

Crooked Carbon Business

An assessment of 11 carbon projects¹

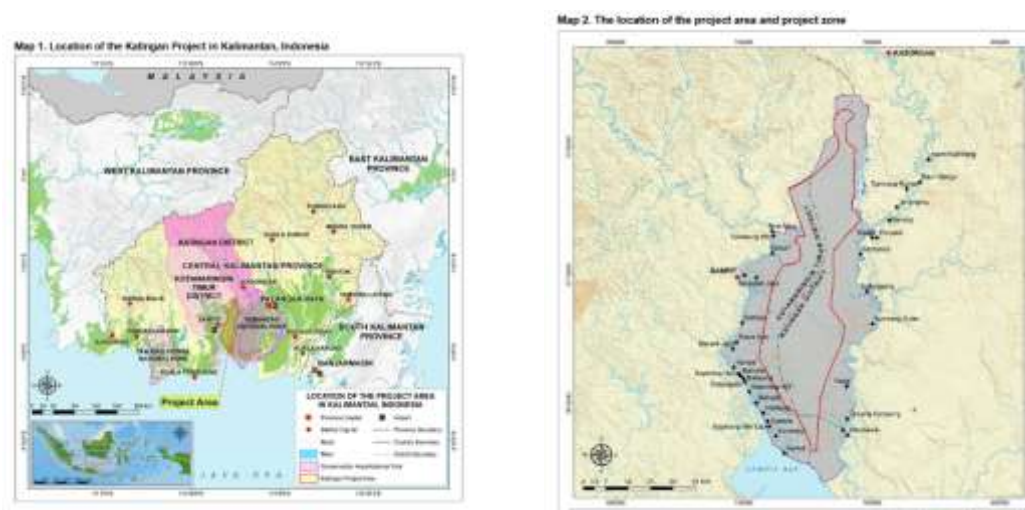
3 Katingan Peatland Restoration & Conservation Project, Indonesia

1. About the project

The Katingan Peatland Restoration & Conservation Project ('Katingan Project') is located on the island of Borneo, in the Indonesian province of Central Kalimantan (see map, Figure 1). The project claims to have prevented conversion of forests into industrial tree plantations and protects and restores 149,000 hectares of peatlands, for which the Indonesia company PT. Rimba Makmur Utama (RMU) received an Ecosystem Restoration Concession² in 2013 (and an extension for the remaining project area in 2016). The Katingan Project Zone (as opposed to the Project Area) covers 305,699 hectares and includes villages, settlements and agricultural land around the concession area.

RMU claims that it will avoid a whopping 447 million tonnes of CO₂ emissions over the 60-year lifetime of the project – *the equivalent of nearly 14 years-worth of Switzerland's total fossil carbon emissions in 2023*. It is the world's largest forest carbon project by volume of projected credits. The volume of allegedly avoided emissions is so huge because: (1) the project area sits on one of the largest peat domes in Indonesia, and peat lands contain very large amounts of carbon and; (2) RMU claims that more than 85 percent of forest within the concession would have been clear-cut and converted into acacia monocultures had it not been for the company being issued an Ecosystem Restoration Concession which blocked approval of concessions for these plantations.

Figure 1: Project location as presented in the PT. RMU project description



Prior to the start of the Katingan Project, the RMU project partner Puter Foundation received significant funding support from various organizations and companies for activities in villages inside the Katingan Project Zone. Activities funded in connection with the future carbon offset project

¹ This briefing is part of the Crooked Carbon Business series which includes 11 briefings on specific carbon offset projects and a collection of academic and media reports documenting the flaws of carbon offsetting. The briefings have been researched and written between September 2024 and September 2025 by Simon Counsell and Jutta Kill, with financial support from the Network for Social Change.

² Ecosystem Restoration Timber Forest Product Utilization Permit (IUPHHK-RE).

included mapping of community use of the land and livelihood initiatives such as programmes encouraging the community to switch to organic farming and cease using fire in their agricultural activities. Funders of these preparatory activities for the carbon offset project included the David and Lucile Packard Foundation, USAID Indonesia Forest and Climate Support, the Global Environmental Facility, the Clinton Foundation and the Norwegian government’s international development agency, NORAD.

