What are the main types of tree plantation projects in the carbon business?

This article is part of the special bulletin "Tree plantations for the carbon market: more injustice for communities and their territories".
See here the complete bulletin.

Afforestation and reforestation projects for carbon offsetting are diverse in their design. They vary in terms of cultivation systems (species planted and how these are cultivated) and with regard to their "social design" (who owns the land; who works on it; who will hold the rights over the credits, etc.).

With regard to the cultivation systems, pine tree monocultures currently account for 50 percent of the supply of carbon credits from projects with fast-growing species, followed by eucalyptus and china-fir, with around 20 percent each. Based on data from Verra's Verified Carbon Standard (VCS), the share of carbon credits generated by pine tree monocultures is expected to increase considerably over the next 10 years, reaching around 75 percent of the total, according to QCI.

Perhaps concerned about the negative image of industrial tree monocultures because of the ecological, social, economic damage and land conflicts they cause, carbon market promoters paint a different picture. Plantations are often described as "planted forests" in the project descriptions that offer carbon credits, and statistics hide monoculture plantation projects behind 'multispecies' project categories.

DIVERSIFIED PLANTATIONS? WATCH OUT FOR TRICKY STATISTICS

It is important not to draw misleading conclusions from the limited information available in the project documents. Data available from QCI, for example, indicates that more than 50 percent of the supply of credits from Verra's afforestation and reforestation projects currently comes from 'multispecies' projects. This information does not suggest monoculture tree plantations but rather diversified plantations or restoration projects with native species. The reality is quite different. For example, one of Suzano's projects in Brazil, the "ARR Horizonte Carbon Project,"(1) consists of more than 15,000 hectares of plantations, of which an overwhelming 93 percent is a green desert of one single exotic species – eucalyptus. The same goes for Green Resources' "Bukaleba Project" in Uganda, where, according to information in the project description, 95 percent of the planted area is cultivated with pine and eucalyptus monocultures. Nevertheless, as these projects comprise small areas planted with indigenous species, the whole project (and therefore the credits it generates) falls into the category of 'multispecies' projects.

Regarding the 'social design,' projects vary in terms of the people and organisations involved, the ownership of the land, the rights over the carbon credits generated and over the trees themselves. In many projects, proponents carry out the planting through hired labour on their own private lands or on

land concessions. In other cases, they seek to establish contracts with smallholders, indigenous or traditional communities. If the latter is the case, the communities are usually responsible for planting the trees, while the rights to sell the carbon credits remain entirely or largely with the companies running the carbon project. Although these agreements also vary a lot in their terms and rules, they often include illegal or abusive clauses, and are sometimes even fictitious, as we point out below.

Thus, the category of afforestation and reforestation projects for carbon offsetting covers a wide range of cultivation systems and social designs. These include large-scale industrial tree plantations by transnational companies; monoculture plantations by forestry companies through agreements with smallholder farmers; small-scale agroforestry plantations by smallholder farmers through contracts with either carbon start-ups or well-known forestry companies; native vegetation restoration projects; and so on.

Due to insufficient information in the datasets made available by the carbon standards, it is not possible to accurately estimate and compare the amount of land occupied by different types of projects, such as monocultures vs. diversified/restoration plantations; commercial vs. non-commercial plantations; private plantations vs. smallholder schemes, etc. However, analysis of a sample focused on projects with high estimates of carbon uptake, makes it possible to identify project patterns with common key characteristics:(2)

• **Large-scale tree monocultures for carbon on privately owned lands**;

• **Tree plantations on communities' lands**:
- Schemes with smallholder farmers in which companies seek to sign contracts with local communities and small farmers to establish either commercial monocultures or diversified plantations on their lands;
- Long-term leases of community lands

The following sections illustrate the three types of projects described above, showing that any consistent analysis will find both structural and circumstantial problems that stand in contrast to the romantic descriptions that companies and certifiers publish about their projects. Information and data were obtained mainly from the documents available at private carbon standards, particularly Verra's VCS and Cercarbono.

Large-scale tree monocultures for carbon on privately owned lands

Industrial tree plantations of pine trees and eucalyptus are among the most common and largest projects for carbon offsetting under the category afforestation and reforestation. Particularly in South America, these projects are usually carried out on privately owned lands or in association with large landowners.

