon Activity" license.

The first two forest carbon offset projects being developed by two timber corporations in areas where they have been granted licences for either the development of monoculture plantations or timber harvesting. Indigenous communities whose customary lands are affected by these licenses are likely to see access to their customary territories and livelihood activities restricted as a result of the carbon projects¹⁶¹.



Protest by Lobang Kompeni village against SaraCarbon's Marudi REDD+ project in Sarawak, Malaysia, February 2025
Sahabat Alam Malaysia

The Sarawak state government also introduced legislation to regulate greenhouse gas emissions in the oil, gas and energy sectors. Carbon levies and financial penalties are announced if business facilities registered under the scheduled industries fail to cut their emissions in accordance with the limit to be set by the state. In 2023, it announced its intention to establish its own state policy on climate change and its own climate change centre. The Sarawak GHG emissions reduction law mentions the setting up of a climate change fund, but no further details have been announced as of January 2025.

The **Sabah** state government amended the Sabah forestry law in 2018. The amended Forest Enactment 1968 recognises "carbon stored in trees or plants" as a form of forest produce. Any projects in Sabah involving the sale of the forest produce "carbon stored in trees or plants" from forest reserves, state land or 'alienated land', must obtain written approval from the Minister (Sabah Forest Enactment, 1968 "Part IIIA Forest Management and Development on 28C: Reduce Emissions from Deforestation and Forest Degradation-plus (REDD+)").¹⁶²

In 2021, the state government of Sabah signed a controversial "Nature Conservancy Agreement (NCA)" with the Singaporean company Hoch Standards. Under the agreement with a validity of 100 years, and covering an area of nearly two million hectares of forests, the company is to develop and implement a nature conservation management plan (NCMP) that would include provisions for the generation of carbon credits. An indigenous leader has since filed a request for a judicial review of this decision which would affect his peoples' territory.

The same year, the state government of Sabah also signed an agreement with Permian Malaysia Sdn Bhd, a subsidiary of UK-based Permian Global on the Kuamut Rainforest Conservation Project. The project was registered with the Verified Carbon Standard (VCS ID 2609), operated by Verra, in 2023 and sold its first VCS-approved carbon credits on the BCX in 2024. Among the buyers of the carbon credits have been Italian oil corporation Eni and US-company Salesforce Inc. as well as IUCN.

Malaysia Forest Fund sets out framework for dividing forest carbon funding

Introduced by the 2009 National Policy on Climate Change, the Malaysia Forest Fund was set up in 2021. The Fund administers the Forest Conservation Certificate and the Forest Carbon Offset protocol. MFF is also tasked with preparing a 'National Guidance on Forest Carbon Markets' document which MFF describes as a document that will be "a point of reference for any state or entity planning to engage in forest carbon related activities. [...] This will ensure no double counting takes place when accounting for the forest sector's emission reduction."

Forest Conservation Certificate (FCC). The stated aim of the FCC is to incentivise the use of corporate funding to pay for forest conservation projects which can be implemented by (other)

companies, state governments, private landowners or conservation entities that received written approval from the state government to carry out conservation activities on the specific area of public land. FCC projects have to be verified by external auditors; they can be used by companies to meet corporate environmental, social and governance (ESG) biodiversity reporting requirements and companies providing the funding can reduce their income tax payments by up to 10 percent of aggregate revenue. The FCC became operational in May 2024; it can neither be used to generate carbon credits nor to support any carbon offsetting projects. The REDD+ Finance Framework registry will list publicly available information on both the funder and project operator of FCC activities.

The protocol for FCC activities appears to all but exclude Indigenous Peoples from operating FCC-funded conservation activities on their customary lands. As a result of the state's systemic failure to recognize Indigenous Peoples' full rights to their customary lands, they would often lack the land documentation required and depend on having received approval from the state to be an FCC project proponent for a specific purpose. However, if indigenous communities themselves are not project proponents, community engagement – promoted by the FCC protocol – would likely reinforce inequitable power dynamics between the state and project proponents who are in a position of power and impacted indigenous communities.

Forest Carbon Offset (FCO). The FCO protocol is envisioned to function as a domestic standard for forest carbon offset activities and nature-

based "solutions" activities more broadly. The federal government's 2024 budget included a RM5 million special grant for a "Forest Carbon Project Development Fund" to support elaboration of a forest carbon project. The MFF has been designated as implementing agency, to agree with state governments on how the funds will be used. According to the MFF website, a feasibility study has been concluded in 2024 but had not been published as of January 2025.

Both FCCs and FCOs open the door to logging and plantation corporations generating additional revenue from parts of their concessions where generating FCCs or FCOs seems the more profitable option than continuing the forest destruction that is involved with the corporate activities such as logging or converting forests to monoculture plantations that are at the core of these corporations.

Chronology of climate change and carbon trading-related policies and laws in Malaysia

2009:

The federal government of Malaysia adopts a national climate change policy.

2021:

Malaysia Forest Fund (MFF) is set up by the MNRES.

Ministry of Environment and Water (KASA, now Ministry of Natural Resources and Environmental Sustainability) issues National Guidance on Voluntary Carbon Market document for entities intending to sell carbon credits on international carbon markets.

In 2021, KASA also announces development of a Domestic Emission Trading Scheme (DETS), to be implemented in three phases by the end of 2022.

The **Sabah** state government signs a "Nature Conservancy Agreement (NCA)" with the

Singaporean company Hoch Standards. Under the agreement with a validity of 100 years, and covering an area of nearly two million hectares of forests, the company is to develop and implement a nature conservation management plan (NCMP) that would include provisions for the generation of carbon credits. An indigenous leader has since filed a request for a judicial review of this decision which would affect his peoples' territory.

2022:

Launch of the Bursa Carbon Exchange (BCX) of Malaysia, a subsidiary of the Bursa Saham Malaysia. In July 2024, the BCX hosted the first auction of Malaysian carbon credits from the Kuamut Rainforest Conservation Project.

Sarawak state legislature passes the Forests Ordinance (Amendment) Bill 2022 and the Land Code (Amendment) Bill 2022, amending the state's Forests Ordinance 2015 and Land Code 1958. The amendments to the forestry law introduces a new chapter 6, entitled 'Special provisions relating to

carbon stocks' and section 2(1) defines carbon as a "forest product". Section 70A grants the forestry director, with the approval of the minister, the power to issue the licence for a Forest Carbon Activity; crucially, this section also states that "any carbon credit unit issued by the Carbon Standard shall be included as part of the Nationally Determined Contribution and reported by the Director to the appropriate body in the Government of Malaysia".

Following the amendments to the Sarawak forestry law, the Forests (Forest Carbon Activity) Rules 2022 was issued in late 2022 to regulate topics such as the issuance of carbon licences; forest carbon registry; forest carbon credits, monitoring, reporting, validation, accounting, fees, royalties of Forest Carbon Activities. The holder of a "Forest Carbon Activity" license is granted the rights to the carbon stock found within the 'forest carbon activity' project area (defined as "Carbon Forest Area"); the licensee can also sell carbon credits generated from the carbon stocks inside the project area. The legislation includes fees payable for "Forest Carbon Activity" licenses; for a 50,000-hectare project area, the fee payable to the state is a mere RM13 million in royalty payments and five per cent of annual revenue from carbon credit sales. Records about the quantification and sale of carbon and the specifications of the license are to be registered with two registries, the Sarawak Forest Carbon Registry and the Sarawak Carbon Licence Register.

The holder of a "Forest Carbon Activity" license is granted the rights to the carbon stock found within the 'forest carbon activity' project area (defined as "Carbon Forest Area"); the licensee can also sell carbon credits generated from the carbon stocks inside the project area. The legislation includes fees payable for "Forest Carbon Activity" licenses; for a 50,000-hectare project area, the fee payable to the state is a mere RM13 million in royalty payments and five per cent of annual revenue from carbon credit sales. Records about the quantification and sale of carbon and the specifications of the license are to be registered with two registries, the Sarawak Forest Carbon Registry and the Sarawak Carbon Licence Register.

2023:

Sarawak state government introduces legislation to regulate greenhouse gas emissions in the oil, gas and energy sectors and announces intention to establish its own state policy on climate change and its own climate change centre. No further details have been announced as of January 2025.

In 2023, the federal government also announced the drafting of a National Carbon Policy which would include 'guidance on carbon trading at the state level'. "Many states such as Sarawak, Sabah, Perak, Pahang and Selangor are exploring [carbon trading] because carbon is also seen as a state resource. We want to coordinate at the national level so that we will get the results that we want," the minister for Natural Resources, Environment and Climate Change is quoted in a news article¹⁶³. The draft National Carbon Policy is yet to be made public as of February 2025.

In March 2023, the World Bank issues a call for a USD 478,600-consultancy titled 'Malaysia Partnership for Market Implementation Lot 1 (Carbon Pricing Impact Analysis and Policy Design)'. The description states that in "collaboration with the Ministry of Finance, the Ministry of Environment and Water (KASA), the Ministry of Energy and Natural Resources (KeTSA), and other ministries and agencies, the consultants will assist the World Bank to (i) assess the potential impact of carbon pricing and recommend carbon pricing instruments feasible in Malaysia; (ii) assess the capacity needs to successfully implement the proposed carbon pricing instruments (CPIs), identify the gaps, and prepare a capacity building plan, and (iii) provide capacity building support to private participants and state-owned-enterprises to prepare for CPI implementation¹⁶⁴. UK-based consultancy ECA also refers to have been involved in "Readying Malaysia for implementation of carbon pricing" under the same Partnership for Market Implementation programme. The consultancy writes on its website: "ECA are delighted to have been contracted by the World Bank under the PMI initiative to provide readiness support to the Government of Malaysia in its policy decisions over CPI design, assessment of the economic impacts of proposed CPIs, establishment of the institutional framework, and assistance with capacity building and stakeholder engagement¹⁶⁵."