Third-party auditing firms accredited by Verra³ have found the Katingan Project in compliance with methodology VM0007 of Verra’s Verified Carbon Standard (VCS). As of August 2024, just over 41 million carbon credits had been issued to the project.

One of the largest carbon credit users is the oil corporation Shell. In the last quarter of 2023 alone, Shell used 4,365,779 carbon credits from the Katingan Project, among others, to claim some of its Liquefied Gas cargo shipments as being carbon-neutral. This is in addition to the 2,9 million Katingan Project carbon credits Shell had previously used. Other corporations that bought credits from the Katingan Project in 2023 include Tokyo Gas (466,748 credits to render two LNG cargo shipments ‘carbon neutral’), PetroChina (866,836 carbon credits) and airline manufacturer Boeing (99,000).

	Katingan Peatland Restoration & Conservation Project
Project owner	PT. Rimba Makmur Utama (RMU) (Indonesia)
Project partner	Permian Global (UK)
Verra VCS-ID	1477
Notional start date	1 November 2010
Project lifetime	60 years
Projected volume of emissions avoided (tonnes of CO₂)	447,110,780
Validation /	06 May 2016 (<i>10 days prior to state date of issuance of project description - 16 May 2016</i>)
1st verification	14 October 2016
Validator & verifier first verification	SCS Global Services (USA)
Project area	149,800 ha
# of credits issued as of August 2024	41,069,452 (source: Carbon Pulse)
# of credits used by final buyer (“retired”) as of August 2024	27,241,522 (source: Carbon Pulse)

The carbon rating company BeZero has given the VCS-certified Katingan Project a “AAA” rating, indicating a “high likelihood of avoiding or removing a tonne of CO₂”. By contrast, based on the same project documentation and also analysing satellite imagery as a basis for assessment, the organisation Renoster, whose team have reviewed dozens of REDD projects, considers the Katingan Project “overcredited”, assigning it a score of 0.45.⁴ Thus, based on Renoster’s assessment, every

³ Verra is a not-for-profit organisation that administers the Verified Carbon Standard (VCS) and the Community, Climate and Biodiversity (CCB) Standard. The large majority of REDD projects selling carbon credits have chosen one or both of these private sector standards as basis for the third-party audits of their projects. Verra also operates the VCS registry which provides project documentation and a record of the credits issued and “retired” for each VCS-approved project.

⁴ The Renoster score of the Katingan Project only considers the REDD component and related calculations of the project, not the peatland restoration (generating most carbon credits) and the restoration through tree planting (very small portion of carbon credits). <https://mercury.renoster.co/projects/VCS2252>

carbon credit issued by the Katingan Project represents only 0.45 tonnes of avoided CO2 emissions.

2. What are the claimed objectives/outcomes?

The project's stated aim is "to protect and restore 149,800 hectares of peatland ecosystems, to offer local people sustainable sources of income, and to tackle global climate change"; "to develop and implement a sustainable land use model through reducing deforestation and degradation, habitat and ecosystem restoration, biodiversity conservation and increasing economic opportunities for the local people of Central Kalimantan."⁵

Without their carbon project, RMU claims that "the area would be converted to fast-growing industrial timber plantations, grown for pulpwood". This would have involved draining the peatland by digging canals, destroying the forest and planting acacia monocultures on the drained peat soils.

In addition, the project proponents hope to deliver a number of community benefits,⁶ including:

- "the Katingan Project will work closely with both project area communities and local government to ensure the sustainable development of infrastructure. This will include ...improved river transport and development of renewable energy sources. Business development activities will focus on both access to processing equipment and markets."
- "sustainable economic development and land use...including direct employment, preferential purchasing of local services and goods, improved planning, both agricultural and local business development support and increased access to investment capital." The community business development is based on an agricultural program that introduces organic fertilizers and prohibits burning and using chemicals.⁷
- The Project claims to have worked with project-zone communities to "create spatially accurate maps that define the agreed extent of village land and the agreed boundary of the project area", and will "incorporate these maps into local planning regulatory processes and so obtain full legal recognition."

