

# Two Shades of Green:

HOW HOT AIR FOREST CREDITS ARE BEING USED  
TO AVOID CARBON TAXES IN COLOMBIA

*Policy briefing, June 2021*



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## Summary

The Colombian government adopted a carbon tax of approximately US\$5/tCO<sub>2</sub>e covering fossil fuels in 2016. Companies can avoid paying the tax by purchasing carbon offsets from projects inside Colombia. This has boosted the Colombian carbon market, which includes projects aiming to lower deforestation, so-called “REDD+” projects.

At the same time, the Colombian government receives international finance for its regional (jurisdictional) REDD+ initiatives in the Amazon region, and has therefore adopted rules to ensure that voluntary projects do not sell an excessive number of carbon credits. If they did, this would lower the amount of finance which the Colombian government can receive, or would create a double counting problem if the same avoided emission is paid for by both buyers on the voluntary carbon market and international donors.

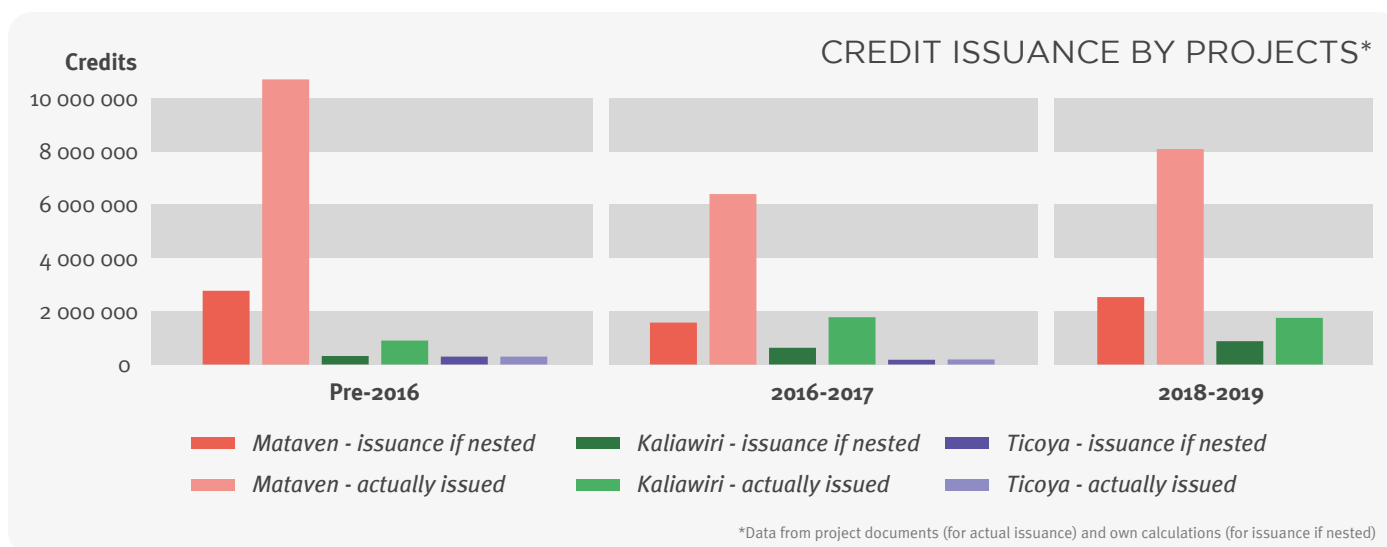
However, this report finds that at least two large scale projects do not use the official reference values set by the government in order to measure their achieved avoided emissions: the Mataven project, registered under the VCS standard, and the Kaliawiri project, registered under the ProClima standard. By setting artificially high baselines, these forest protection projects were able to generate millions of extra carbon credits which are unlikely to represent any real environmental benefits. These credits likely represent ‘hot air’, i.e. they do not deliver practical results for the climate, nor for forest conservation. As these credits were further used by companies as a substitute for paying the national carbon tax, they also led to a loss of public revenues.

The two projects analysed are estimated to have generated about 21 million credits more than they would have if they had used the official government reference values to set their baseline. Of these, 12.4 million are possibly breaching national regulation, or at least have been issued as a result of having exploited a lack of clarity in the regulation. If all the credits were used to avoid paying the Colombian carbon tax, the government would lose US\$62 million in the form of forgone tax revenues.

4.9 million hot air credits have already been used, representing a loss of US\$25 million for the State. These credits were nearly entirely used by one company, Primax Colombia SAS, a fossil fuel distributor covered by the tax policy.

This analysis also reports on one project which did use the official reference values to set its baseline, the Ticoya REDD+ project, in order to demonstrate that it would have been possible for the other projects to adopt the same approach.

Finally, it should be highlighted that finance for forest conservation is urgently needed, and that Indigenous people should be supported, including financially, in conservation efforts. But environmental integrity should not be sacrificed for the sake of promising more impact to buyers than what has actually been achieved.



*This graph shows the number of credits issued by three different projects over three different time periods. For each project, the graph shows how much the project should have issued if it had used the official reference values to set its baseline, i.e. if it had “nested”, and how much the project actually issued. Mataven and Kaliawiri both issued much more than they should have, while the Ticoya project issued an appropriate amount.*

### Carbon Market Watch calls on:

- **Project developers** to refrain from selling any more of the issued credits from the Mataven and Kaliawiri projects, and to correct their baselines.
- **Validation and Verification Bodies (VVBs)** to evaluate the conservativeness of baselines and compliance with national regulation, as well as clearly describe in their reports how projects have performed against criteria. The conflict of interest facing VVBs should be addressed; they should not be selected by the project developer.
- **VCS/Verra and Proclima** to suspend the Mataven and Kaliawiri projects in their registries, and to purchase and retire new credits to compensate for credits already sold by both projects. All project documents, including annexes, should also be made publicly available, for all projects listed on their registries.
- **The Colombian Ministry of Environment and Sustainable Development** to clarify regulation 1447 and enforce a stricter application to ensure that hot air credits are not used under the tax system. Projects must be scrutinised in more detail, and the ministry should also improve access to information about offset projects, including by making all project documents publicly available via the registry, and publishing data on credit use.
- **Primax Colombia SAS** to refrain from any future use of carbon offsets and commit to investments in renewable energy and energy saving technologies at least equivalent to the gains made from the use of hot air credits. In addition, the company should invest in forest conservation, without claiming carbon neutrality through the purchase of offsets.



# Clarifications

Information contained in this report is the result of a collaboration between Carbon Market Watch and the Latin American Center for Investigative Journalism (CLIP).

This report points to failures in the implementation of the Colombian carbon tax policy, with wider implications for the governance and credibility of the international voluntary carbon market. Questions are raised regarding both the environmental integrity and the legality of carbon credits used under this policy. However, it should be noted that while Carbon Market Watch (CMW) believes that the projects analysed in this report lack environmental integrity and have generated hot air credits, it is not in a position to assess with sufficient certainty whether the use of these credits breaches any existing regulations. This question should be assessed by legal experts and other stakeholders in Colombia.

Furthermore, while this report focuses on distinguishing between “hot air” and “legitimate” credits, this does not mean that CMW endorses the use of any carbon credits as part of compliance mechanisms such as a carbon tax. CMW does not make any judgement over the adequacy of the Colombian government’s jurisdictional REDD+ programme, nor its associated baseline, but relies on its data because it is used as a reference in the carbon tax regulation. Should this government baseline itself be inflated, this would make the (already conservative) estimates of hot air credits presented in this briefing lower than the real scale of the problem.