Signboards by the Marudi REDD+ project and protest boards by the community of Lobang Kompeni, February 2025
Sahabat Alam Malaysia

2024:

Second national policy on climate change is published. The National Climate Change Policy (NCCP) 2.0 is the second iteration of Malaysia's climate policy originally introduced in 2009. It is an umbrella policy that ties together the country's climate policies and initiatives, including the National Energy Transition Roadmap (NETR), the National Climate Change Act, and the National Adaptation Plan. In comparison to the first policy of 2009, the 2024

policy puts stronger emphasis on the development of a carbon market and introduction of carbon pricing instruments.

Federal budget includes a RM5 million special grant for a "Forest Carbon Project Development Fund".

Forest Conservation Certificate (FCC) licensing process becomes operational.

Systemic nature of the violations of the indigenous customary land rights in Malaysia

Judicial reviews and court rulings have confirmed that customary land rights include a right to property equal in status to the documentary land rights and that that goes beyond usufructuary rights, and that there must be adequate compensation for their loss. The rulings also confirm that common law respects

the pre-existing nature of the Indigenous Peoples' customary rights to lands and that these rights may only be extinguished through unambiguous written notification, in accordance with the law and with the payment of adequate compensation as specified under Article 13 of the Federal Constitution.

Despite these landmark judicial decisions confirming Indigenous Peoples' rights to customary lands, Indigenous Peoples in Malaysia face systemic land tenure insecurity¹⁶⁶. Customary lands without any document of title or status as indigenous communal reserve are claimed by the government of Malaysia as property of the state. On these lands, the government often interprets Indigenous Peoples' land rights as mere usufruct rights - the right to use and benefit from the land, but not the right to ownership of the land itself. Where the government has issued some form of recognition of Indigenous Peoples' rights, it has often done so in a way that jeopardises community interests and the integrity of peoples' territories, limiting rights lands to cultivation and housing areas, unilaterally determining the boundaries of territories, etc. The Malaysian government thus denies

Indigenous Peoples' proprietary rights to a significant portion of customary lands. This undue process also led to large parts of indigenous territories across Malaysia having been declared as production forests and conservation areas where Indigenous Peoples' rights would have either been totally extinguished, be subject to heavy regulations or in the case of the former, threatened by extraction of timber as a priority over community use. This situation is further aggravated by the country still lacking a law on the free, prior and informed consent (FPIC) and mandatory consultations for affected communities as well as that on the right to information.

This systemic misinterpretation of Indigenous Peoples' rights to customary lands affects Indigenous Peoples across the three regions of



Protest by three communities against SaraCarbon's Marudi REDD+ project in Sarawak, Malaysia, February 2025
Sahabat Alam Malaysia

Peninsular Malaysia, Sabah or Sarawak and stands to curtail life spaces for Indigenous Peoples even further if land is locked up to generate carbon credits. If, as in Indonesia or Liberia, carbon rights are assigned to concession holders or if proprietary rights over the project area are made a prerequisite for participation in carbon projects, the Malaysian state's current legal misinterpretation of Indigenous Peoples' rights would see Indigenous Peoples largely excluded from undertaking such projects. Carbon is always tied to land, and activities used to generate revenue from guaranteeing the storage of carbon on land require authority to determine the use of the land. It would thus seem that recognizing Indigenous Peoples' rights to carbon stock would require recognizing their full customary land ownership rights, including the proprietary rights which the state

thus far is claiming over large portions of customary territories across Malaysia.

In the case of the amended Sarawak Forestry Ordinance 2015 which introduced Forest Carbon Activities - will the Sarawak state government reverse current legal interpretations on what Indigenous Peoples' rights over their customary lands implies in practise so that indigenous communities could become directly involved in forest carbon projects? Or will carbon project permits trigger a new form of land grabbing of indigenous territories and introduce a new form of land rights violations since rights to carbon stocks in the project area will be granted to the project proponent, with the consequences for Indigenous Peoples that have been documented already amply for carbon offset projects across the world?

ANNEX I

Offsetting: a brief history of overwhelming failure

The Kyoto Protocol's Clean Development Mechanism (CDM) established carbon offsetting internationally – and failed spectacularly in achieving the twin goals of the CDM, reducing emissions and advancing clean development. By 2012, CDM projects had been issued millions of phantom credits which were selling for less than 0,10 USD. The CDM had made emitting greenhouse gases cheap for

polluting companies in the global North: they could avoid reducing their own emissions by buying cheap CDM credits. Communities in the global South, meanwhile, were not just exposed to continued destruction and pollution from fossil fuel extraction and processing. They also faced another corporate grab for lands that could be turned into carbon projects¹⁶⁷.

Human rights abuses and conflicts a common occurrence in offsetting

The CDM exposed many systemic flaws of offsetting¹⁶⁸. Touted as a mechanism that would both reduce emissions and promote sustainable development, the CDM did the opposite in both regards¹⁶⁹. Safeguards were adopted with the promise that they would guarantee CDM offset project owners' respecting of human rights. But these safeguards could not prevent the structural flaws of offset projects that regularly

violated human rights. Among the projects approved by the CDM to sell carbon credits was the Bajo Aguan palm oil biogas project by Grupo Dinant in Honduras. The company stood accused of fuelling land conflicts and was implicated in serious human rights abuses, including murder in the Aguan Valley, where the CDM carbon project was located¹⁷⁰.

The CDM also greenlighted carbon credit sales from industrial tree plantation projects linked to human rights abuses. Security guards killed a villager passing through eucalyptus plantations

that were part of the Brazilian company Vallourec's carbon project, yet the project retained its CDM status and was able to continue to sell carbon credits¹⁷¹.

Failure to reduce destruction and pollution

Hundreds of hydropower, wind farm, cook stove, tree plantation and industrial factory offset projects were allowed to sell carbon credits with the CDM stamp of approval despite wholly implausible claims that without the CDM, the alleged emission reductions would not have happened¹⁷². This included standard approval of hydro power projects that had been generating power for years or had sold power purchase agreements years before they applied to sell carbon credits. Routine issuance of phantom credits eventually led to the implosion of the CDM, but not before millions of phantom credits had been sold to polluting companies.

Millions of phantom credits have also been issued to projects selling carbon credits in the so-called voluntary carbon market (VCM).¹⁷³ It became the main trading venue for carbon credits from forest carbon projects which had been excluded from the CDM¹⁷⁴. The VCM soon showed systemic flaws that had already been exposed in the CDM: millions of phantom credits were issued and projects caused manifold conflicts with communities who were deprived of access to their customary lands¹⁷⁵. In Uganda, Tanzania and Ghana, tree plantation companies such as New Forests Company¹⁷⁶, Global Woods¹⁷⁷, Miro Company¹⁷⁸ and Green Resources¹⁷⁹ sold credits from carbon projects that caused evictions and conflicts. Forest carbon projects in Kenya¹⁸⁰, Cambodia¹⁸¹, Peru¹⁸²

– to name just a few examples – were shown to have violated community rights, were connected to human rights abuses or had caused severe conflicts in communities whose lands were used to generate carbon credits. All of these projects had been assessed and approved by certification companies as being in compliance with carbon standards such as the Verified Carbon Standard, VCS, or the GoldStandard. These standards are a crucial feature of carbon offset markets. They not only determine the profitability of a carbon offset project - project developers use these standards to calculate the alleged emission savings of their projects – but also turn a carbon project developer's fictitious story that without the project, more emissions would have been released into the atmosphere into a marketable product.

There is no indication that regulations which governments across the global South are putting in place to 'scale up' carbon offsetting will avoid causing land conflicts and human rights abuses that have been associated with carbon offsetting in both the CDM and the voluntary carbon market. Issuance of phantom credits is also likely to continue. Carbon credits offered (Gabon¹⁸³) or sold (Guyana¹⁸⁴) by governments under 'scaled-up' national forest carbon programmes are widely seen as phantom credits, generated through accounting tricks rather than representing genuine reduction of emissions from deforestation.

ANNEX II

World Bank funding to advance carbon markets

The World Bank has not been alone in pushing carbon markets into the regulatory frameworks of the global South. UNDP and development institutions of industrialized countries such as USAID, NORAD and GIZ have equally been promoting carbon markets in the global South with a raft of pilot initiatives over the past 20 or so years¹⁸⁵. Their programmes have often been put in place in coordination with Bank initiatives. The following overview list key World Bank carbon market initiatives since 2003.

2003

World Bank launches the world's first international carbon fund (**Prototype Carbon Fund, PCF**) to 'jump start' the CDM with pilot projects in the global South¹⁸⁶. The PCF provided a financial lifeline to the world's biggest urban waste dump which was kept open years longer thanks to the PCF CDM project. The neighbourhood in Durban where the apartheid-era dump was located, faced yet more cancer death. In the end, the carbon project sales flopped and the project was closed¹⁸⁷.

2008

Launch of the **Forest Carbon Partnership Facility**¹⁸⁸. With the FCPF, the World Bank aimed to set up jurisdictional approaches for forest carbon trading through REDD+ programs in 47 countries. In the following years, the Bank sets up several other multi-donor funds such as the **Biocarbon Fund Initiative for Sustainable Forest Landscapes**, the **Carbon Initiative for Development**, the **Transformative Carbon Asset Facility** and the **Carbon Partnership Facility**. They all promote carbon offsetting. A Biocarbon Fund project implemented by the NGO COMARCO in Zambia served as a blue print for the jurisdictional carbon offset project the government of Zambia is starting to implement

as of late 2024 in the country's Eastern Province.