3. What do proponents claim would have happened without the offset project intervention?

RMU claims that without the Katingan Project, the forests inside the Ecosystem Restoration Concession would have been converted to fast-growing industrial acacia plantations, for the production of wood pulp. RMU claims that the Katingan Project "prevents this fate by having obtained full legal control of the production forest area through an Ecosystem Restoration Concession license (ERC; Minister of Forestry Decree SK 734/Menhut-II/2013), blocking the applications of plantation companies." Allegedly, a company called PT. Natural Wood Kencana had already submitted an initial application for conversion of 50,000 hectares into industrial acacia plantations in 2008 and two more companies were expected to submit applications in 2010.⁸

⁵ VCS Project Description. Katingan Peatland Restoration and Conservation Project. Page 11.

<https://registry.terra.org/app/projectDetail/VCS/1477>

⁶ For the full list, see Table 83. Livelihood assets, from page 200 of the project description: <https://tinyurl.com/y9xft85e>

⁷ World Rainforest Movement. 15 years of REDD: a mechanism rotten at the core. 2022.

<https://www.wrm.org.uy/publications/15-years-of-redd>

⁸ VCS Project Description. Katingan Peatland Restoration and Conservation Project. Page 99. The only reference provided for the claim that PT. Natural Wood Kencana had submitted an application for conversion of the peat forests to acacia plantations is the mention of a "Letter No. 04/TOR/CEO/X/2008 dated October 23, 2008" without any further links or explanation why this letter could be taken as evidence for a successful application in a multi-step process of granting of a suit of licenses needed for such a conversion. <https://registry.terra.org/app/projectDetail/VCS/1477>

This claim, underpinning the issuing of 447 million carbon credits over the course of the project's 60-year lifetime has been challenged as implausible and unverifiable. Neither the alleged PT. Natural Wood Kencana application for acacia plantation concessions, nor any documentation confirming rejection of the application have ever been made public. Researchers have been unable to find trace of the application. The claim that the entire Katingan Project area would have been converted into acacia plantations is also implausible because in 2011, the Indonesian government issued a moratorium on conversion of peatlands, initially as a temporary measure; it was turned into a permanent moratorium in 2018. It is questionable whether an application for conversion of the largest peat dome on Borneo into industrial acacia plantations would have received all the required licenses and permits even if its initial application predated the moratorium. It is certainly questionable whether the request would have been permitted for the entire 50,000 hectares allegedly requested by PT. Natural Wood Kencana and whether the two additional acacia concession requests RMU claims were to be submitted in 2010 would also have been submitted before the moratorium took effect. In its project review, Renoster writes: "it is unclear to us whether this project's activity really would have been permitted only a handful of months before the moratorium, and whether the moratorium could consider to apply to areas such as these that were designated as concessions, but which would have taken many years to develop." The project proponent's evidence on this key justification for the carbon offset project seems thin, particularly considering the large volume of carbon credits (and profits from their sale) at stake. In addition to claiming existence of applications which have not been made public, RMU simply notes that "the area was zoned for plantation establishment" and that "the pulp and paper industry was on the rise."

Furthermore, the figures which RMU cites for the expansion of pulp plantations are wildly exaggerated⁹. Also, to calculate the speed of conversion from forests to acacia plantations, RMU has chosen reference areas that are hundreds of kilometers away, some even located on other islands where the conditions for conversion and demand for acacia pulp are not comparable. One reason for the choice of reference areas far away from the project location may be that no acacia plantations have been established for hundreds of kilometers around the Katingan Project area (peat swamps are not very suitable for acacia plantations!), raising even more questions about the credibility of the claim that in the absence of the Katingan Project, the peat forests would have been converted into industrial acacia plantations. Moreover, the assumed annual deforestation rate of 3,91 percent (resulting in 85 percent of the forest assumed to have been lost by 2033) is highly implausible. All of these assumptions are used to determine the volume of allegedly avoided emissions by the Katingan Project.