Finally, CMW acknowledges that Verra is in the process of reviewing its rules for REDD+ projects, and has published updated rules for “jurisdictional and nested REDD+”. The updated rules already published only concern REDD+ projects which are part of (i.e. “nested within”) a wider jurisdiction’s programme, *if the wider programme is also registered under the VCS*. The VCS project analysed here is not nested under a VCS programme, but under a national REDD+ programme, and is therefore not covered by the updated rules. More updates, including for project-based REDD+, are expected from Verra. However, it is not yet clear how these might impact projects such as the Mataven project which were analysed here. These updates also do not apply retroactively, and therefore do not put into question our findings for past issuances of credits.

While several possible ways of nesting exist, it is important to note that the estimates of hot air credits reported in this publication are significantly below what the Colombian Ministry of Environment and Sustainable Development has indicated in its funding application to the Green Climate Fund. These estimates are therefore realistic, and most likely even conservative.

## The Colombian carbon tax

Colombia adopted a carbon tax covering the combustion of fossil fuels in 2016 (law 1819).<sup>1</sup> A tax of approximately US\$5/tCO<sub>2</sub>e (tonne of CO<sub>2</sub> equivalent) is levied at the level of distributors and likely passed on to consumers. It covers all liquid fossil fuels used in the country, i.e. not exports, and includes a few exemptions such as the sale of fossil fuel for the refueling of international ships.

In 2017, Colombia passed decree 926<sup>2</sup> which allows companies to buy and cancel carbon credits instead of paying the tax. For each tCO<sub>2</sub>e emitted covered by the tax, a company can choose between purchasing a carbon credit, or paying the US\$5 tax. Under this system, if companies can find carbon credits costing less than \$5, it is economically attractive for them to purchase the offset instead of paying the tax.

This provision was originally open to the use of international credits. However, since 2018, only credits generated in Colombia are eligible. In 2018, the Colombian government also adopted other restrictive measures, suggesting that previous rules had too many loopholes.

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1 Available here, see part IX: <https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=79140>

2 Available here: <https://funcionpublica.gov.co/eva/gestornormativo/norma.php?i=81936>

In 2018, the Colombian Ministry of Environment and Sustainable Development also adopted regulation 1447,<sup>3</sup> which establishes a registry, Monitoring, Reporting and Verification (MRV) provisions, and accounting requirements. Part of these new rules includes provisions to account for emission reductions achieved through projects which aim to lower deforestation, so called REDD+ projects. In particular, the regulation provides rules for how specific projects must account for their reductions in a way that is consistent with national REDD+ programmes. These provisions apply to issuances of credits for avoided emissions achieved since 2016 (i.e. credits are issued after the regulation was published, but the avoided emissions could have been achieved from 2016 already).

Today, it is still unclear whether all projects abide by these rules. Standards, verifiers and the environment ministry are failing to provide clarity on enforcement. The lack of regulatory clarity, and the fact that project developers are exploiting this, leads to the creation of carbon credits which do not represent real emission reductions, and whose use under the Colombian carbon tax is possibly in breach of regulation 1447.

## How hot air credits are used to avoid paying taxes

### Jurisdictional Vs. project-based initiatives

To understand the nature of the problem, one must understand the basic logic through which carbon credits are created by forest conservation projects. First, the project developers set a “baseline scenario”, which is an assumption of a world in which their project is not implemented, and use this to estimate the deforestation which would have happened without their project. Second, they implement their project and observe actual emissions from deforestation. Third, they compare observed emissions to baseline emissions. The difference is the quantity of credits they can create.<sup>4</sup>

It is easy to see how this system creates a perverse incentive for project developers. The higher their baseline emissions are, the more credits they can issue. A major challenge for standards is therefore to set rules which will prevent project developers from setting unrealistic baselines. But as the projects discussed below show, the system is far from bulletproof.

Forest conservation initiatives under REDD+ are often classified in two categories: project level and jurisdictional level. These refer to the entity managing the project, which is often directly related to the geographic area covered. Under “project-based REDD+”, initiatives are implemented in a specific area determined by the project developers. In contrast, under “jurisdictional REDD+”, the measures are adopted to protect an area that matches a specific jurisdiction’s territory. This could be a region, a country, a department, etc. A jurisdictional initiative therefore generally tends to cover a larger area than a specific project does.

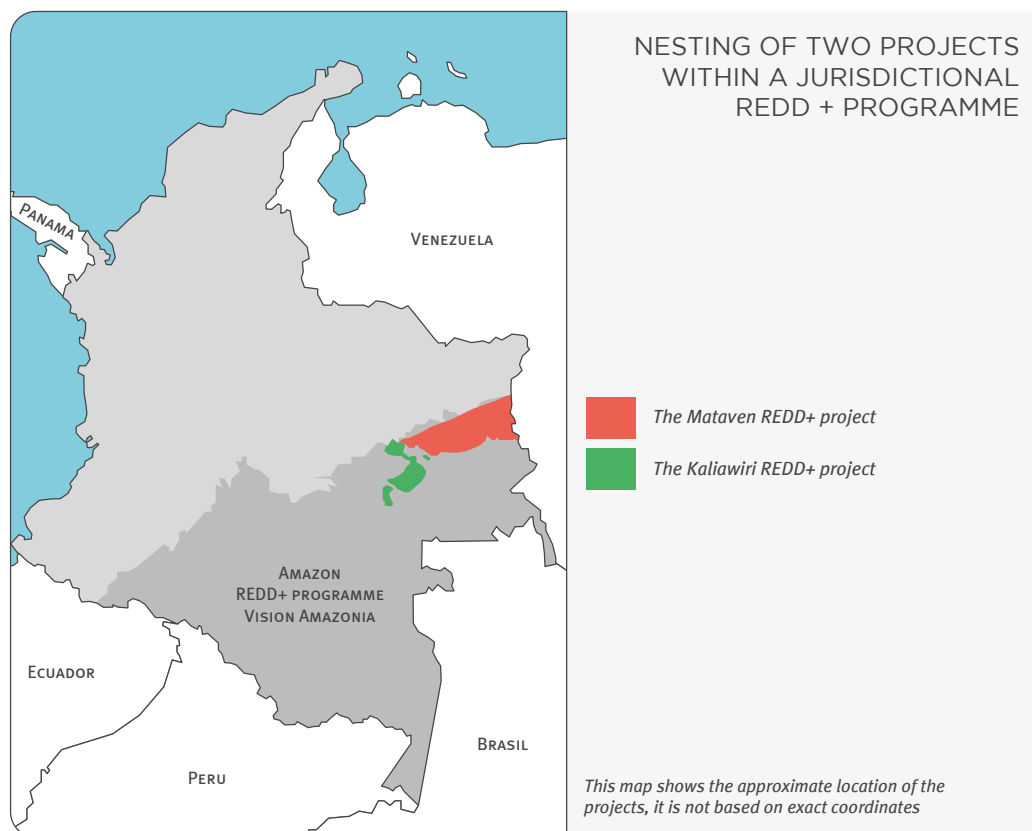
This distinction creates the added difficulty of dealing with situations where projects are taking place in a region which is already covered by a jurisdictional programme. To avoid double counting (or double financing), and to ensure consistency, the two should ideally use the same methodological approach to calculate avoided emissions (i.e. measure their impact), and the jurisdictional programme should ensure that it is not selling credits for avoided emissions which the project has already sold. When projects are correctly implemented in a way that takes into account the jurisdictional programme, they are said to be “nested” within that programme.

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<sup>3</sup> Available here: <https://www.minambiente.gov.co/images/normativa/app/resoluciones/98-RES%201447%20DE%202018.pdf>

<sup>4</sup> For the sake of clarity, we ignore more technical provisions, such as the setting aside of credits for buffer pools and leakage belts. This does not affect the general reasoning provided here.