The **Carbon Pricing Leadership Coalition** was launched on the opening day of the UN climate conference in Paris in 2015 with the aim to "secure the place of carbon pricing on the global agenda." The World Bank provides Secretariat services to the Coalition which is 'convening dialogues between the private sector and governments on carbon pricing.'¹⁸⁹

2015

Partnership for Market Readiness (PMR) programme launched to persuade governments in the global South that carbon pricing and carbon offsetting are a prerequisite to access climate funds. "The PMR helped 14 countries consider emissions trading systems, 12 carbon taxes, and 9 domestic crediting mechanisms¹⁹⁰." The **Partnership for Market Implementation**, launched in 2021, is the successor of the PMR. The World Bank was aiming to raise US\$250 million to push carbon offset markets in up to 30 countries.

Under the Umbrella of the PMR, the World Bank's International Finance Corporation (IFC), in cooperation with Conservation International, issued a USD152 million **Forest Bond** in 2016. Bond holders were given the option to receive their 'interest payments' in cash or as carbon credits from a carbon offset project in Kenya¹⁹¹. In its 'lessons learned' briefing on the Forest Bond, the IFC notes that "none of the investors opted for carbon credits—choosing instead to receive the bond's coupon in cash every year—a disappointment for the Bond's creators¹⁹²."

2018

The World Bank initiates the **Climate Warehouse** which aims to advance the technical infrastructure

needed for global carbon markets. Among others, countries are promised access to low-cost open-source technology "to create an end-to-end digital ecosystem for a globally connected carbon market."

2020

The objective of the **Climate Market Club** is to 'develop approaches to operationalize carbon markets.' The Club consists of 19 participants, of which 14 are governments.

2022

SCALE—Scaling Climate Action by Lowering Emissions is launched to replace earlier World Bank carbon funds such as the FCPF and the Biocarbon Fund Initiative for Sustainable Forest Landscapes (ISFL). The FCPF is due to close down in 2025, after its original 'sunset' clause of 2020 had been pushed back¹⁹³. SCALE will also incorporate the Carbon Initiative for

Development (Ci-Dev), and the Transformative Carbon Asset Facility (TCAF). By bringing these funds under one umbrella, the World Bank promises 'to broaden and deepen the impact of climate and carbon finance'. In November 2024, the UK government announced a contribution of GBP 188 million to the SCALE programme, to "support the development of high-integrity forest carbon markets to ensure the buying and selling of carbon credits to drive emission reductions"¹⁹⁴

2023

At the 28th UN climate conference in 2023, the World Bank launched the **Carbon Markets Engagement Roadmap**¹⁹⁵ to expand "high-integrity carbon markets, mobilize finance, and provide a robust supply of high-quality credits." Through the Roadmap, the World Bank hopes to work with 15 countries to generate forest carbon credits by 2028¹⁹⁶.

Endnotes

- ¹ Friends of the Earth International. 2023. Bank of evidence on false climate solutions. https://www.foei.org/wp-content/uploads/2023/11/Bank-of-evidence-climate-false-solutions_EN_Nov-2023.pdf; The New Yorker. 2023. The Great Cash-for-Carbon Hustle. <https://www.newyorker.com/magazine/2023/10/23/the-great-cash-for-carbon-hustle>. For more examples, see the online portal REDD-Monitor at <https://reddmonitor.substack.com/>
- ² Milieudéfense. 2024. Why carbon offsetting is a false solution. <https://en.milieudéfense.nl/news/02484-opm-factsheet-carbon-offsetting-02.pdf>
- ³ For detail, see CIEL. 2024. Carbon markets are not climate finance. <https://ciel.org/wp-content/uploads/2024/11/Carbon-Market-Not-Climate-Finance.pdf>
- ⁴ IETA Carbon Market Business Brief. 2024. Colombia Carbon Tax at a Glance. https://ieta.b-cdn.net/wp-content/uploads/2024/02/Colombia-business-brief_Jan-23.pdf
- ⁵ J. Peña. Behind the green smoke of carbon markets in Colombia. Unpublished report.
- ⁶ Gilbertson, T. 2021. Financialization of nature and climate change policy: implications for mining-impacted Afro-Colombian communities. Community Development Journal, Volume 56, Issue 1, January 2021, 21–38.
- ⁷ Carbon Pulse. January 2025. Gabon launches sovereign carbon initiative with \$17/t “contribution”, CORSIA-linked offsetting provisions. <https://carbon-pulse.com/359709/>
- ⁸ Examples of carbon projects embroiled in human rights and land conflicts: REDD-Monitor 2024. ORF documentary investigates the Katingan REDD project in Indonesia: “We are no longer allowed to use the forest. We are no longer allowed to grow anything”. <https://reddmonitor.substack.com/p/orf-documentary-investigates-the>; Secours Catholique – Caritas France. 2023. Carbon offsetting at the cost of human rights? The case of TotalEnergies’ BaCaSi project in Congo. https://www.secours-catholique.org/sites/default/files/03-Documents/BACASI_EN-Web_0.pdf and <https://www.mediapart.fr/journal/ecologie/121222/derriere-le-greenwashing-de-totalenergies-l-expropriation-de-paysans-au-congo>; REDD-Monitor. 2024. Ongoing land rights disputes in the Keo Seima REDD project in Cambodia. <https://reddmonitor.substack.com/p/ongoing-land-rights-disputes-in-the>; Forest Peoples Programme. 2024. Comunidad kichwa Puerto Franco logra una victoria histórica en su lucha contra la conservación excluyente del Parque Nacional Cordillera Azul y su proyecto de créditos de carbono (REDD+). <https://www.forestpeoples.org/es/article/2024/historic-win-puerto-franco-redd-exclusionary-conservation>
- ⁹ Ayrey, E. 2023. 21 Ways That Forest Carbon Projects Cheat! (with examples). <https://www.youtube.com/watch?v=bfj6EkyO77I>
- ¹⁰ Malone, P. 2024. Log the forest and get carbon credit rewards. <https://johnmenadue.com/log-the-forest-and-get-carbon-credit-rewards/>; Sarawak Report. 2025. Marudi Villagers Protest Against Samling’s ‘SaraCarbon’ Carbon Credit Project. <https://www.sarawakreport.org/2025/03/marudi-villagers-protest-against-samlings-saracarbon-carbon-credit-project/> and <https://registry.verra.org/app/projectDetail/VCS/4814> for the project documentation submitted to Verra’s Verified Carbon Standard (VCS).
- ¹¹ REDD-Monitor. 2023. The sale by the Government of Guyana of forest-based carbon credits was fraudulent. <https://reddmonitor.substack.com/p/the-sale-by-the-government-of-guyana> and Rainforest Foundation UK. 2023. Gabon’s Sovereign REDD Reduction Units. <https://www.rainforestfoundationuk.org/wp-content/uploads/2023/07/Case-Study-Gabons-Sovereign-Redd-Reduction-Units.pdf>
- ¹² See, for example: Elgin, B. 2020. These Trees Are Not What They Seem. How the Nature Conservancy, the world’s biggest environmental group, became a dealer of meaningless carbon offsets. <https://www.bloomberg.com/features/2020-nature-conservancy-carbon-offsets-trees/> and <https://reddmonitor.substack.com/p/the-nature-conservancy-fake-forest>
- ¹³ The Guardian. 2024. BP-owned company is selling carbon credits on trees that aren’t in danger, analysis finds. <https://www.theguardian.com/environment/article/2024/jul/11/finite-carbon-forest-offsets-analysis>
- ¹⁴ Terra de Direitos. 2016. Código Florestal e mecanismo de mercado para a proteção Ambiental. <https://terradedireitos.org.br/noticias/noticias/artigo-codigo-florestal-e-mecanismo-de-mercado-para-a-protecao-ambiental/20401>; GRAIN. 2019. Regularização ambiental e fundiária tensionam pela massiva privatização das terras públicas e territórios coletivos no Brasil. <https://grain.org/fr/article/6219-regularizacao-ambiental-e-fundiaria-tensionam-pela-massiva-privatizacao-das-terras-publicas-e-territorios-coletivos-no-brasil> and Packer, L. 2015. Lei Florestal 12.651/12. https://terradedireitos.org.br/uploads/arquivos/Artigo_CodigoFlorestal_final.pdf
- ¹⁵ REDD-Monitor. 2023. International statement on the carbon deal between Blue Carbon and the Liberian Government. <https://reddmonitor.substack.com/p/international-statement-on-the-carbon>
- ¹⁶ Quantum Commodities Intelligence. 2024. US environmental non-profit approaches \$10bn in assets. (subscription required) <https://www.qcintel.com/carbon/article/us-environmental-non-profit-approaches-10bn-in-assets-filing-34091.html>. The Nature Conservancy. Consolidated Financial Statements for fiscal year ending June 2024 and 2023. <https://www.nature.org/content/dam/tnc/nature/en/documents/FY24-TNC-Consolidated-Audited-FS-Final.pdf>
- ¹⁷ Sahabat Alam Malaysia (Friends of the Earth Malaysia - SAM). 2025. Comment on Marudi Forest Conservation and Restoration Project (Project 4814). https://foe-malaysia.org/wp-content/uploads/2025/02/250125_SAM-comments-to-Verra-on-Marudi-carbon-project_F.pdf
- ¹⁸ PNG Environmental Alliance. 2024. COP29 media statement from Papua New Guinea Environmental Alliance. <https://reddmonitor.substack.com/p/cop29-media-statement-from-papua>
- ¹⁹ Mongabay. 2024. World’s largest’ carbon credit deal in the Amazon faces bumpy road ahead. <https://news.mongabay.com/2024/10/worlds-largest-carbon-credit-deal-in-the-amazon-faces-bumpy-road-ahead/>
- ²⁰ Ministério Público Federal. 2024. MPF requer que Justiça Federal suspenda o projeto de crédito de carbono/REDD+ do estado do Amazonas. <https://www.mpf.mp.br/am/sala-de-imprensa/noticias-am/mpf-requer-que-justica-federal-suspenda-o-projeto-de-credito-de-carbono-redd-do-estado-do-amazonas>
- ²¹ Bermúdez, Andrés. 2023. Colombia: the indigenous reservation that sold carbon credits without its inhabitants knowing. Mongabay. <https://es.mongabay.com/2023/06/colombia-el-resguardo-indigena-que-vendio-bonos-de-carbono-sin-que-sus-habitantes-lo-supieran>; Constitutional Court of Colombia. 2024. Sentencia 248 de 2024. <https://www.corteconstitucional.gov.co/relatoria/2024/T-248-24.htm>; REDD-Monitor. 2025. Marudi Indigenous communities oppose Samling’s carbon project in Sarawak, Malaysia. <https://reddmonitor.substack.com/p/marudi-indigenous-communities-oppose>
- ²² Friends of the Earth International. 2023. Opposing carbon markets. A guide to carbon markets and how to fight them. https://www.foei.org/wp-content/uploads/2023/11/Carbon-markets-guide_FoEI_ENG.pdf
- ²³ Verra. 2024. Singapore, Gold Standard and Verra Release Initial Recommendations Outlining Progress in the Development of a Carbon Crediting Protocol to Implement Article 6.2. <https://verra.org/singapore-gold-standard-and-verra-article-6-crediting-protocol/>
- ²⁴ Carton, W. et al. 2021. Undoing Equivalence: Rethinking Carbon Accounting for Just Carbon Removal. <https://www.frontiersin.org/journals/climate/articles/10.3389/fclim.2021.664130/full>
- ²⁵ Dooley, K. 2024. After nearly 10 years of debate, COP29’s carbon trading deal is seriously flawed. <https://theconversation.com/after-nearly-10-years-of-debate-cop29s-carbon-trading-deal-is-seriously-flawed-244493>