4. What has been happening in reality?

Around 43,000 people are reported to be living in 34 villages around the Katingan Project area. This includes indigenous Dayak Misik communities. Their traditional land includes the forests inside the Katingan Project and villages located in what RMU considers 'Project Zone', outside the RMU concession. In 2014, the governor of Central Kalimantan had agreed that every Dayak family would be allowed five hectares of land to cultivate, but the exact location of the land was not agreed. In

⁹ Research by Greenpeace in 2020 found that the average area of forest cleared to make way for industrial tree plantations in the entire province of Central Kalimantan between 2001 and 2010 was significantly lower than Katingan REDD project developers anticipated in just the project area. <https://www.greenpeace.de/publikationen/vw-engl.pdf> An expert cited in a 2021 Nikkei article states that "There is one pulp paper concession adjacent to the project area. The concession is inactive." Nikkei Asia. Indonesian carbon credit project appears to betray its purpose. 13 December 2021. <https://tinyurl.com/5b75t47j>

2016, a newspaper article noted that this unresolved conflict over land tenure “complicates conservation plans” because Dayak communities have long considered portions of the Katingan Project area as part of their traditional land tenure system. “The combination of new conservation laws and the presence of the Katingan Project has cut people off from what they consider to be their land”, the journalist notes, citing a man who lives in a riverside village built on stilts and boardwalks: “Now I can’t do anything with my land.”¹⁰

Other reports also note that “the communities’ support for the project was varied” and that initially, most villages refused to sign Memoranda of Understanding with RMU. One report attributes this to “negative perception of their experience of the establishment of the [nearby] Sebangau National Park due to its lack of consultation, unclear boundaries and the access restrictions imposed with few compensatory benefits” while another notes that prohibitions on the use of fire as traditionally used by the Dayak were particularly controversial as they carried the threat of 25 years’ imprisonment and a fine of 2 billion Indonesian rupiahs (around US\$14,000). As a result, farmers generally switched to using herbicides to remove grass, a change that increased the cost of peasant farming and damages soil and water sources.¹¹ While large uncontrolled fires generally do not start on community farming plots but on land eyed by corporations for expansion of large-scale monoculture tree plantations (like oil palm and acacia), legal and project prohibitions tend to hit villagers, rather those actually responsible for large fires.

A case in point are the large fires that affected RMU concession areas in 2015 and 2019. According to the project documents, RMU hoped that “all fires in the project will be prevented.”¹² This assumption, however, has already twice proven too optimistic. Large fires spilling from an adjacent oil palm plantation into the Katingan Project area destroyed 9,000 and nearly 2,000 hectares of peat forest in 2015 and 2019 respectively.

5. Key ‘takeaways’ from the projects

- ✓ The Katingan Project is another example of how open to subjective judgement carbon standards and auditing decisions are. Depending on assumptions made by the project proponent and judgements by auditors (paid by the project proponent) about the plausibility of the assumptions and hypothetical emissions without the carbon project, estimates of alleged emission savings can differ by millions of tonnes of CO₂ for a single project. Verra-accredited auditors approved the Katingan Project as compliant with VCS-methodology VM007 and the VCS standard. They signed off on projected avoidance of 445 million carbon credits over the 60-year lifetime of the project, whereas Renoster, concluded that, based only on the REDD component of the Katingan Project (i.e. not considering peatland restoration and tree planting), the project “may be receiving twice as many credits as it should.”
- ✓ The Kalimantan Project story is based on the unverifiable and implausible ‘additionality’ claim that plantation companies would have been awarded concessions to convert the peat swamp area into industrial acacia plantations. The claim is unverifiable because the alleged applications have never been made public and researchers have been unable to find trace of such applications. The story is implausible because even if the applications existed, a

¹⁰ How to save forests? Run them like a business, says this former Wall Street man. The World. December 2016.