The map below gives an example of two projects located within the Colombian jurisdictional REDD+ programme “Vision Amazonia”.



In Colombia, there are both jurisdictional and project-based REDD+ initiatives. In order to ensure consistency between the two, the Colombian government, through the environment ministry, has regulated how projects should “nest” within jurisdictional programmes, before their credits can be eligible for use under the carbon tax system.

The baseline established by the Colombian government is specified in its Forest Reference Emissions Level (FREL) document. The government submitted a FREL report to the UN climate agency (UNFCCC) for the Amazon biome for the period 2013-2017,<sup>5</sup> and a national FREL for the period 2018-2022.<sup>6</sup> These documents specify, among other things, the future rate of deforestation which should be assumed to estimate baselines (and which is based on average historical deforestation) and the amount of carbon stored in a given hectare of forest. It can include additional factors. For example, the Colombian environment ministry uses an adjustment parameter to increase its expected rate of deforestation, to take into account the possible increase in deforestation which results from the peace treaty with the FARC.

The nesting of projects is regulated in articles 40 and 41 of regulation 1447 of 2018,<sup>7</sup> and it essentially works as follows:

- Projects which did not validate their baseline before the regulation entered into force, and which are located inside a region for which a FREL exists, must set a baseline that matches the FREL methodology and reference values.
- Projects which had validated their baseline before the regulation entered into force, and which are located in a region for which a FREL exists, will be allocated a “maximum mitigation potential” by the environment ministry, and this will be the maximum number of credits from the project which can be used under the Colombian carbon tax. This will be calculated in a manner consistent with the FREL.

5 Colombian Ministry of Environment and Sustainable Development (2014): “*Proposed Forest Reference Emission Level for deforestation in the Colombian Amazon 14 Biome for results-based payments for REDD+ under the UNFCCC*”

6 Colombian Ministry of Environment and Sustainable Development (2019): “*Propuesta de nivel de referencia de las emisiones forestales por deforestación en Colombia para pago por resultados de REDD+ bajo la CMNUCC*”

7 P.27-28 of regulation 1447 of 2018: <https://www.minambiente.gov.co/images/normativa/app/resoluciones/98-RES%201447%20DE%202018.pdf>

Scenarios 1 and 2 both essentially require the same thing: if the project issues carbon credits from an area covered by a FREL, the maximum number of credits which can be used under the tax system is the amount that would be issued if the project had nested. The difference between the two options is that under scenario 1, the project must set the right baseline from the start, i.e. nest from the start. Whereas under scenario two, where the project has already set its baseline - and possibly failed to nest - the environment ministry will set the total quantity of credits for use under the tax in accordance with the FREL but without limits on how many credits the project can issue. The credits in excess of what the environment ministry approved could hence be used by voluntary buyers, outside of the tax system.

Colombia currently has one jurisdictional REDD+ programme, funded by Norway, Germany, the United Kingdom and the Green Climate Fund (GCF), with payments made for avoided emissions over the period 2013-2017. It covers the Amazon area (the “biome”).<sup>8</sup> All projects located in the Amazon biome region of Colombia should therefore have complied with either scenario 1 or 2 described above for the period 2016-2017. For the period 2018-2022, Colombia has developed a national FREL, which is being assessed by the UNFCCC.<sup>9</sup>

## Questionable credits

Despite regulation 1447, some projects have not nested, and thus use incorrect baselines. This has led to the issuance and use of many more credits than would have happened, had nesting taken place. It also creates the risk of different actors selling different credits for the same avoided emission. The two projects presented in this report both issued a very large volume of credits, without nesting.

As will be further discussed, independent verifiers, and the standards which registered these projects, have accepted the situation, and it seems that the Colombian government has not sought to enforce its own regulation in a stricter manner.

This lack of regulatory enforcement leads to several problems. First, the carbon credits issued are relying on inflated baselines and therefore strongly overestimate the real reductions in emissions achieved. Second, the use of these credits leads to foregone tax revenues for the Colombian government. Third, this use of the credits also leads to further losses of revenues for Colombia due to lower international payments. This is because Colombia has had to deduct some of the credits sold on the voluntary market from the international finance it has received. International donors were not willing to pay for avoided emissions if these had already been paid for by private companies through voluntary offset purchases. Therefore, if voluntary projects sell a large number of credits, the government can lose a significant amount of funding when projects do not nest.

The Colombian government has already lost international climate finance because of credits sold on the voluntary market by one of the projects presented below, the Mataven REDD+ project. For the year 2015, the Colombian government received payments for its Vision Amazonia REDD+ programme, but had to deduct a significant amount of credits because Mataven had issued a large volume of them.<sup>10</sup> For the year 2015, Mataven claims to have avoided 4.39 million tCO<sub>2</sub>,<sup>11</sup> while the entire Vision Amazonia programme claims to have avoided 19.4 million tCO<sub>2</sub>,<sup>12</sup> over a much larger area. On a per hectare basis, Mataven claims to have reduced emissions by nine times more than the jurisdictional project (3.8 tCO<sub>2</sub>e/hectare versus 0.42 tCO<sub>2</sub>e/hectare).<sup>13</sup>

## The Mataven project

The REDD+ Mataven project is currently the largest REDD+ project in Colombia. It was developed by ACATISEMA, an association of Indigenous Peoples, and MEDIAMOS F&M SAS, a consultancy. It is registered under the US-based Verified Carbon Standard (VCS) managed

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8 See the Vision Amazonia website: <https://visionamazonia.minambiente.gov.co/en/>

9 It is unclear whether regulation 1447 applies also when a FREL has been submitted but not yet approved by the UNFCCC. For the purpose of this report, the assumption is that the regulation applies, since this seems to follow the spirit of the regulation. However, this is clearly identified in the calculations, and it has no impact on the estimate of hot air credits already used under the tax scheme, since all of these were for avoided emissions over the 2016-2017 period.

10 In its funding application to the GCF (document GCF/B.26/02/Add.06), the Colombian government does not specifically mention that the project it has discounted emissions for is the Mataven project, but refers to “a voluntary market project”. However, the number of credits discounted in 2015 - 3,548,786 credits - matches exactly the issuance volume of the Mataven project for that year. We can therefore assume it is this project.

11 REDD+ project Resguardo Indígena Unificado - Selva de Mataven, validation and Verification report version 1.3, accessible through the [Verra project registry](#) (project ID: 1556)

12 GCF consideration of funding proposal, document GCF/B.26/02/Add.06

13 Note that credits are not issued on a per-hectare basis; this comparison simply serves to show the scale of the difference.



by Verra, under project ID 1566.<sup>14</sup> It covers an area of 1.15 million hectares in the Amazon biome of Colombia, and has issued carbon credits for avoided emissions since 2013. The project has a crediting period of 30 years, lasting until 2042. The project developers have estimated that it will save 108.5 million tCO<sub>2</sub>e over this period, or 3.6 million tCO<sub>2</sub>e per year. By this metric, it is the 14th largest project on the Verra registry, out of over 1700 projects. To date, it has already issued 17 million credits, and a further 8 million tCO<sub>2</sub>e avoided have been verified but the credits have not yet been issued.