- ²⁶ Carbon Pulse. 2025. Interview: Carbon industry misinterpreting definition of 'net zero' emissions, says physicist. (subscription required) <https://carbon-pulse.com/364226/>
- ²⁷ Republik. 2024. Die Luftibusse: Wie sich die Schweiz in einen thailändischen Wirtschaftskrimi verstrickt hat. <https://www.republik.ch/2024/11/18/die-luftibusse-wie-sich-die-schweiz-in-einen-thailaendischen-wirtschaftskrimi-verstrickt-hat> and Alliance Sud. 2024. Switzerland in the dense fog of carbon offsetting. <https://www.alliancesud.ch/en/schweizer-CO2-Kompensation-in-Ghana>
- ²⁸ L. Aukland. 2002. Forestry in the CDM - a true compromise? International Forestry Review. Vol. 4, No. 1 (2002), 81-84. <https://www.jstor.org/stable/43740948>
- ²⁹ See for examples: Adelphi. 2023. Implementing Article 6 – an overview of preparations in selected countries. https://adelphi.de/system/files/document/implementing_article_6-an_overview_of_preparations_in_selected_countries_v1.pdf
- ³⁰ ADE. 2023. Second Evaluation of the BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL). https://www.biocarbonfund-isfl.org/sites/default/files/2024-07/2.%20ISFL%20BioCarbonEvaluation_Final%20Synthesis%20Report_April%2030%2C%202024_Final%20%281%29.pdf
- ³¹ Congress of the Republic. 2021. Law 2169 of 2021. Whereby the low carbon development of the country is promoted through the establishment of goals and minimum measures in terms of carbon neutrality and climate resilience and other provisions. http://www.secretariosenado.gov.co/senado/basedoc/ley_2169_2021.html; Ministry of Environment and Sustainable Development (MADS). 2020. Update of Colombia's Nationally Determined Contribution (NDC). <https://unfccc.int/sites/default/files/NDC/2022-06/NDC%20actualizada%20de%20Colombia.pdf>
- ³² Gilbertson, T. 2021. Financialization of nature and climate change policy: implications for mining-impacted Afro-Colombian communities. Community Development Journal, Volume 56, Issue 1, January 2021, 21–38. <https://academic.oup.com/cdj/article-abstract/56/1/21/5960023>
- ³³ Gilbertson, T. 2021. Op. cit.: 34
- ³⁴ Gilbertson, T. 2020. Compensating for Development at the In-between and Edges of Extractive Capitalism: Socionature and Cultural Erasure in the Northeast Caribbean Colombian Coal Mining Region. https://trace.tennessee.edu/utk_graddiss/7055/
- ³⁵ Gilbertson, T. 2020. Op. cit.: 36
- ³⁶ REDD-Monitor. 2024. Colombia's Constitutional Court rules in favour of Indigenous Peoples. Identifies serious flaws in the REDD+ Baka Rokariré project. <https://reddmonitor.substack.com/p/colombias-constitutional-court-rule>
- ³⁷ Gilbertson, T. 2021. Op. cit.: 34
- ³⁸ Gilbertson, T. 2022. Blood coal for blood carbon in Colombia: Expansion of carbon taxes with REDD+ underscores the failure of carbon pricing. In: World Rainforest Movement. 2022. 15 Years of REDD. A Mechanism Rotten at the Core. https://www.wrm.org.uy/sites/default/files/2022-05/REDD_15_%20years_ENG.pdf
- ³⁹ Garzón, J. 2023. Transparency and participation in the carbon market. <https://www.facebook.com/cealdes/videos/transparencia-y-participaci%C3%B3n-en-los-mercados-de-carbono/1351494612248963>
- ⁴⁰ Almonacid, J. 2022. Land ownership and the market for carbon credits in páramos. El Espectador. <https://blogs.elespectador.com/politica/con-los-pies-en-la-tierra/la-propiedad-la-tierra-mercado-bonos-carbono-paramos/>
- ⁴¹ Transparency International. 2025. Voluntary carbon market in Colombia. <https://gfintegrity.org/wp-content/uploads/2025/02/Voluntary-Carbon-Credit-Market-in-Colombia-To-publish.pdf>
- ⁴² Gómez, N. 2024. Effectiveness of carbon taxes in conjunction with offsetting mechanisms: The Colombian experience. MSc thesis. Pg. 2. <https://edepot.wur.nl/656472>
- ⁴³ Gilbertson, T. 2021. Op. cit.: 34
- ⁴⁴ Ministry of Finance and Public Credit (MHCP) & Ministry of Environment and Sustainable Development (MADS). 2017. Decree 926 of 2017. https://www.minambiente.gov.co/wp-content/uploads/2022/01/Decreto_926_de_2017_Actualizacion.pdf
- ⁴⁵ Krause, T. 2020. Reducing deforestation in Colombia while building peace and pursuing business as usual extractivism? Journal of Political Ecology, 27, 1–18; Krause, T. and Nielsen, M.. 2019. Not seeing the forest for the trees: the oversight of defaunation in REDD+ and global forest governance, Forests, 10 (4), 344.
- ⁴⁶ Forrister et al. 2023. Comisión de estudio para la promoción y desarrollo de los mercados de carbono en Colombia. Pg. 21 <https://www.minambiente.gov.co/wp-content/uploads/2023/09/20230725-Resumen-ejecutivo-CEMCO2.pdf>
- ⁴⁷ Ombudsman's Office. 2024. See Alerta Temprana N° 007-24. <https://www.defensoria.gov.co/-/defensor%C3%ADa-alerta-riesgos-que-afectan-liderazgos-ambientales-por-accionar-de-grupos-armados-ilegales-en-la-regi%C3%B3n-amaz%C3%B3nica>
- ⁴⁸ Ministry of Environment and Sustainable Development (MADS). 2017. Structure of the National Safeguards System. Pg. 4. <https://www.undp.org/sites/g/files/zskgke326/files/migration/latinamerica/UNDP-RBLAC-SistemaNacionalSalvaguardasCO.pdf>
- ⁴⁹ Ministry of Environment and Sustainable Development (MADS). 2017. Estrategia Integral de Control a la Deforestación y Gestión Sostenible de los Bosques (EICDGSB). https://redd.unfccc.int/media/eicdgb_bosques_territorios_de_vida_web.pdf
- ⁵⁰ Carbon Market Watch and Centro Latinoamericano de Investigación Periodística. 2021. Las dos caras del verde: el uso de bonos forestales por aire caliente para evitar impuestos al carbono en Colombia. https://carbonmarketwatch.org/wp-content/uploads/2021/06/Two-shades-of-green_ES_WEB.pdf
- ⁵¹ Ministry of Environment and Sustainable Development (MADS). 2018. Resolution 0256 of February 22, 2018. https://archivo.minambiente.gov.co/images/BosquesBiodiversidadyServiciosEcosistemicos/pdf/manual_de_compensaciones/Resoluci%C3%B3n_256_de_2018.pdf
- ⁵² Congress of the Republic. 2021. Op. cit.:33
- ⁵³ Ministry of Environment and Sustainable Development (MADS). 2020. Update of Colombia's Nationally Determined Contribution (NDC). <https://unfccc.int/sites/default/files/NDC/2022-06/NDC%20actualizada%20de%20Colombia.pdf>
- ⁵⁴ Ministry of Foreign Affairs et al. 2021. Tercer Informe Bienal de Actualización de Cambio Climático de Colombia. Pg.227. <https://asocarbono.org/wp-content/uploads/2022/03/bur3-colombia.pdf>
- ⁵⁵ Congress of the Republic. 2021. Op. cit.:33
- ⁵⁶ Congress of the Republic. 2021. Op. cit.:33
- ⁵⁷ Ministry of Environment and Sustainable Development (MADS). 2023. Institutional Management Report. Pg. 25. <https://www.minambiente.gov.co/wp-content/uploads/2023/01/Informe-de-Gestion-vigencia-2022-VERSION-1-PUBLICABLE.pdf>
- ⁵⁸ Congress of the Republic. 2022. Law 2277 of 2022. Whereby a tax reform for equality and social justice is adopted and other provisions are enacted. <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=199883>
- ⁵⁹ Ministry of Environment and Sustainable Development (MADS). 2023. Institutional Management Report. Pg. 301. <https://www.minambiente.gov.co/wp-content/uploads/2023/01/Informe-de-Gestion-vigencia-2022-VERSION-1-PUBLICABLE.pdf>
- ⁶⁰ El Clip. 2024. Dura amonestación de la Corte Constitucional a empresas de carbono y al Gobierno colombiano. <https://www.elclip.org/amonestacion-corte-constitucional-empresas-carbono-y-gobierno-colombiano/?lang=es>; REDD-Monitor. 2024. Op. cit.: 39