- **SUZANO PROJECTS IN BRAZIL**

One example is the world's largest project in terms of estimated annual removal. Promoted by Suzano, one of the largest pulp and paper companies in the world, the project consists in planting 38,708 hectares of one single species – eucalyptus – in the state of Mato Grosso do Sul, Brazil. According to the project description, the carbon credits will be a result of the change in land use in previous pasture areas, with plantations being developed with "good forestry practices" certified by "sustainable programs." Suzano also owns another similar and already registered project of 14,427

hectares of eucalyptus monocultures in the same state, for which the first issuance of credits took place in July 2023. The project allows the company to claim that it is offsetting its emissions and to generate an extra income by selling credits to entities like the UK-based Standard Chartered Bank.

Industrial tree plantations like the ones from Suzano's projects have so many problems and can be questioned from so many angles that they help to expose the fantasy of carbon offsetting. First, it would be possible to question the exaggeration in the carbon removal estimate. In line with other phantom credits from land-based projects exposed in 2023,(3) the removal rate claimed by Suzano in this afforestation project (184.7 tons of CO2 per hectare per year) is nearly 5 times higher than what is pointed out in scientific literature.(4) But even more serious is the fact that the auditors did not question the additionality of the project (see below), which is a fundamental condition of any carbon offset project.

ADDITIONALITY OF CARBON OFFSETTING PROJECTS

To be additional means that a project would not have happened if not for the expectation of revenue from the sale of carbon credits. In theory, any plantation that sells carbon credits only exists because of the opportunity presented by carbon markets. In other words, the plantation would not have taken place for other reasons such as timber or pulp production – even though once it takes place the company might take advantage of these products as well.
The concept of additionality is always based on a baseline scenario, which is a reference for what presumably would have happened in the area if the project had not taken place.

Given that Suzano has been aggressively expanding its plantations to feed its new mill under construction in the municipality of Ribas do Rio Pardo – the same location of the project –, the company's story that it would not establish the eucalyptus plantation if it was not for the money it can obtain from selling carbon credits, is ridiculous. The fact that Suzano carries on 1.4 million hectares of eucalyptus plantations in Brazil to supply its 11 pulp mills(5) make clear that the project would take place anyway to feed the profitable pulp production of the company, whose net profit in 2023 was approximately US$ 2.8 billion.(6) It is no coincidence that there are more companies expanding their eucalyptus plantations and building pulp mills in the region of Suzano's project.

The impossibility to prove additionality is not exclusive to Suzano. It is shared by any carbon offset, and thus by all large-scale monoculture tree plantations promoted as carbon projects.

- **URUGUAY**

In Uruguay, 12 of the 14 current afforestation projects selling or preparing to sell carbon credits in voluntary carbon markets are owned by companies with long-established wood, pulp or biomass for energy production – which is explicitly described in the projects' documents as their primary objective. Selling carbon credits for their owners is the 'cherry on the cake,' extra profit. Moreover, without exception, these 12 projects use the somewhat simplistic argument that they will be implemented on degraded grasslands, disregarding the extremely high plant diversity of South America's native grasslands(7) and ignoring the drastic reduction in biodiversity caused by monocultures, especially by the involuntary spread of several species of pine trees. This did not prevent several of these projects in Uruguay from obtaining the CCB (Climate, Community and Biodiversity) standard, which stands for carbon projects that, among others, supposedly conserve biodiversity.

One example is the project by the company Guanaré SA, whose 21,200 hectares of pine and eucalyptus monocultures produce wood and cellulose to be exported to Asia, while the carbon credits are sold to transnationals such as Mitsui and Aldi.(6) With a crediting period of 60 years since it started in 2006, this is the afforestation project that has issued the most carbon credits in the world, despite being "fundamentally unadditional," that is, "it would likely have happened regardless of the voluntary carbon markets."(9)

- **COLOMBIA**

Other examples include the project Bosques de la Primavera S.A. in Colombia, a joint venture between forestry companies registered under the Biocarbon certification scheme. This has been the most productive Biocarbon afforestation and reforestation project in terms of the number of credits generated, with almost 20,000 hectares of industrial plantations of exotic species (pine, eucalyptus, acacia and teak) in the Llanos region. Also in Colombia – and very similar – are the five largest afforestation and reforestation projects of the certifier Cercarbono, two of them developed by South Pole – the company that faced criticism for continuing to sell carbon credits from the Kariba REDD project in Zimbabwe even after the company had become aware that the alleged carbon savings were exaggerated. Together, the five projects add up to more than 30,000 hectares of industrial tree plantations, especially pine and eucalyptus.