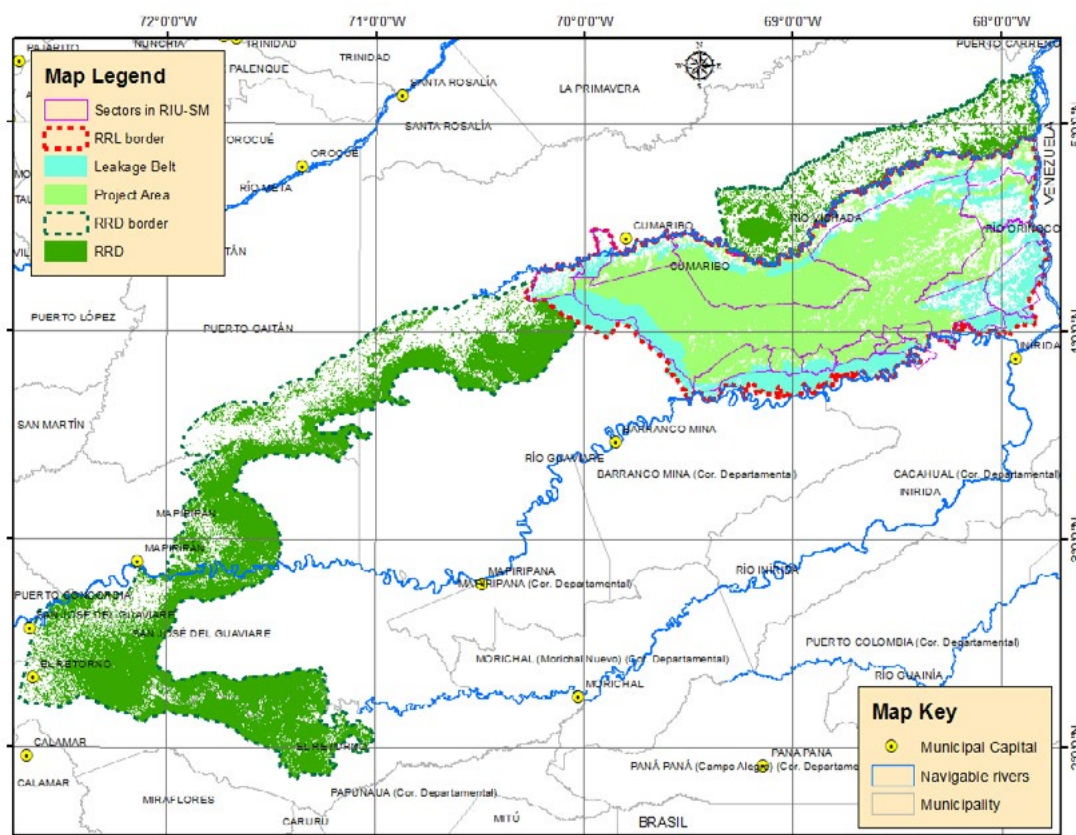
The very large volume of credits created by this project raises two main concerns. First, the possibility that this results from the use of an inflated baseline. Second, the possibility that this quantity of credits does not comply with regulation 1447 and/or creates a double counting problem.

### Qualitative assessment of the baseline

Several elements suggest that the baseline is overestimated. First, as will be discussed in a subsequent section, if the project had followed nesting procedures, and used the same methodologies to set its baseline as the Colombian government did for the FREL, the project would have issued far fewer credits. However, it is possible that specific areas within a jurisdiction are at higher risk of deforestation than the jurisdictional average, and hence taking other, more local, factors into account is relevant.

In order to establish a baseline, project developers determine a “baseline scenario” and identify a reference area which must essentially represent what would happen in the project area if the project was not implemented. This is a procedure approved by the VCS methodology used (VMD0007).<sup>15</sup>

However, several factors which characterise the reference area are unlikely to ever materialise in the project area, and therefore it is not a good comparison to measure the project’s impact. As can be seen from the map below, the reference area is a narrow stretch of land, which includes a much longer section of deforestation and forest frontier than the project area. While the exact shape of the reference region is per se not particularly relevant, the fact that it includes a much wider deforestation frontier than what could realistically happen in the project area is very important. Logically, logging is much easier starting at the edge of a forest. Therefore, an area with a wide forest frontier is much more exposed than an area with a very small frontier, even if both areas contain the same “amount” of forest each.



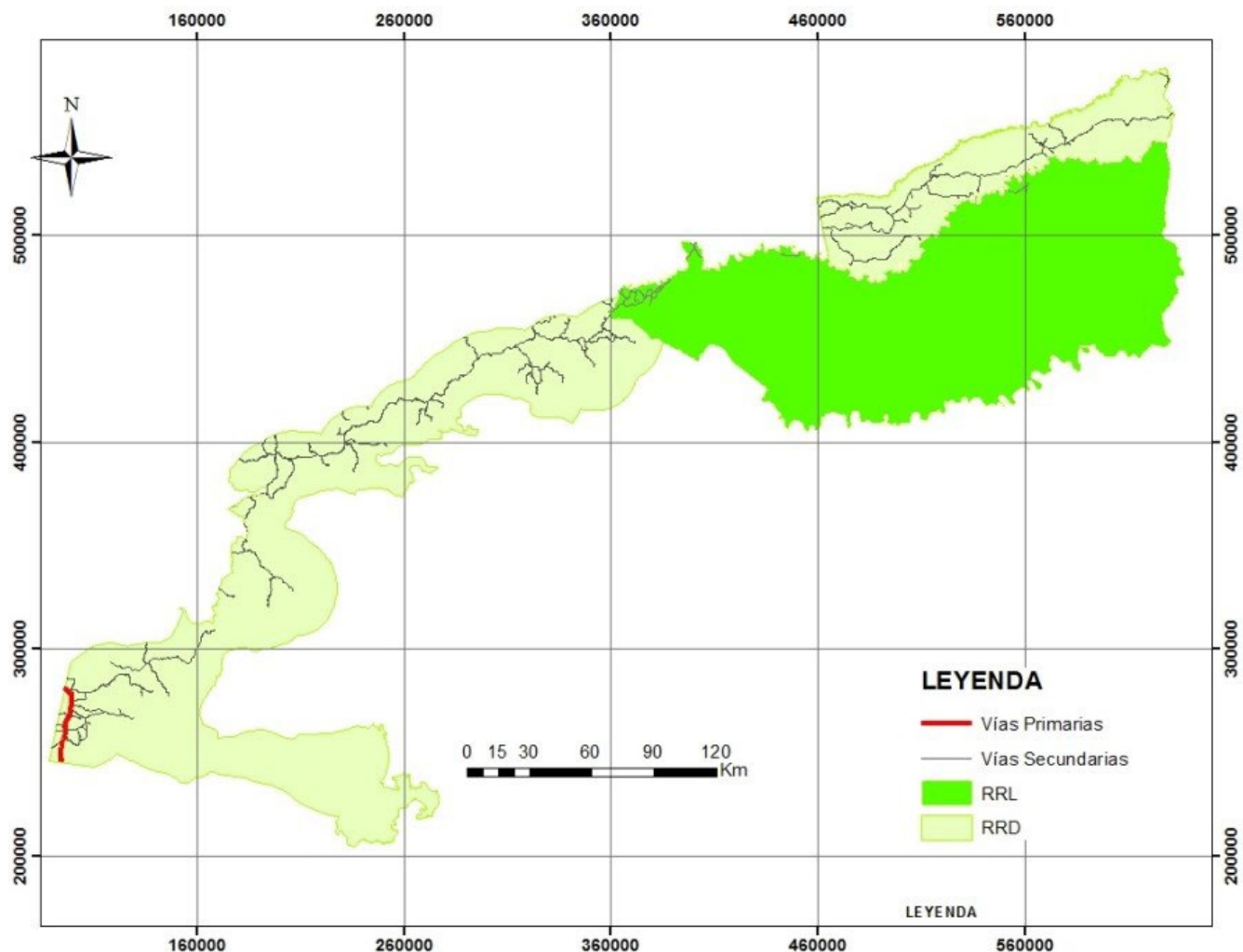
Map of the Mataven project and references areas

Map 8, p. 136 of the Project Design Document (PDD). Light green = project area; dark green = reference area.