- ⁶¹ Constitutional Court. 2024. Sentencia 248 de 2024. <https://www.corteconstitucional.gov.co/relatoria/2024/T-248-24.html>
- ⁶² See for example, the list of activities and entities involved in their implementation in: The World Bank Partnership for Market Readiness 2020 report. Expanding Carbon Pricing in Colombia: Final report for the Partnership for Market Readiness Project. <https://documents1.worldbank.org/curated/en/559731608060479169/pdf/Expanding-Carbon-Pricing-in-Colombia-Final-Report-for-the-Partnership-for-Market-Readiness-Project.pdf>
- ⁶³ <https://www.un-redd.org/partner-countries/latin-america-and-caribbean/colombia>
- ⁶⁴ Ombudsman's Office. 2024. Op. cit.: 49
- ⁶⁵ World Bank. 2020. Expanding Carbon Pricing in Colombia. Final report for the Partnership for Market Readiness Project. <https://documents1.worldbank.org/curated/en/559731608060479169/pdf/Expanding-Carbon-Pricing-in-Colombia-Final-Report-for-the-Partnership-for-Market-Readiness-Project.pdf>
- ⁶⁶ World Bank. 2020. Revisión del impuesto al carbono y su mecanismo de no causación en Colombia. <https://pubdocs.worldbank.org/en/569511616691826280/18-Reporte-de-lecciones-aprendidas-y-recomendaciones.pdf>
- ⁶⁷ World Bank. 2020. Op cit.: 68 and Ministry of Environment and Sustainable Development (MADS). 2023. Draft Decree. Whereby a Chapter is added to Title 9 of Part 2 of Part 2 of Book 2 of Decree 1076 of 2015, in relation to the national program of tradable greenhouse gas emission quotas (PNCTE) and other provisions are issued (Annex 3).
- ⁶⁸ Colombian Association of Carbon Market Actors (Asocarbo). 2023. Bienvenida y Ecosistemas de mercados voluntarios y regionalización. Conference recording. <https://www.youtube.com/watch?v=9hDLo1vZD4>
- ⁶⁹ Gilbertson, T. 2020. Op cit.: 36
- ⁷⁰ Krause, T. 2020. Op cit.: 47
- ⁷¹ Conservation International, Asocarbo, Corporación Ecoversa. 2023. Análisis sobre el apalancamiento de recursos público-privados para el combate a la deforestación en Colombia.
- ⁷² Republic of Indonesia. 2022. Enhanced Nationally Determined Contribution. <https://unfccc.int/sites/default/files/NDC/2022-09/23.09.2022.Enhanced%20NDC%20Indonesia.pdf>
- ⁷³ Regulation of Minister of Environment Number 7 Year 2023 /Peraturan Menteri LHK Nomor 7 Tahun 2023 Regarding Carbon Trading Procedures in Forestry Sector / Tentang Tata Cara Perdagangan Karbon Sektor Kehutanan. 2023. <https://legalhub.asia/e-lib/energy/reg-directory/regulation/peraturan-menteri-lhk-nomor-7-tahun-2023>
- ⁷⁴ SSEK Law Firm. 2023. Legal Alert: Indonesia – New Regulation on Carbon Trading for the Forestry Sector. <https://ssek.com/blog/legal-alert-indonesia-new-regulation-on-carbon-trading-for-the-forestry-sector/>
- ⁷⁵ Reuters. 2025. Indonesia plans launch of forestry-based carbon offset trade soon, Antara reports. <https://www.reuters.com/sustainability/indonesia-plans-launch-forestry-based-carbon-offset-trade-soon-antara-reports-2025-03-14/>
- ⁷⁶ Indonesia Stock Exchange. 2023. Indonesia Carbon Exchange (IDXCarbon) was Officially Launched. <https://www.idx.co.id/en/news/press-release/2016>
- ⁷⁷ Forest Watch Indonesia. 2021. The Polemic of Indonesian Deforestation. <https://fwi.or.id/en/the-polemic-of-indonesian-deforestation/>
- ⁷⁸ Center for International Forestry Research (CIFOR) and World Agroforestry (ICRAF). 2023. https://www.cifor-icraf.org/publications/pdf_files/infobrief/8867-Infobrief.pdf
- ⁷⁹ SSEK Law Firm. 2023. Op. cit.: 77
- ⁸⁰ Ministry of Environment and Forestry press release. 2022. MoEF Orders Validation of Forest Carbon Projects to Comply with Indonesian Laws and Regulations. <https://ppid.menlhk.go.id/berita/siaran-pers/6501/moef-orders-validation-of-forest-carbon->
- ⁸¹ Center for International Forestry Research (CIFOR) and World Agroforestry (ICRAF). 2023. https://www.cifor-icraf.org/publications/pdf_files/infobrief/8867-Infobrief.pdf
- ⁸² Angelsen, A. et al. 2025. Explaining the recent reduction of Indonesia's deforestation. <https://www.nmbu.no/en/research/new-clts-report-explaining-recent-reduction-indonesias-deforestation> and REDD-Monitor. 2025. New report finds that Indonesia's claim of 90% reduction of deforestation since 2016 is based on "cherry picking" and "exaggerates the decline". <https://reddmonitor.substack.com/p/new-report-finds-that-indonesias>
- ⁸³ A graph in this article by the World Rainforest Movement shows how different assumptions lead to different payment levels in the case of the World Bank FCPF East Kalimantan programme: World Rainforest Movement. 2024. How Jurisdictional REDD in Indonesia threatens forests and benefits NGOs: the case of East Kalimantan. <https://www.wrm.org.uy/bulletin-articles/how-jurisdictional-redd-in-indonesia-threatens-forests-and-benefits-ngos-the-case-of-east-kalimantan>
- ⁸⁴ Ministry of Environment and Forestry of Indonesia. 2023. Emission reduction report for the Indonesia-Norway Partnership. https://files.nettsteder.regjeringen.no/wpuploads01/sites/543/2023/12/ERR-Indonesia-Norway_Final_31July2023-compressed.pdf
- ⁸⁵ Green Climate Fund. 2020. <https://www.greenclimate.fund/project/fp130> and MoFE. 2024. MenLHK: Indonesia Menjadi Contoh Internasional dalam REDD+ dan RBP Emisi Karbon. <https://ppid.menlhk.go.id/berita/siaran-pers/7638/menlhk-indonesia-menjadi-contoh-internasional-dalam-redd-dan-rbp-emisi-karbon>
- ⁸⁶ News release. 2024. Kaltim Jadi Provinsi Pertama Penerima Kompensasi Karbon dari Bank Dunia (East Kalimantan becomes the first province to receive carbon compensation from the World Bank). <https://batuuh-kukar.desa.id/artikel/2024/5/24/kaltim-jadi-provinsi-pertama-penerima-kompensasi-karbon-dari-bank-dunia#:~:text=Pada%202021%2C%20Kaltim%20berhasil%20lampau,kabupaten%20kota%20hingga%20masyarakat%20adat>
- ⁸⁷ World Rainforest Movement. 2024. How Jurisdictional REDD in Indonesia threatens forests and benefits NGOs: the case of East Kalimantan. <https://www.wrm.org.uy/bulletin-articles/how-jurisdictional-redd-in-indonesia-threatens-forests-and-benefits-ngos-the-case-of-east-kalimantan>
- ⁸⁸ BioCarbon Fund website Jambi pilot programme. Socialization of the Result Based Payment Phase at the Regency/City Level. <https://biocf.jambiprov.go.id/en/berita/sosialisasi-fase-result-based-payment-di-tingkat-kabupatenkota> and <https://bappedalitbang.kerincikab.go.id/mengenal-program-biocarbon-fund-initiative-for-sustainable-forest-landscape-bio-cf-isfl-2/>
- ⁸⁹ Friends of the Earth International. 2013. Why the end of the Kalimantan Forests and Climate Partnership is important. <https://www.foei.org/why-the-end-of-the-kalimantan-forests-and-climate-partnership-is-important/> and World Rainforest Movement. 2025. No to REDD and carbon markets. Video. <https://www.wrm.org.uy/multimedia/documentary-no-to-redd-and-carbon-markets>
- ⁹⁰ Republic of Indonesia Government Regulation No. 34/2002 concerning forest structuring and making of forest management plans, utilization of forests and use of forest areas. <https://faolex.fao.org/docs/pdf/ins52631.pdf>
- ⁹¹ Regulations No. 6/2007 and 3/2008 see FAOLEX database: Government Regulation No. 6/2007 on forest arrangement and formulation of forest management plan as well as forest exploitation. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC075584/>
- ⁹² Regulation No. P.30/Menhut-II/2009 on the implementation procedures of reducing emissions from deforestation and forest degradation (REDD). <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC143984/>