In most of the industrial plantations projects mentioned above, the carbon contained in harvested wood is not considered as carbon removed from the atmosphere; therefore, it is not taken into account to generate credits. In theory, then, the carbon credits would be generated only from the organic matter left in the soil once the trees are harvested. However, that does not prevent the fact that this organic matter left in the soil (decaying roots, leaves and branches) will inevitably end up decomposed by microorganisms, releasing carbon that will return to the atmosphere sooner or later. In other words, the carbon present in plants (or in any form of life) will never be permanently 'locked up' in the soil, as it is part of a biotic cycle.

Of course, this is conveniently ignored by the proponents' narrative, in line with international agreements that endorse carbon offsetting through tree plantations. The overriding interest in profit is expressed quite clearly in the criteria adopted by the developers of the Bosques de La Primavera S.A. project, who make it explicit that the plantation owners will constantly compare the net income from the sales of the wood with the net income from leaving the trees standing and sequestering carbon. “They will select the alternative which produces the greatest net income.” (10)

Furthermore, the very methodology used by most industrial tree plantation initiatives for carbon offsetting presents a number of highly subjective criteria that can be used as conveniently as possible by project proponents and developers.

CONVENIENT METHODOLOGIES IN AN INTRINSICLY FLAWED SCHEME

The “AR-ACM0003” methodology accounts for more than 50 percent of all afforestation and reforestation projects for carbon offsetting listed in eight certification standards analyzed. It is a methodology for large-scale projects with highly subjective criteria.
For example, one of the documents that comprise the methodology is a guide to identifying the baseline scenario and demonstrating the additionality of the project – two elements that determine

whether the project will or will not be accepted to offset emissions, as well as the amount of credits that the plantation will generate. Applying this section of the methodology requires the project developer to arrive at five concrete outcomes:

"- List of credible alternative land use scenarios that would have occurred on the land […]
- List of plausible alternative land use scenarios […]
- List of barriers that may prevent one or more land use scenarios […]
- List of land use scenarios that are not prevented by any barrier […]
- Identification of the most economically and/or financially attractive land use scenario […]"

The range of qualitative factors used to get to each one of these outcomes is so broad that it provides enormous flexibility for the project developer to draw up the arguments that best support their analysis, whatever it may be. However, the lack of quantitative variables and objectivity in plantation (and conservation) projects' methodologies is not the major problem. The unsolvable issue here is that the claim that the project will sequester a certain number of emissions is based on predictions, hypotheses – and therefore do not represent reality itself – about what would or would not have happened in the region of the project in an expected period of many decades, sometimes 100 years. Unavoidably, such long-term scenarios depend on several unpredictable economic, social, political and environmental variables. To top it all off, as mentioned above, the entire application of the methodology is validated by an intrinsically flawed certification system that substantially jeopardizes the credibility of the information provided by project proponents and certifiers.(11)

Large-scale tree monocultures have existed for a long time. However, the examples mentioned above – and many others among the list in the Appendix (available here) – show that with the creation of the carbon offset mechanisms, forestry and pulp & paper companies can now profit from a new product without much effort other than doing paperwork along with carbon certification schemes.

Long before the carbon fallacy

Carbon offsetting is not just a problem in and of itself. In the case of plantations, it has exacerbated existing problems. Either directly or indirectly, large-scale tree monocultures have long been the cause of evictions of grassroots communities, land grabs, water grabs, deforestation, biodiversity loss, and often raging fires that not only release carbon back into the atmosphere. They also cause the destruction of livelihoods and deaths. These impacts are often kept hidden behind corporate lies. More information can be found here: What could be wrong about planting trees?, and 12 replies to 12 lies about industrial tree plantations. There is also a considerable record of devastation and violations caused specifically by the above-mentioned Suzano (see What you need to know about Suzano).

Schemes with smallholder farmers

A considerable number of afforestation and reforestation projects are implemented using schemes with smallholder farmers. Such projects share two characteristics. First, the plantations are set up on land not owned or tenured by the project proponent. Second, the labour required for the planting and management of the tree plantation is provided by the communities or smallholders themselves. These plantations can be either commercial monocultures or multiple-species plantations aimed at different purposes besides generating the carbon credits.