<sup>14</sup> All documentation for this project can be found on the VCS registry : <https://registry.verra.org/app/projectDetail/VCS/1566>

<sup>15</sup> Available here: <https://verra.org/methodology/vmd0007-estimation-of-baseline-carbon-stock-changes-and-greenhouse-gas-emissions-from-unplanned-deforestation-bl-up-v3-3/>

In addition, as can be seen from the map below, the reference area is relatively well-connected with roads, whereas the project area barely has any. Roads facilitate access to forests, and therefore increase the risk of logging.<sup>16</sup> The reference area is supposed to represent what would likely happen in the project area if the project was not implemented. Hence, the expectation is that a similar road network would develop in the project area. This seems unrealistic given the size of the difference. In addition, at the time the project started, there was no planned main road construction in the project area.<sup>17</sup>



#### Road network in the project and reference areas

Map 23, p.161 of PDD. RRD= reference area; RRL is approximately the project area (the actual project area is slightly smaller than RRL); the lines represent roads.

Finally, the full project area is under the legal and territorial control of Indigenous Peoples.<sup>18</sup> The reference region includes some areas, but not the entire region, which are designated as Indigenous Peoples' territory. If the reference area is supposed to represent a likely scenario for the future project area, this assumes that Indigenous Peoples' tenure in the project area would be rolled back in the absence of the project implementation. This is highly unlikely given that Indigenous Peoples' tenure is regulated through national measures, and any changes would be politically sensitive. The project design document (PDD) only

<sup>16</sup> Barber et al. (2014): "Roads, deforestation, and the mitigating effect of protected areas in the Amazon", *Biological Conservation*, 177, p.203-209

<sup>17</sup> Map 24 on p. 162 of the PDD shows a planned road which passes through the North of the department in which the project is located (Vichada), but which does not cross the project area. The PDD also includes the following sentence, unfortunately filled with typos, which likely meant to communicate that it is unclear whether the planned road could have any impact on the project area: "Finally on the Map 24 current and future road projects being worked on are presented, the emphasis is on the "Via Puerto Carreno" project, but does not cross or RRL region or RRL region whether it will have a direct impact on them." (sic) (PDD p.161)

<sup>18</sup> See p.134 of the project design document

includes a map of Indigenous territories for the project area.<sup>19</sup> Indigenous management of the land is generally associated with lower deforestation threats.<sup>20</sup>

To conclude, this qualitative assessment of the baseline used by Mataven suggests that the baseline is inflated, because the reference area is not a realistic representation of what could happen in the project area, if the project was not implemented. This is particularly true for three key dimensions: the size of the deforestation frontier, the ease of access, and IP tenure of the land.

### **Quantitative reconstruction of the baseline**

As discussed above, projects which have set their baseline prior to the entry into force of regulation 1447, must be assigned a maximum mitigation potential by the environment ministry, based on the reference values included in the FREL. In order to nest, the project must consider two main factors determined by the FREL: the assumed rate of future deforestation, and the carbon content of one hectare of forest.

A crucial difference between the Mataven project and the reference level submitted by the Colombian government to the UNFCCC, is the assumed rate of deforestation. While the Amazon biome FREL assumes a rate of 0.18% per year for the 2013-2017 period - calculated as the average rate of deforestation in the Amazon biome over the 2000-2012 period - the project's implied baseline annual deforestation rate is 0.86%, nearly five times higher. The historical deforestation rate in the Vichada department, where the project is located, is 0.22%, which is again much lower than the baseline rate used by the project.

Using the reference values and methodology set out in the Amazon biome (2013-2017) and national level (2018-2019) FRELs, it is possible to reconstruct the Mataven project baseline under a "nesting" scenario. The baseline values obtained can then be compared to the observed emissions reported by the project,<sup>21</sup> to estimate the total number of credits which should have been issued under a nesting scenario.<sup>22</sup> In other words, this is also an estimate of how many credits should have been used, if the project had complied with the so-called "maximum mitigation potential" (MMP) requirement.

The below table summarises these calculations.<sup>23</sup>

**TABLE 1.**  
INFLATED CREDIT ISSUANCE BY THE MATAVEN REDD+ PROJECT

	Estimate of legitimate issuance under a nesting scenario	Actually issued credits	Difference between "legitimate" and issued credits (%)	Estimate of inflated credits
2013-2015	2.77 million	10.71 million	+387%	7.94 million
2016-2017	1.56 million	6.40 million	+409%	4.84 million
2018-2019	2.53 million	8.10 million	+320%	5.57 million
<b>Total</b>	<b>6.86 million</b>	<b>25.21 million</b>	<b>+367%</b>	<b>18.35 million</b>

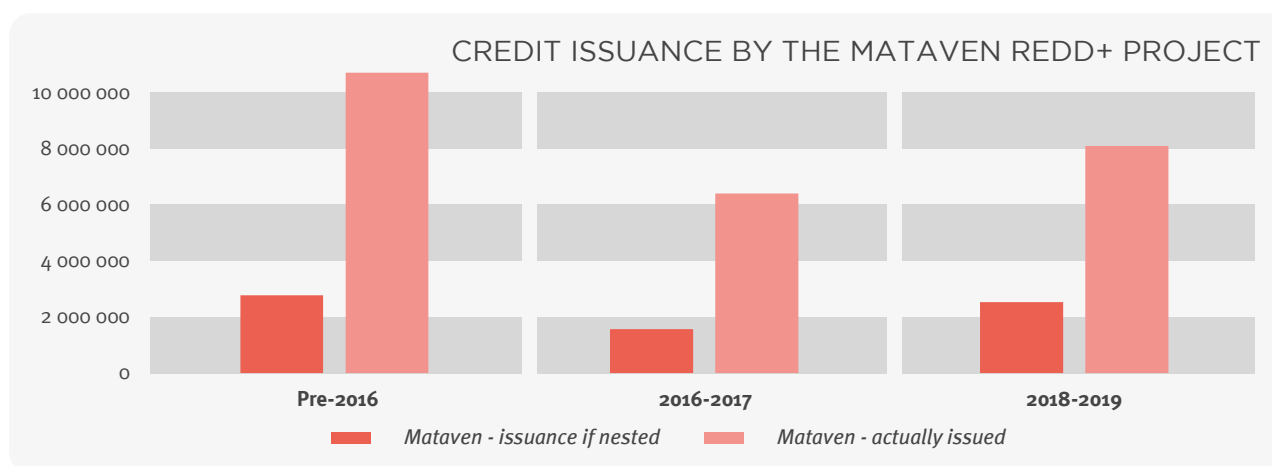
<sup>19</sup> Map 9, p.137 of the project design document

<sup>20</sup> Rainforest Foundation Norway (2021): "Falling short: Donor funding for Indigenous Peoples and local communities to secure tenure rights and manage forests in tropical countries (2011-2020)"

<sup>21</sup> See the project's first validation and verification report, accessible on the project page of the VCS registry

<sup>22</sup> The calculations below also take into account the share of credits set aside for the VCS buffer pool. The same share was used as that reported in the VCS verification reports for the relevant periods.

<sup>23</sup> The detailed calculations are available upon request. The same calculations were also carried out using the historical deforestation rate in Vichada department, where the project is located, instead of the entire biome covered by the FREL. The results were very similar.