- ⁹³ Decree No. P. 36/Menhut - II/2009 regarding procedures for licencing of commercial utilization of carbon sequestration and/or storage in production and protected forests. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC143983/>
- ⁹⁴ Peraturan Menteri Kehutanan Republik Indonesia. P.50/Menhut-II/2014. Tentang Perdagangan Sertifikat Penurunan Emisi Karbon Hutan Indonesia [https://jdih.menhk.go.id/kiosk/files/P.50%20\(3\).pdf](https://jdih.menhk.go.id/kiosk/files/P.50%20(3).pdf)
- ⁹⁵ Regulation of the Minister of Environment and Forestry of the R.I No. P.70/MENLHK/SETJEN/KUM.1/12/2017 on the Procedures for Implementing the Reduction of Emissions from Deforestation and Forest Degradation, Role of Conservation, Sustainable Manamement of Forest and Enhancement of Forest Carbon Stocks. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC196401/>
- ⁹⁶ Minister of Environment and Forestry Regulation P.71/MENLHK/SETJEN/KUM.1/12/2017 on the implementation of the national registry system for climate change control. <https://www.regulasip.id/book/5688/read>
- ⁹⁷ ICAP. 2022. Indonesia establishes the legal framework for a domestic emissions trading system. <https://icapcarbonaction.com/en/news/indonesia-establishes-legal-framework-domestic-emissions-trading-system>
- ⁹⁸ Regulation of the President of the Republic of Indonesia number 98 of 2021 on the implementation of carbon pricing to achieve the nationally determined contribution target and control over greenhouse gas emissions in the national development. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC210632>
- ⁹⁹ Peraturan Menteri Lingkungan Hidup Dan Kehutanan Nomor 21 Tahun 2022 tentang Tata Laksana Penerapan Nilai Ekonomi Karbon. <https://peraturan.bpk.go.id/Details/235421/permen-lhk-no-21-tahun-2022> and Regulation of the Minister of Environment and Forestry of the Republic of Indonesia no. 21 of 2022 concerning procedure for implementation of carbon pricing. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC217195/>
- ¹⁰⁰ Overviews in English <https://www.nuriadinet.com/news/ministry-environment-and-forestry-regulation-no-7-year-2023-procedures-carbon-trading-forestry-sector-moef-72023>; <https://www.twobirds.com/-/media/new-website-content/insights/pdfs/joint-publication--bb-nsmp-aa--carbon-credits-comparison-across-singapore-malaysia-indonesia-17-may.pdf> Link to the Regulation of the Minister of Environment and Forestry no. 7 of 2023 concerning Procedures for Carbon Trading in the Forestry Sector: <https://www.fao.org/faolex/results/details/fr/c/LEX-FAOC218225/>
- ¹⁰¹ Law Number 32 of 2024 concerning Amendments to Law Number 5 of 1990 concerning Conservation of Biological Natural Resources and their Ecosystems. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC228790/>
- ¹⁰² What to Expect: Bill on Conservation of Living Natural Resources and Its Ecosystems, and Detailed Regulations Anticipated to Affect M&A. 2024. <https://adcolaw.com/blog/what-to-expect-bill-on-conservation-of-living-natural-resources-and-its-ecosystems-and-detailed-regulations-anticipated-to-affect-ma/>; and AMAN. 2024. Six Reasons AMAN Rejects Law. No. 32 of 2024 on the Conservation of Natural Resources and Ecosystems (KSDAHE). <https://aman.or.id/publication-documentation/267>
- ¹⁰³ Carbon Streaming Press release. 2024. Carbon Streaming Provides Update On Rimba Raya Project. <https://www.carbonstreaming.com/news/carbon-streaming-provides-update-on-rimba-roya-project-3/>
- ¹⁰⁴ REDD-Monitor. 2024. ORF documentary investigates Rimba Raya REDD project in Indonesia: "All empty promises". https://reddmonitor.substack.com/p/orf-documentary-investigates-rimba?utm_source=publication-search
- ¹⁰⁵ Carbon Streaming. 2024. Carbon Streaming Initiates Claims in Connection with the Rimba Raya Project. <https://www.carbonstreaming.com/news/carbon-streaming-initiates-claims-in-connection-with-the-rimba-roya-project/>; and Carbon Pulse. 2024. Losses mount for carbon credit financier after it writes off two more projects. (subscription article) <https://carbon-pulse.com/341838>
- ¹⁰⁶ Carbon Pulse. 2024. Op cit.: 108
- ¹⁰⁷ UNREDD. 2012. Structuring Indonesian REDD+ projects and compliance with national regulations. <https://www.un-redd.org/sites/default/files/2021-10/REDD%2B%20Opportunities%20and%20Challenges%20in%20Indonesia.pdf>
- ¹⁰⁸ Laconic. 2024. Securitized Sovereign Carbon. <https://www.laconicglobal.com/>; Laconic and Plurinational State of Bolivia announce landmark \$5 billion sovereign carbon transaction. <https://carbonherald.com/laconic-and-the-plurinational-state-of-bolivia-announce-landmark-5-billion-sovereign-carbon-transaction/>
- ¹⁰⁹ REDD-Monitor. 2025. The Tropical Forests Forever Facility: "The worst conservation fund ever?" <https://reddmonitor.substack.com/p/the-tropical-forests-forever-facility>
- ¹¹⁰ Liberia Environmental Protection Agency. Liberia's Revised Nationally Determined Contribution (NDC). 2021. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC206208/>; and https://unfccc.int/sites/default/files/NDC/2022-06/Liberia%27s%20Updated%20NDC_RL_FINAL%20%2B002%29.pdf
- ¹¹¹ Forest Development Authority. 2022. Sustainable Forest Management (SFM) in Liberia—The 4Cs Approach. <https://www.fda.gov.lr/sites/default/files/documents/sfm-document.pdf>
- ¹¹² FrontPage Africa. 2024. Liberia: EPA, Stakeholders Aim to Push for Climate Change Legislation. <https://frontpageafricaonline.com/news/liberia-epa-stakeholders-aim-to-push-for-climate-change-legislation/>
- ¹¹³ Guardian. 2023. The new 'scramble for Africa': how a UAE sheikh quietly made carbon deals for forests bigger than UK. <https://www.theguardian.com/environment/2023/nov/30/the-new-scramble-for-africa-how-a-uae-sheikh-quietly-made-carbon-deals-for-forests-bigger-than-uk>
- ¹¹⁴ International statement on the carbon deal between Blue Carbon and the Liberian government. 2023. https://www.fern.org/fileadmin/uploads/fern/Documents/2023/International_Statement_on_the_Carbon_Deal_-_Carbon_Blue_and_Liberia.pdf
- ¹¹⁵ SDI et al. 2024. Carbon offsets and trading in Liberia: How to respond when a carbon trader visits your community. <https://loggingoff.info/wp-content/uploads/2024/06/IFMCM2024-WhatIfCarbonTraderVisits-1.pdf>
- ¹¹⁶ Liberia Environmental Protection Agency. 2024. Press release. Liberia Sets Its Sights on the Global Carbon Market: A Game-Changing Partnership with the Coalition for Rainforest Nations. <https://epa.gov.lr/liberia-sets-its-sights-on-the-global-carbon-market-a-game-changing-partnership-with-the-coalition-for-rainforest-nations/>
- ¹¹⁷ Liberia Investigator. 2024. Liberia's NCCSC Discusses Key Decisions on Carbon Market Regulation. <https://liberianinvestigator.com/news/liberias-nccsc-discusses-key-decisions-on-carbon-market-regulation/>
- ¹¹⁸ Zero Carbon Analytics. 2024. Article 6 of the Paris Agreement at COP29: What is at stake? <https://zerocarbon-analytics.org/archives/food/article-6-of-the-paris-agreement-at-cop29>
- ¹¹⁹ REDD-Monitor. 2023. A question for the Coalition for Rainforest Nations: "Why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye?" https://reddmonitor.substack.com/p/a-question-for-the-coalition-for?utm_source=publication-search
- ¹²⁰ Rainforest Foundation UK. 2023. Credits where they are not due. A critical analysis of the major REDD+ schemes. https://www.rainforestfoundationuk.org/wp-content/uploads/2023/07/Carbon-Credits_final_ENG.pdf
- ¹²¹ Liberia Environmental Protection Agency. 2024. Press release. Liberia Sets Its Sights on the Global Carbon Market: A Game-Changing Partnership with the Coalition for Rainforest Nations. <https://epa.gov.lr/liberia-sets-its-sights-on-the-global-carbon-market-a-game-changing-partnership-with-the-coalition-for-rainforest-nations/>
- ¹²² Winrock International. 2016. Development of Liberia's REDD+ Reference Level. Final Report for Republic of Liberia Forest Development Authority. <https://www.forestcarbonpartnership.org/system/files/documents/Liberia%20Reference%20Level%20Report%20Oct%202016.pdf>