- **INDIA**

One example is the project led by the Paris-based entity Livelihoods Fund, through which companies like Danone, Michelin, Hermès, SAP, Mars, Chanel, and 'development' banks like Germany's KfW (through its subsidiary DEG Invest) are investing in plantations in India. According to the project description, which is available in Verra's VCS registry, the initiative consists of having more than 9,700 farmers from 333 villages in the Araku Valley plant fruit trees on more than 6,000 hectares of tribal (sic) community land – of which the project classifies 60 percent as "barren land". The project states that communities have signed 20-year legally binding agreements accepting that the rights over the carbon credits that the project will issue are assigned exclusively to the Livelihoods Fund. For their part, the communities remain only in possession of the fruits and "other valorised outcomes" generated by the project once the distributed saplings have grown.

A recent report shows that farmers involved are not aware of carbon credits, much less the fact that companies on the other side of the world are benefiting from carbon-neutral claims by selling a new product generated by their labour on their land. Furthermore, the report shows that the 'additionality' claim of the project is questionable: a government agency – and several other private agencies, according to villagers – have been providing free saplings and training to tribal farmers (sic) long before the project's arrival.

A similar example, also in India, is that of nine ongoing projects of Core CarbonX Solutions, a small company with close connections to the financial sector. These projects include the third largest afforestation/reforestation project in the world based on estimated carbon uptake. In the project descriptions, the company claims to have entered into "individual" agreements with tens of thousands of "selected subsistence" farmers from over 8,000 villages. It also claims that workshops, consultation and training were conducted at the village level and that it distributed saplings for small agroforestry areas. Altogether, the projects supposedly cover an area of over 400,000 hectares(!) of allegedly degraded or fallow lands, spread across six states in India. According to the projects, 60 percent of the income from the sale of carbon credits would go to the farmers.

One of the many inconsistencies in the description of Core CarbonX projects stands out: the text describing the meetings supposedly carried out for local stakeholder consultation is exactly the same **for all projects**. This is curious – to say the least – considering half of the projects embrace more than 1,000 villages each, with one listing 4,000 villages alone. In any case, it is hard to believe that the inflated figures of area and villages embraced, as well as of carbon uptake of the project presented by the company and obtained at Verra's VCS registry, are not just another case of exaggeration with no concrete grounds, just as several other land-based carbon projects have been proved to be after having been already 'approved' by the certification process. It is equally hard to believe that conditions will then be in place for the thousands of 'subsistence' farmers (as referred to in the project description) involved in these projects to be able to properly assess the distribution of the carbon credit income promised by the company.

- **UGANDA**

In central Uganda, New Forests Company states that its carbon project does not focus on its own commercial plantations, but it actually involves an "Out-grower Afforestation Programme." The company intends "to share their passion for tree growing and support rural livelihoods" through the program in close cooperation with WWF. In practice, New Forests Company has donated seedlings to communities living next to the company´s plantations for them to establish plantations of interest to the company – pine and eucalyptus – but on the farmers' own land, with their own labour.

New Forests Company claims to be the “1st option to buy mature trees” from the farmers. However, experience with such outgrower schemes elsewhere shows that companies are the ones who will most benefit from the sale of the timber in such arrangements. As for the carbon credits, the company claims to have signed an agreement with each out-grower association, through which the farmers will receive 60 percent of the carbon credit income. Once again, questions arise: should the project ever sell carbon credits? How will farmers know they are really getting their fair share given sales prices are rarely disclosed? What costs will be deducted from and reduce the 60 percent promised to the associations? Finally, and perhaps more importantly, what other overlooked impacts will remain for the communities once land used for “subsistence” activities is suddenly occupied by monoculture plantations?

The impressively high figures of the many smallholder’s schemes projects in terms of numbers of farmers and rates of carbon sequestered raise questions about their verifiability and whether they actually exist in the terms described in the project documents. They also raise deeper questions of to what extent these projects are not new forms of colonialism and appropriation of labour and land in the global South.

The severity of impact that tree planting for carbon projects can pose for food sovereignty of peasant families entering such carbon contracts has recently been exposed in relation with a carbon offset project in western Uganda. Farmers initially persuaded to plant trees for a carbon offsetting project by the NGO Ecotrust have started cutting down the trees as they could no longer grow food to feed their families once the trees took over the land. A recent investigation shows that the consequences of engaging with the project have not been the promised benefits, but rather hunger and poverty. A community leader who joined the project himself and has acted as a spokesperson for other participants estimates that of the hundred farmers he is in contact with, only six or seven are happy with the project as “they had unused land to plant on and were paid better. The rest of us are much poorer than before. Almost everyone has started cutting down the trees or is planning to do so”.(12) Ironically, the project is called “Trees for Global Benefits” and supposedly offsets emissions of a European fast-**food** company.