The Mataven project seems to have issued a very large number of hot air credits, given both the qualitative and quantitative results discussed previously. This is detrimental for the climate, in particular if these credits are used to offset real emissions.

### *Consideration of regulation 1447*

Beyond the above described lack of environmental integrity, the legality of the credits from the Mataven project is also questionable. As stated above, articles 40 and 41 of regulation 1447 of 2018 require that the environment ministry supplies projects with an estimate of their “maximum mitigation potential” (MMP).

However, project developers have exploited a certain lack of clarity in the regulation to claim that the nesting/MMP requirement is not yet applicable, despite the fact that the regulation applies to avoided emissions from 2016 onwards. The regulation stipulates that the environment ministry will communicate this maximum mitigation potential to the projects through the official online registry. Yet the registry was only operational at the end of 2020. Projects have therefore used the absence of an operational registry to claim that they could not and/or should not adapt their baselines. This seems to go at least against the spirit of the regulation, yet the ministry has not taken any steps to enforce the rules more strictly.

Project developers could of course have nested their project, or calculated the MMP, without waiting for the online registry to be launched by simply using the reference values and methodology employed in the publicly available FREL. This is what was done for this report, to present the estimates calculated in the table above, and was also done by other projects, such as the Ticoya REDD+ project.<sup>24</sup>

As described in part two of this report, it is a system-wide failure of the market which allowed this to happen, given that project developers, the environment ministry, the independent verifiers, and the standard did not raise any concerns regarding this potential over-issuance.<sup>25</sup>

### *Financial impacts*

The nesting/MMP requirements under regulation 1447 apply since 2016. Credits for the years 2016-2017 have already been issued by Verra, and most have been sold. For 2018-2019, the verification of results has been completed, but credits have not yet been issued as of April 2021. If all credits for the period 2016-2019 were used under the tax system, and based on the current tax rate of approximately 5\$/tCO<sub>2</sub>e, they would lead to a loss of revenues of US\$52 million for the Colombian government.

<sup>24</sup> This project is registered under the ProClima standard, and the project page can be consulted here: <https://proclima.net.co/iniciativa/?id=9> It uses the baseline annual deforestation rate from the Amazon biome FREL.

<sup>25</sup> The VCS did raise this as a question in a project review report, but was satisfied with the answer provided by the developer and verified by the verifier, namely that the nesting requirement was not currently applicable given that the online registry was not yet operational. The document including initial questions asked by Verra regarding the MMP can be downloaded from the project page on the VCS registry. Document final issue date: 1st February 2019

Of all the Colombian VCS credits retired since the VCS was launched, around 80% came from the Mataven project.<sup>26</sup> Of the 6.4 million credits issued for emissions avoided in 2016 and 2017, 5.35 million have been used, nearly entirely by Primax Colombia, a fossil fuel distributor subject to the carbon tax. The number of credits used surpasses our estimate of the maximum mitigation potential for the project over the 2016-2017 period by 3.79 million credits (total used minus estimate of legitimate issuance from the table above). This is equivalent to a loss of revenues of US\$ 18.9 million (\$5/credit) for the Colombian government, attributable to the use of hot air credits. In the end, this allowed the fossil fuel supplier to avoid paying the carbon tax.

### **Demonstrating the conservativeness of this report's estimates**

Through the Colombian government's funding application to the GCF,<sup>27</sup> it is possible to see what the "maximum mitigation potential" would have been if the environment ministry had enforced the rule, and if the project had requested the MMP. As mentioned previously, the government deducted around 3.5 million credits from its 2015 funding application to account for the credits issued by Mataven. In 2015, the project was not yet covered by the 1447 regulation. However, since 2016, the regulation should apply, and for that year, the government deducted only 293,023 credits. This means that this is the number of credits which the government likely recognises as valid under a nesting scenario. This is 2.5 times fewer credits than estimated in this paper, and 11 times fewer credits than what was actually issued by Verra.

For the years 2018-2019, it appears that the project did request the MMP from the environment ministry. The ministry communicated the baseline level which the project should use to comply with this requirement, and this level is set 10 times lower than what the project actually used.<sup>28</sup> It is also 4 times lower than the baseline used for this report, which again highlights the conservativeness of our estimates.

## **The Kaliawiri project**

The Kaliawiri REDD+ project is located next to the Mataven project area. It was developed by BioFix, a Colombian project developer and consultancy, under the Colombian standard ProClima. Few details are available on the ProClima registry. The ProClima registry does not for example include the project design document, which is only included in the recently launched national registry "RENARE".<sup>29</sup>

### ***Qualitative assessment of the baseline***

Similarly to the Mataven project, several factors suggest that the baseline of the Kaliawiri project might be inflated.

First, as was the case for Mataven, the project area is fully covered by Indigenous People's territory,<sup>30</sup> while the reference area is not.<sup>31</sup>

Second, the project area goes relatively deep into the forest, while the reference area includes a large frontier of deforestation at the edge of the forest. As explained earlier, areas deep inside a forest are less at risk of deforestation, given that activities such as logging will typically concentrate at the edge of the forest.

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<sup>26</sup> VCS registry

<sup>27</sup> GCF document: GCF/B.26/02.Add.06

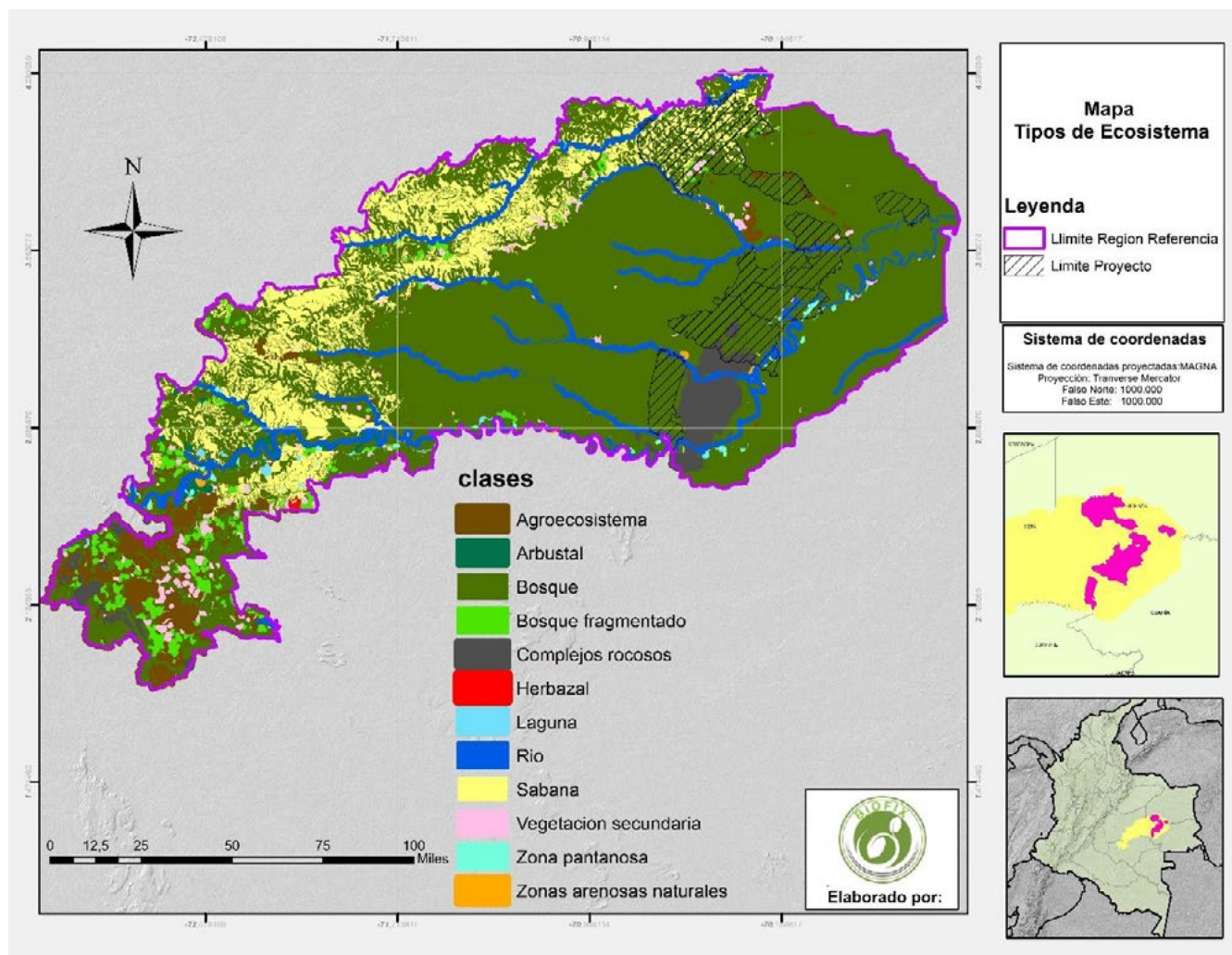
<sup>28</sup> The document can be accessed here: <https://orfeo.ideam.gov.co/old/consultaWeb/> using reference number "20215000000911"