- ¹²³ Food and Agriculture Organisation of the United Nations (UN-FAO). 2021. Improving Forest Reference Emission Levels in Liberia for Global Reporting and Sustainable Forest Management - UTF/LIR/023/LIR. <https://openknowledge.fao.org/server/api/core/bitstreams/4820ef08-83e2-44f7-a3ff-a3fa3cd288a5/content> and <https://www.fao.org/redd/news/detail/en/c/1114014/>
- ¹²⁴ World Bank Blog. 2014. Liberia, Norway and the World Bank Partner for Sustainable Forest Management. <https://blogs.worldbank.org/en/voices/liberia-norway-and-world-bank-partner-sustainable-forest-management>
- ¹²⁵ <https://www.nicfi.no/2020/01/28/liberia-and-norway-launch-climate-and-forest-partnership/>
- ¹²⁶ Republic of Liberia. 2016. National Strategy for reducing emissions from deforestation and forest degradation (REDD+) in Liberia. Forest Development Authority. https://redd.unfccc.int/media/liberia_s-national_redd_strategy_final.pdf
- ¹²⁷ Liberian Ministry of Foreign Affairs. Amended and restated concession agreement between the Republic of Liberia and Sime Darbi Plantation Inc. <https://leiti.org.lr/sites/default/files/documents/164828310-sime-darby-liberia-concession-agreement.pdf> and Golden Veroleum Liberia. Concession Agreement. 2010. https://goldenveroleumliberia.com/wp-content/uploads/2010/09/2014-09-30_2_GVL_Concession_Agreement-rev1.pdf
- ¹²⁸ Republic of Liberia. 2021. Liberia Revenue Code as amended. https://www.liscr.com/LISCR/media/Resources/Pages/Corporate_Registry/Resources/pdf/liberia-revenue-code-amendment-2020.pdf
- ¹²⁹ Republic of Liberia. 2018. Land Rights Act. An Act to establish the Land Rights Law of the Republic of Liberia. <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC18240/>
- ¹³⁰ United Nations. 2020. Report on the technical assessment of the proposed forest reference emission level of Liberia submitted in 2020. <https://unfccc.int/documents/267151>
- ¹³¹ Carbon Pulse. 2024. Liberia national carbon policy to push Article 6 markets, achieve UN targets. (subscription article) <https://carbon-pulse.com/350474>
- ¹³² Flora & Fauna, USAID. 2024. Terms of Reference for consultancy for the provision of technical support to the Department of Carbon Harvesting and Trading at the Forestry Development Authority. <https://emansion.gov.lr/sites/default/files/documents/Cardon%20Dpt%20Consultancy%20Advert.pdf>
- ¹³³ Forest Trends. 2024. Liberia Forest Concession Review: Phase II. <https://www.forest-trends.org/publications/liberia-forest-concession-review-phase-ii/>
- ¹³⁴ United Nations Development Programme. 2024. UNDP Renews Commitment to Liberia's Carbon Readiness. Press statement. <https://www.undp.org/sites/g/files/zskgke326/files/2024-02/NDCs%20Dialogue.pdf>
- ¹³⁵ United Nations Development Programme. 2024. Making carbon markets work for communities in Liberia. <https://www.undp.org/liberia/press-releases/experts-discuss-liberias-preparation-carbon-markets>
- ¹³⁶ United Nations Development Programme. 2024. Liberia gets ready for carbon markets. <https://climatepromise.undp.org/news-and-stories/liberia-gets-ready-carbon-markets>
- ¹³⁷ United Nations Development Programme (UNDP) in partnership with the Forestry Development Authority (FDA). 2024. [LEH GO GREEN](https://www.undp.org/liberia/projects/leh-go-green). <https://www.undp.org/liberia/projects/leh-go-green>
- ¹³⁸ Forestry Development Authority Liberia. 2017. Request for expression of interest for provision of consultancy services for advancing the Liberia Conservation Trust Fund as a National protected Areas Financing Mechanism. https://www.public.ppcc.gov.lr/doc/LR-FDA-LFSP-REOI%20for%20Conservation%20Trust%20Fund_website.doc
- ¹³⁹ Liberia Forest and Climate Resilience Forum. 2023. <https://thedocs.worldbank.org/en/doc/ab124a050ffbb86774f0e6107c59407f-0360012023/original/Liberia-Forum-2023.pdf>
- ¹⁴⁰ The World Bank. 2020. Implementation Status & Results Report. Liberia Forest Sector Project. <https://documents1.worldbank.org/curated/en/255781592963578200/text/Disclousable-Version-of-the-ISR-Liberia-Forest-Sector-Project-P154114-Sequence-No-08.txt>
- ¹⁴¹ Daily Observer. 2024. EPA Aims to Strengthen Climate Action Through New Law. https://www.liberianobserver.com/news/epa-aims-to-strengthen-climate-action-through-new-law/article_182dcd5e-9c06-11ef-813c-5f22bbc9d715.html
- ¹⁴² Liberia Environmental Protection Agency. 2024. EPA, NovaSphere, Others Validate County Climate Change Baseline Report in Gbarnga. <https://epa.gov.lr/epa-novasphere-others-validate-county-climate-change-baseline-report-in-gbarnga/>
- ¹⁴³ Flora & Fauna, USAID. 2024. Terms of Reference for consultancy for the provision of technical support to the Department of Carbon Harvesting and Trading at the Forestry Development Authority. <https://emansion.gov.lr/sites/default/files/documents/Cardon%20Dpt%20Consultancy%20Advert.pdf>
- ¹⁴⁴ World Bank Group. 2024. ProGreen 2024. Annual Report. <https://thedocs.worldbank.org/en/doc/e2a07374775e7d38ca569d880aaa0e6d-0320052024/original/PROGREEN-Annual-Report-2024.pdf>
- ¹⁴⁵ Fauna & Flora. Piloting REDD+ in the Wonegizi Landscape. <https://www.fauna-flora.org/expertise/climate-change/redd/redd-community-forest-management-liberia-myanmar/> and <https://gret.org/wp-content/uploads/2023/04/Fiche-PAPFOR-WWZ.pdf> "The REDD+ project in Liberia will provide gazettement of vital conservation habitats and sustainable forest management while integrating community incentives.": <https://ekmsliberia.info/wp-content/uploads/2020/06/HCV-1-4-Report-Wonegizi.pdf>
- ¹⁴⁶ Blue Carbon. Projects under development. <https://bluecarbon.ae/projects/>
- ¹⁴⁷ REDD-Monitor. 2024. BluEarth Carbon Development's dodgy carbon deals in Liberia. <https://reddmonitor.substack.com/p/bluearth-carbon-developments-dodgy> and FrontPage Africa. 2024. Liberia: Forest Communities Angered by Exclusion from Carbon Credit Negotiations. <https://frontpageafricaonline.com/news/liberia-forest-communities-angered-by-exclusion-from-carbon-credit-negotiations/>
- ¹⁴⁸ Ufficio Camerale. Dati della societa – Carbonibus S.R.L.. https://www.ufficiocamerale.it/7077/carbonibus-srl?srlid=AfmBOooClrP_G0J1dldfkfS-ksoxy_vncOLTV_gGvw8UKR_gBZ9Xokt
- ¹⁴⁹ Karbon-X. West Africa Rubber Renewal. With Revive Terra. <https://www.karbon-x.com/projects> and <https://portal.karbon-x.com/projects/69b93658-f494-4810-b41a-e78a92cccdfd>
- ¹⁵⁰ Walid Al Saqaaf - Rebalance Earth's Post. https://sn.linkedin.com/posts/walid-al-saqaaf_rebalanceearth-naturalcapital-naturalcapitalconference-activity-7026226004121579520-0Z8D and <https://www.fnlonon.com/articles/rob-gardner-why-i-left-sjp-for-a-biodiversity-start-up-20230823>
- ¹⁵¹ RecovEarth. <https://www.recov.earth/projects>
- ¹⁵² Aera Group. Mount Coffee Hydropower Project. <https://aera-group.fr/country/liberia/>
- ¹⁵³ Malaysia's update of its first Nationally Determined Contribution. 2021. <https://unfccc.int/sites/default/files/NDC/2022-06/Malaysia%20NDC%20Updated%20Submission%20to%20UNFCCC%20July%202021%20final.pdf>
- ¹⁵⁴ Government of Malaysia. 2022. https://unfccc.int/sites/default/files/resource/MY%20BUR4_2022.pdf
- ¹⁵⁵ Ministry of Economy. 2023. National Energy Transition Roadmap. <https://ekonomi.gov.my/sites/default/files/2023-08/National%20Energy%20Transition%20Roadmap.pdf>