Such consequences cannot be considered accidental or unexpected outcomes. In 2017, researchers had already raised concern over the risk that the Ecotrust project in Uganda locks small farmers “into a type of land use for a long time that reduces their ability to adapt to deal with temporary crises as well as long-term changes, which in the worst case can mean long-term negative effects on their life situation”.(13) The research also raised concerns on the lack of transparency, poorly informed consent and widespread confusion about what the carbon offsetting project is basically about. The early indications corroborate the fact that failures in these tree planting projects for carbon offsetting are not circumstantial but structural and predictable.

Long-term land leases

Often, tree plantation initiatives for carbon offsetting are also established through land leases or concession agreements signed by the companies with national governments. In these cases, even when the countries’ laws or the agreements (or the entity who certifies the carbon project) establish that the company’s project can only go ahead with the approval and/or free, prior and informed consent of the communities living on that territory, in practice this virtually never happens. Rather, the company will use several tactics to convince the customary leadership of communities in the concession area to accept their project and claim the community support, as it is also the case in other types of projects.(14)

- **GREEN RESOURCES IN UGANDA AND TANZANIA**

In eastern Africa, the company Green Resources has implemented carbon projects in Uganda and Tanzania. The latter is a 10,814 hectare pine and eucalyptus plantation for the manufacturing of wood products (the company's core business), with a duration of 99 years. In the project description, the company acknowledges that the land was under customary law and occupied by villages “but remained idle.” It further claims that it followed the required steps to acquire the land under a 99-year lease agreement with the Tanzanian government. The company states that the project will bring socio-economic development to local communities. However, evidence collected in an investigation by the Oakland Institute revealed that the activities of Green Resources have been “marred by social disruption, adverse livelihood impacts, and environmental problems” such as biodiversity loss and water contamination by agrochemicals.(15)

Other forestry companies have similar and more recent ongoing tree plantation ventures for carbon offsetting on the African continent.

- **MIRO FORESTRY IN GHANA AND SIERRA LEONE**

In West Africa, the UK-based company Miro Forestry has been expanding its commercial plantations at a rate of 3,000 hectares a year. This expansion has involved large amounts of public money from European banks (Finland's FinFund, the UK's CDC and the Netherlands' FMO) channelled through the Arbaro Fund, whose plantations have already been exposed for abuses and damage to rural communities in Africa and South America.(16)

Taking advantage of the carbon market opportunity, Miro Forestry has launched two projects in Ghana and Sierra Leone, which 'add' the new product “carbon credits” to the expansion of its timber business. Together, the projects will cover an area of around 26,000 hectares mainly occupied by monocultures of eucalyptus (60 percent) and Gmelina arborea (30 percent). In the case of the Sierra Leone project, the area has been used by at least 80 communities for generations, with no such information in the description of the Ghana project. Both projects will last for 30 years.

Miro Forestry claims they have long-term formal agreements with traditional landowners and Chiefdom Councils through which all of the land used in the projects is leased to the company. However, the fact that these communities’ livelihoods are customarily as well as intrinsically bound up with diversified land use for meeting nutritional and other needs – and also because of what is shown in many other cases such as the ones mentioned above – makes it difficult to believe there was an informed and free decision by a sufficiently representative portion of the communities.

- **REWILDING MAFORKI IN SIERRA LEONE**

The Rewilding Maforki Company's 50-year project is also located in Sierra Leone. It consists of 25,000 hectares of plantations on community land supposedly leased from dozens of chiefdoms. Rewilding’s associate company Carbon Done Right has said that it had “secured access to 57,000 hectares” in Sierra Leone, but in reality no leases have been registered with local authorities.(17) A recent investigation by the HEKS/EPER and SiLNoRF (18) that surveyed residents from 25 villages affected by the project strongly also points to non-compliance with Sierra Leonean land law when it comes to informing and obtaining the consent of communities when leasing their territories. Furthermore, while in the company’s project the lands are described as unproductive, the villagers emphasize their use of the land for producing food for their own consumption.