<sup>29</sup> The national registry "RENARE" can be accessed online here: <http://renare.siac.gov.co>

<sup>30</sup> PDD p.30

<sup>31</sup> PDD p.27





**Map of the project and reference areas for the Kaliawiri REDD+ project**

Figure 21, p. 210 of the PDD - This map shows the entire reference area chosen to calculate baseline emissions. Within this map, the striped area (on the right hand side) marks the project area.

Third, the Project Design Document (PDD) does not compare the level of (road) access in the reference area with what could happen in the project area. This is a crucial element to assess the risk of deforestation. Using maps of the Colombian road network included in the Mataven PDD, which cover part of the Kaliawiri project, it appears that there are more roads in the reference area than in the project area of Kaliawiri, and no plans for main road extensions in the project area. However, this should be considered with caution, as it is difficult to precisely reconcile the maps from the Mataven and Kaliawiri PDDs, which are only included as images on the pdf document.

The detailed geographic coordinates of the projects are only included in the Annexes to the PDDs, which are not public. This makes it very difficult to assess the accuracy of the information contained in the PDD, and limits the possibility to carry out additional analysis.

Overall, these elements suggest that the Kaliawiri baseline might be inflated.

### **Consideration of regulation 1447**

Given that the project is located in a region covered by the Amazon biome FREL between 2016-2017, and the national FREL since 2018 until 2022, it should be subject to articles 40 and 41 of regulation 1447, specifying nesting requirements.

The PDD and validation reports claim that the project's baseline was validated before regulation 1447 was published, which was 2018. However, the only publicly available versions of the PDD and validation reports are dated April and May 2020. It is unclear how the validation report can confirm that the baseline was validated before 2018, when the report itself was actually published in 2020.

Having validated its baseline before the publication of regulation 1447 would have exempted the project from having to nest from the beginning. Instead, it would have been covered by the "maximum mitigation potential" (MMP) rule - as is the case for Mataven. The main difference between these two options is that, under the MMP rule, there is no restriction on the quantity of credits which can be issued, but only on the quantity which can be used under the tax system. In contrast, the rule requiring nesting from the start would have restricted the overall quantity of credits issued.

Even assuming that the project had validated its baseline prior to 2018 - for which there is no logical justification based on the publicly available documents - the use of the project's credits under the carbon tax system should have been limited to the maximum mitigation potential, which is not the case.

The Kaliawiri PDD claims that its baseline calculation was based on official data from the agency in charge of calculating the FREL (IDEAM), and is therefore in compliance with the nesting requirement. The detailed calculations are in an annex which is not public. However, the 1447 regulation requires that projects use the factors used in the FREL. Instead, the project developers used data apparently supplied by IDEAM, which is specific to their chosen reference area.

Using this data, the project developer's estimated baseline annual deforestation rate is 0.6%.<sup>32</sup> In comparison, the baseline deforestation rate used in the FREL is 0.18%. In addition, for this report, the historical deforestation rate over the same reference period as that used by the project (2005-2015) was calculated for the two departments in which the project is located, Vichada and Guainia.<sup>33</sup> These are respectively 0.16% and 0.04%, i.e. between 4 and 15 times lower than the rate estimated by the project.

Furthermore, there is a lack of clarity, and potential inconsistency, between the PDD and the verification report in how the regulation 1447 is applied. In the PDD, the project developers state that they will adapt their baselines once a public reference level (FREL) is adopted, and they quote IDEAM saying that no reference level exists for the project area in 2018.<sup>34</sup> However, there is neither reference nor context for this quote, and it is at odds with the fact that, at the time the PDD was published, Colombia had both a regional FREL for the Amazon (for the period 2016-2017) and a national FREL (for the period 2018-2022).

Despite the fact that the PDD states that the baseline will be reviewed and adjusted once IDEAM updates its reference levels, the validation report states that the project has adequately carried out the methodological reconstruction of the FREL, using the correct factors.<sup>35</sup> It is unclear how this can be reconciled with the PDD's treatment of regulation 1447, which states that no FREL exists. It is possible that the PDD only attempted to nest for the years 2016-2017, and this is what the validation report is referring to. However, whether this was intentional or not, the overall confusion makes it very difficult to assess the project developer's justification for not using the reference factors included in the public FREL. This results in the issuance of many more credits than what would have been issued if the project had used the reference values from the FREL.

Based on the publicly available documents, it appears that the project should have nested from the start. Having failed to do so, it should at least have limited the number of credits eligible under the Colombian carbon tax to the maximum mitigation potential rule.

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<sup>32</sup> PDD, p.247

<sup>33</sup> Using official data from the Ministry of Environment, accessible here : <http://smbyc.ideam.gov.co/MonitoreoBC-WEB/reg/indexLogOn.jsp> (upper left tab "reportes de bosque natural", "cambio de la superficie cubierta por bosque natural").

<sup>34</sup> PDD, p.288

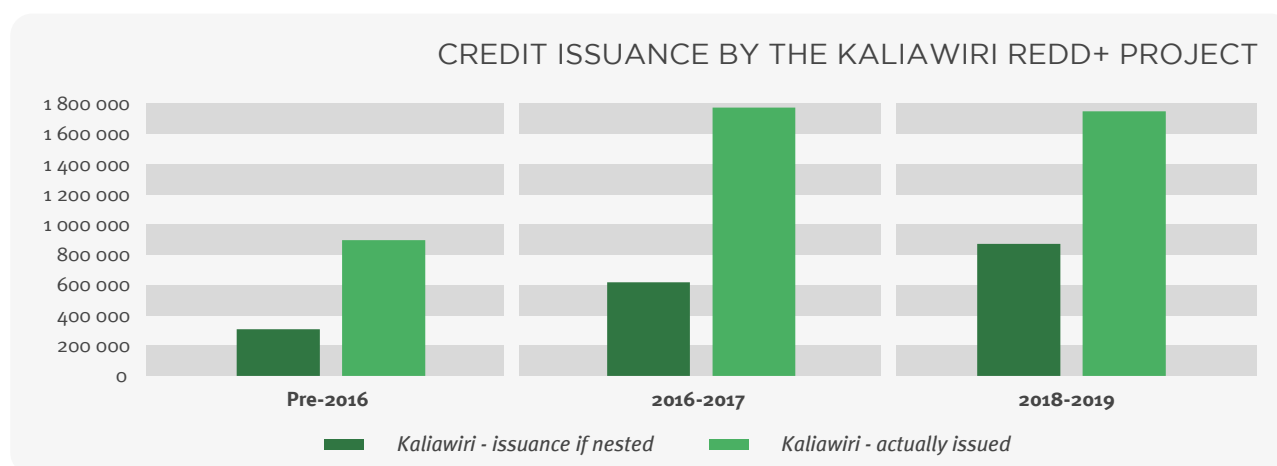
<sup>35</sup> Validation and verification report version 3, p.23

## Quantitative reconstruction of the baseline

The baseline of the Kaliawiri project under a nesting scenario was reconstructed here using the same methodology as for the Mataven project, i.e. as if the project had used the FREL reference to estimate the risk of deforestation. The results are summarised in the table below.