- ¹⁵⁶ Third World Network (TWN) and Sahabat Alam Malaysia (SAM). 2023. Addressing Climate Change in Malaysia: A Critical Perspective on Carbon Pricing. <https://www.twn.my/title2/climate/series/cc07.pdf>
- ¹⁵⁷ Carbon Pulse. 2025. Malaysia signs Article 6.2 agreement with Singapore. (subscription article) <https://carbon-pulse.com/356170/>
- ¹⁵⁸ Third World Network (TWN) and Sahabat Alam Malaysia (SAM). 2023. Addressing Climate Change in Malaysia: A Critical Perspective on Carbon Pricing. <https://www.twn.my/title2/climate/series/cc07.pdf>
- ¹⁵⁹ Bursa Malaysia. 2024. Op cit.: 162. Pg.59
- ¹⁶⁰ Bursa Malaysia. 2024. VCM Handbook. Pg. 58 https://bcx.bursamalaysia.com/bcx/VCM_Handbook.pdf
- ¹⁶¹ Sahabat Alam Malaysia (Friends of the Earth Malaysia - SAM). 2025. Comment on Marudi Forest Conservation and Restoration Project (Project 4814). https://foe-malaysia.org/wp-content/uploads/2025/02/250125_SAM-comments-to-Verra-on-Marudi-carbon-project_F.pdf
- ¹⁶² Bursa Malaysia. 2024. Op cit.: 162. Pg. 69
- ¹⁶³ Malay Mail. 2023. Nik Nazmi: Govt drafting National Carbon Policy. <https://www.malaymail.com/news/malaysia/2023/06/07/nik-nazmi-govt-drafting-national-carbon-policy/73060>
- ¹⁶⁴ World Bank. 2023. Malaysia Partnership for Market Implementation Lot 1 (Carbon Pricing Impact Analysis and Policy Design). <https://www.developmentaid.org/organizations/awards/view/458762/malaysia-partnership-for-market-implementation-lot-1-carbon-pricing-impact-analysis-and-policy-design>
- ¹⁶⁵ ECA. 2022. Readyng Malaysia for implementation of carbon pricing. <https://www.eca-uk.com/2022/01/20/readying-malaysia-for-implementation-of-carbon-pricing/>
- ¹⁶⁶ For more information, see Sahabat Alam Malaysia online dossier 'Indigenous customary land rights and the modern legal system'. Part 2: Federal constitution and landmark judicial decisions. <https://foe-malaysia.org/articles/indigenous-customary-land-rights-and-the-modern-legal-system-2/> and Part 3: Systemic violations require system change. <https://foe-malaysia.org/articles/indigenous-customary-land-rights-and-the-modern-legal-system-3/>
- ¹⁶⁷ Milieudefensie. 2024. Why carbon offsetting is a false solution act sheet carbon offsetting or other longer material. <https://en.milieudefensie.nl/news/02484-opm-factsheet-carbon-offsetting-02.pdf>; Focus on the Global South. 2010. Costly Dirty Money-Making schemes. Clean Development Mechanism projects in the Philippines. <https://focusweb.org/wp-content/uploads/2017/04/CDM-Web-version-lowres.pdf>
- ¹⁶⁸ Gilbertson, T. & Reyes, O. 2009. Carbon Trading. How it works and why it fails. Dag Hammarskjöld Foundation Occasional Paper Serie. https://www.researchgate.net/publication/233681598_Carbon_Trading_How_it_Works_and_Why_it_Fail
- ¹⁶⁹ Schapiro, M. 2010. Conning the climate. Inside the carbon-trading shell game. <http://admin.indiaenvironmentportal.org.in/files/Conning-the-Climite-feb10.pdf>
- ¹⁷⁰ Mackey, D. M. 2012. Bajo Aguan's Modern Tragedy of the Commons. <https://www.guernicamag.com/bajo-aguans-modern-tragedy-of-the-commons/>; and Biofuelwatch. 2011. Palm oil in the Aguan Valley, Honduras: CDM, biodiesel and murders. <https://www.biofuelwatch.org.uk/2011/palm-oil-in-the-aguan-valley-honduras-cdm-biodiesel-and-murders/>
- ¹⁷¹ Global Forest Coalition. 2020. Vallourec: junk offset credits through charcoal production for the iron and steel sector in Brazil. <https://globalforestcoalition.org/wp-content/uploads/2020/12/vallourec-CORSIA-case-study.pdf>
- ¹⁷² Haya, B. and Parekh, P. 2011. Hydropower in the CDM: Examining Additonality and Criteria for Sustainability. https://gspp.berkeley.edu/assets/uploads/research/pdf/Haya_Parekh-ER11-001-Hydropower_in_the_CDM.pdf; for a collection of academic research on carbon offset flaws, see also the Berkley Carbon Trading Project repository of articles on offset quality. <https://gspp.berkeley.edu/research-and-impact/centers/cepp/projects/berkeley-carbon-trading-project/repository-of-articles>
- ¹⁷³ CSE India. 2023. Discredited: The Voluntary Carbon Market in India. <https://www.cseindia.org/discredited-the-voluntary-carbon-market-in-india-11885>
- ¹⁷⁴ Fischer, T. & Knuth, H. 2023. CO2 Certificates: Phantom Offsets and Carbon Deceit. Die Zeit. <https://www.zeit.de/wirtschaft/2023-01/co2-certificates-fraud-emissions-trading-climate-protection-english>; Greenfield, P. 2023. Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows. The Guardian. <https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe>
- ¹⁷⁵ Friends of the Earth International. 2023. Bank of evidence on false climate solutions. https://www.foei.org/wp-content/uploads/2023/11/Bank-of-evidence-climate-false-solutions_EN_Nov-2023.pdf
- ¹⁷⁶ Witness Radio Uganda. 2021. The New Forests Company in Uganda: Villages Evicted, Deceived and Dumped into Poverty. <https://www.wrm.org.ug/bulletin-articles/the-new-forests-company-in-uganda-villages-evicted-deceived-and-dumped-into-poverty>
- ¹⁷⁷ Nel, A. 2017. Zones of Awkward Engagement' in Ugandan Carbon Forestry. https://www.researchgate.net/publication/314527543_'Zones_of_Awkward_Engagement'_in_Ugandan_Carbon_Forestry
- ¹⁷⁸ GRAIN. 2025. Inclusive carbon land deals? <https://grain.org/en/article/7231-inclusive-carbon-land-deals>
- ¹⁷⁹ McGinnis, A. 2019. Trapped in the buffer zone. Uganda forest communities cast aside in the fight against climate change. <https://www.infonile.org/trapped-the-buffer-zone>
- ¹⁸⁰ SOMO. 2024. Offsetting human rights. Sexual abuse and harassment at the Kasigau Corridor REDD+ Project in Kenya. <https://www.somo.nl/offsetting-human-rights/>; Survival International. 2023. Blood Carbon: how a carbon offset scheme makes millions from Indigenous land in Northern Kenya. <https://www.survivalinternational.org/articles/carbon-offset-scheme-makes-millions-from-indigenous-land-northern-kenya>
- ¹⁸¹ Human Rights Watch. 2024. Carbon Offsetting's Casualties. Violations of Chong Indigenous People's Rights in Cambodia's Southern Cardamom REDD+ Project.
- ¹⁸² Milieudefensie. 2023. How Shell is using Nature-Based Solutions to continue its fossil fuel agenda. <https://en.milieudefensie.nl/news/shells-pipe-dream>
- ¹⁸³ REDD-Monitor. 2023. Gabon's rainforest carbon credits set a dangerous precedent that could worsen climate change. <https://reddmonitor.substack.com/p/rainforest-foundation-uk-gabons-rainforest>
- ¹⁸⁴ Climate Home News. 2023. As Guyana shows, carbon offsets will not save the Amazon rainforest. <https://www.climatechangenews.com/2023/08/01/amazon-rainforest-carbon-offsets-credits-guyana/>
- ¹⁸⁵ Adelphi. 2023. Implementing Article 6. An overview of preparations in selected countries. https://adelphi.de/system/files/document/implementing_article_6-an-overview_of_preparations_in_selected_countries_v1.pdf
- ¹⁸⁶ REDD-Monitor. 2025. Over-issuance of millions of carbon credits: C-Quest Capital announces "wrongdoing" by its former CEO, Ken Newcombe. <https://reddmonitor.substack.com/p/over-issuance-of-millions-of-carbon>
- ¹⁸⁷ Le Monde Diplomatique. 2012. Africa's biggest landfill site: the case of Bisasar Road. <https://mondediplo.com/outsidein/africa-s-biggest-landfill-site-the-case-of>
- ¹⁸⁸ Rainforest Foundation UK. 2023. Credits where they are not due. A critical analysis of the major REDD+ schemes. https://www.rainforestfoundationuk.org/wp-content/uploads/2023/07/Carbon-Credits_final_ENG.pdf

¹⁸⁹ Carbon pricing Leadership Coalition Website. <https://www.carbonpricingleadership.org/who-we-are>

¹⁹⁰ Partnership for Market Readiness. 2021. From the Ground Up. A Decade of Lessons on Carbon Pricing. <https://documents1.worldbank.org/curated/en/416741627365320014/pdf/The-Partnership-for-Market-Readiness-From-the-Ground-Up-A-Decade-of-Lessons-on-Carbon-Pricing.pdf>

¹⁹¹ ReCommon. 2017. Mad carbon laundering. <https://www.recommon.org/en/mad-carbon-laundering/>

¹⁹² International Finance Corporation. 2022. Designing investor-friendly carbon markets. Lessons from the IFC Forests Bond. <https://www.ifc.org/content/dam/ifc/doc/2022/article-forests-bond-doc.pdf>

¹⁹³ Forest Carbon Partnership Facility. 2015. Decision on Extension of the Term of the Carbon Fund of the FCPF beyond 2020. <https://www.forestcarbonpartnership.org/system/files/documents/FMT+Note+CFM+2015-1+Extending+the+Term+of+the+CF.pdf>

¹⁹⁴ Carbon Pulse. 2024. UK commits over £200 mln to support international forest carbon markets. (subscription article). <https://carbon-pulse.com/345673/>

¹⁹⁵ World Bank Group. 2023. The World Bank Engagement Roadmap for Carbon Markets. <https://www.worldbank.org/en/topic/climatechange/brief/the-world-bank-engagement-roadmap-for-carbon-markets>

¹⁹⁶ World Bank Group. 2024. Fact Sheet Carbon markets. <https://www.worldbank.org/en/news/factsheet/2024/11/12/carbon-markets> and World Bank Group. 2023. The World Bank Engagement Roadmap for Carbon Markets. <https://www.worldbank.org/en/topic/climatechange/brief/the-world-bank-engagement-roadmap-for-carbon-markets>