Rewilding Maforki seems different from the other companies mentioned in this section, in the sense that it was created with a focus on the carbon market, not timber. However, its project description shows that most of the plantations have also the purpose of commercializing the wood, just like Miro's. In addition, it is no coincidence that 49 percent of the company that holds Rewilding's shareholding control (Aristeus LTD) is being transferred to other companies including Developers Africa LTD, which in turn is owned by people who are also on Miro's Board.

WOMEN, EXCLUDED FROM DECISIONS

The investigation into Rewilding Maforki's project in Sierra Leone also exposes a pattern that is not limited to carbon offsetting projects. When outside companies come in and try to impose their will, women are often excluded from discussions and decisions around land. The investigation highlights that most women were never asked about nor did they give their consent to Rewilding Maforki's project. This shows how project developers benefit from or even take advantage of dominant patriarchal structures that exclude women from decisions over land even where women depend on that land to grow food.

Once again, projects of this kind immediately raise concerns. First, there are clear signs that they are not 'additional' projects. Second, projects of such magnitude in terms of the number of communities involved – and which frequently claim to have a "robust FPIC [Free, Prior and Informed Consent]" and a "participatory, inclusive, and collaborative approach" – are usually just tossing out catchphrases that are nothing more than buzzwords, as described in Rewilding Maforki's project.

"INDEPENDENT" projects are also a problem

Projects aimed at carbon markets and registered with private certification mechanisms such as Verra are not the only problem. Some of the largest companies in the world are investing in "independent" industrial tree plantations to offset their emissions. For example, in the Republic of Congo, communities have nowhere to grow their food because oil giant TotalEnergies is taking over the land to set up 40,000 hectares of tree monoculture so that their damages (and profits) from oil and gas extraction can continue under the argument that they are making up by planting trees.

(1) Verra, 2024. Verified Carbon Standard, project ID 3350, project description documents.
(2) This typology does not seek to account for the diversity of projects, but to identify certain patterns that group a significant number of projects together. There are certainly projects that do not fit into this typology, for example non-commercial restoration projects, but as they are less significant in number and scale, they did not receive priority in the analysis.
(3) Zeit Online, 2023. Phantom Offsets and Carbon Deceit.
(4) Bernal, B., Murray, L.T. & Pearson, T.R.H., 2018. Global carbon dioxide removal rates from forest landscape restoration activities. Carbon Balance Manage 13, 22.
(5) WRM, 2023. What you need to know about Suzano Papel e Celulose.
(6) Suzano, 2024. Value obtained from the sum of the net income of the four quarters of 2023, with a BRL-USD exchange rate of 5-1. Data available here.
(7) The pampa biome can have up to 57 plant species per square meter, more than what is found in the Amazon. National Geographic, 2020.

(8) REDD-Monitor, 2022. German supermarket Aldi buys carbon offsets from monoculture eucalyptus plantations in Uruguay in order to claim that its milk is “carbon neutral”.
(9) Quantum Commodity Intelligence, 2022. Guanaré forest project is 'fundamentally unadditional'.
(10) Global Carbon Trace, 2024. “Project document”, available here.
(11) For more information, see WRM’s article “Carbon Certification: The Emperor’s New Clothes”.
(12) This was confirmed by several other community members. See the report by Aftonbladet, 2024, here.
(13) Andersson, E. & Carton, W., 2017. Sälja luft? Om klimatkompensation och miljörättvisa i Uganda . For a good summary of the case, see the article by REDD-Monitor here.
(14) See more in the booklet “12 tactics palm oil companies use to grab community land” launched by Grain, WRM and an Alliance of community and local organisations in 2019.
(15) The Oakland Institute, 2014. The Darker Side of Green: Plantation Forestry and Carbon Violence in Uganda. For more information on the case see also the reports “Evicted for Carbon Credits: Norway, Sweden, and Finland Displace Ugandan Farmers for Carbon Trading” (2019) and “Carbon Colonialism: Failure of Green Resources’ Carbon Offset Project in Uganda” (2017), available at the Oakland Institute’s webpage.
(16) WRM, 2022. Arbaro Fund: A Strategy to Expand Industrial Tree Plantations in the Global South.
(17) Source Material, 2024. ‘Saviour of carbon markets’ faces questions over African land rights.
(18) HEKS/EPER, SiLNoRF, 2024. Controversial carbon offset project spells hardship for local communities.