<https://theworld.org/stories/2016/12/19/indonesian-businessman-trying-save-his-country-s-forests-making-money-them>

¹¹ CIFOR Working Paper 202. 2016: https://www.cifor-icraf.org/publications/pdf_files/WPapers/WP202Myers.pdf and World Rainforest Movement. 15 Years of REDD. A Mechanism Rotten at the Core. 2022.

<https://www.wrm.org.uy/publications/15-years-of-redd>

¹² Katingan Project description. ‘Katingan_PDD_v1.3’, 11 May 2016. Page 187. <https://tinyurl.com/y9xft85e>

moratorium on conversion of peatlands that was put in place in 2011 may well have prevented issuance of the final permits - *even if* an initial application for conversion to industrial plantations had been submitted. Furthermore, no acacia plantations exist for hundreds of kilometers around the Katingan Project and peat soils are not very favourable for such plantations.

- ✓ Deforestation for the establishing of pulpwood plantations throughout Central Kalimantan is not nearly as high as purported by RMU. Furthermore, the project's reference areas, which the VCS standard requires to be comparable to the project area and which provide key parameters for the calculation of the alleged rate of deforestation inside the project area, are hundreds of kilometres away from the Katingan Project location; some are even located on other islands.
- ✓ Large fires have destroyed a total of 11,000 hectares of peat forest in the eastern part of the project concession in 2015 and in 2019.¹³ Emissions released as a consequence of the fires appear to have been underestimated in project monitoring reports. It is also unclear if project calculations adequately consider the effect of drainage canals dug through the peat swamps immediately adjacent to the Katingan Project where the company PT Persada Era Agro Kencana (PT PEAK) has been draining land to expand its oil palm plantation. These drainage canals are likely to affect the water cycles inside the peat dome, increase the flow of water out of the peat dome and lead to higher rates of peat oxidation, and thus greenhouse gas emissions.¹⁴
- ✓ As with all REDD projects, there is a mismatch between the time over which fossil carbon released by users of Katingan Project carbon credits such as Shell interferes with the climate (hundreds to thousands of years and more) and a 60-year project lifetime of the Katingan project. Rimba Makmur Utama will not be able to guarantee that carbon continues to be stored in the forests and peat domes underneath the forest after the end of the 60-year lifetime of the project. Yet the climate impact of fossil carbon releases which users of its carbon credits claim has been nullified, continues to interfere with the climate for millennia. Compensation of the climate damage can thus at best be considered temporary, yet is advertised as permanent.

6. Where to find more information?

Documents related to the project audits can be found in the Verra VCS-registry:

<https://registry.terra.org/app/projectDetail/VCS/1477>

A detailed project review by rating organisation Renoster:<https://mercury.renoster.co/projects/VCS1477>

A project critique in the Milieudéfensie / Friends of the Earth Netherlands report 'How Shell is using Nature Based Solutions to continue its fossil fuel agenda': <https://en.milieudéfensie.nl/news/2486-f19b4682dbb1aaeeb1bff8680f75c70b-2.pdf>

Article on social implications of the project in the WRM report 15 years of REDD: The Katingan REDD+ Project in Indonesia: The Commodification of Nature, Labour and Communities' Reproduction. <https://www.wrm.org.uy/15-years-of-redd-the-Katingan-REDD-Project-in-Indonesia>; in Bahasa Indonesia: <https://www.wrm.org.uy/id/publications/15-years-of-redd-a-mechanism-rotten-at-the-core>

A video critique of the Katingan Project by Indonesian investigative media group Narasi:

<https://www.youtube.com/watch?v=tJ2Utsg6Uqg>

¹³ REDD-Monitor. Indonesia's Katingan REDD project sells carbon credits to Shell. But that doesn't mean the forest is protected. It's threatened by land conflicts, fires and a palm oil plantation. 2019. <https://reddmonitor.substack.com/p/indonesias-katingan-redd-project>

¹⁴ Holden, J et al. Impact of land drainage on peatland hydrology. Journal of Environmental Quality 35:1764–78. 2006.