**TABLE 2.**  
INFLATED CREDIT ISSUANCE BY THE KALIAWIRI REDD+ PROJECT

	Estimate of legitimate issuance under a nesting scenario	Actually issued credits	Difference between “legitimate” and issued credits (%)	Estimate of inflated credits
2015	309 320	897 611	+290%	588 291
2016-2017	618 640	1.78 million	+287%	1.16 million
2018-2019	873 722	1.75 million	+200%	877 523
<b>Total</b>	<b>1.80 million</b>	<b>4.43 million</b>	<b>+246%</b>	<b>2.62 million</b>



## Financial impacts

Had the project nested under the Colombian regional and national REDD+ programmes for the period 2016-2019, it is estimated that it would have issued about 2 million credits fewer than it actually issued. If all these credits were used under the tax system, this would correspond to a loss of revenue of approximately US\$10 million (\$5/credit) for the Colombian government. These credits are also unlikely to represent real avoided emissions, given the risk of the baseline having been inflated.

Most of the credits issued by Kaliawiri were purchased by Primax, the same fossil fuel company which purchased most of the Mataven credits. Primax purchased 2.9 million credits from Kaliawiri, for avoided emissions in the years 2015-2018. Counting only the credits purchased since 2016, when regulation 1447 should have applied, and only those which exceed the estimate of what should have been issued for each year, 1.16 million of these credits are hot air,<sup>36</sup> generating a loss of US\$8 million in forgone tax revenues for the government.

<sup>36</sup> The status of retired credits, as well as the name of buyers can be found on the ProClima registry at <https://proclima.net.co/#proyecto-iniciativas>. Our calculation (1.16 million hot air credits used) includes all the hot air credits issued for the years 2016-2017, since Primax bought all credits issued for those years. The quantity of credits purchased for avoided emissions achieved in 2018 is below our estimate of what should have been issued, and hence is not counted as hot air. The remaining credits for 2018 and 2019 are still available

## System failure

International carbon markets rely on a network of actors, which are supposed to provide the necessary checks and balances to maintain integrity. For example, projects are assessed by third party verification bodies, which are themselves vetted by the standards. In the case of the Colombian carbon tax, the government, through the environment ministry, adds a layer of governance to determine rules regarding the types of credits allowed for use under the system.

The findings described in the previous section suggest that project developers have created many more credits than they should have. This was only possible because the standards, verifiers and the ministry failed to adequately implement the checks and balances that are meant to protect the system's integrity.

### Verification bodies' conflicts of interest

Validation and Verification Bodies (VVBs) are essentially independent auditors. They must respect a code of conduct, are often certified by ISO certifications, and are vetted by the standards.

However, VVBs are both selected and paid by the project developers. This creates a conflict of interest, as VVBs might be wary of providing negative evaluations of projects at the risk of not being selected by the project developer in the future, and potentially acquiring a "bad" reputation among market actors. The system's in-built incentives are working against the independence and integrity of VVBs.

In the case of the Mataven and Kaliawiri projects, several questions can be raised regarding the quality of the validation and verification reports produced by various VVBs.

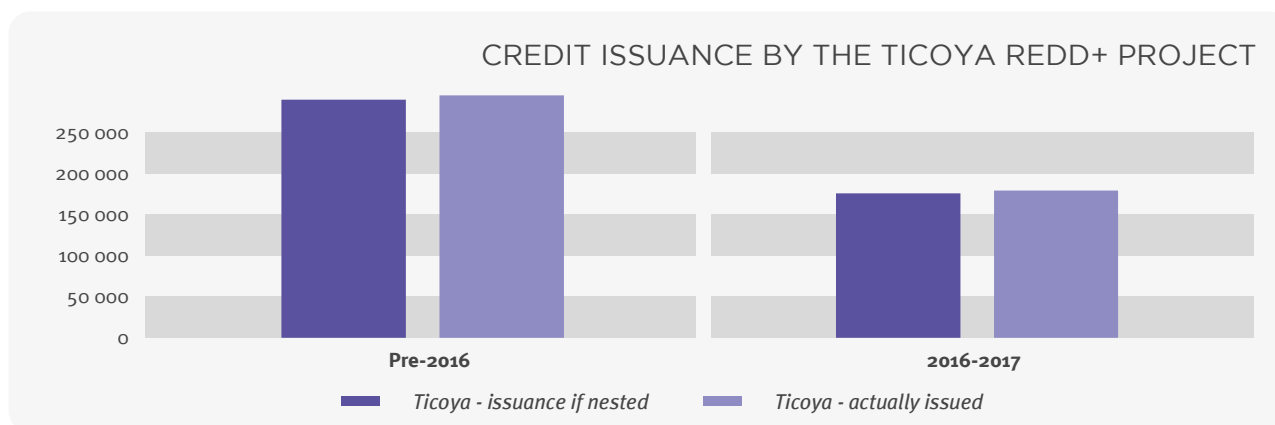
The Mataven project was validated by ICONTEC, a Colombian standards and certification organisation. In its report, ICONTEC confirms that the project was developed in accordance with the VCS methodology, and does not question the choice of reference area, despite the qualitative differences described in this report, such as road coverage and Indigenous Peoples' ownership of the land. The Mataven project's results for the period 2016-2019 were verified by EPIC Sustainability. With respect to the nesting requirements under regulation 1447, the VVB stated that the project developers' description of the situation was satisfactory, i.e. that the project will nest once the RENARE registry is operational. It remains unclear why the project was not able to nest using publicly available documents, such as the official FREL, when other projects have done so.<sup>37</sup> EPIC Sustainability does not address this in either of its two verification reports for Mataven.

The Kaliawiri project was validated and verified by AENOR. As described in the previous section, the validation report is unclear, and potentially inconsistent with the PDD in its treatment of regulation 1447. In addition, it is noteworthy that the same auditors from AENOR validated and verified another REDD+ project in Colombia, the Ticoya project registered under the ProClima standard. In the validation report for this project, published before the Kaliawiri report, AENOR clearly acknowledges that there exists a FREL for the period 2013-2017 for the Amazon region, and states that the project complies with regulation 1447 because it has used the FREL reference values to establish its baseline.<sup>38</sup> While the Ticoya PDD is not publicly available, the verification report does mention how many credits it has issued, and using the same methodology as used here for the Mataven and Kaliawiri projects, it was possible to match this number with a deviation of only 2% (compared to 250% and 350% deviations for Mataven and Kaliawiri).

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<sup>37</sup> See for example the Ticoya REDD+ project, registered under the ProClima standard, which used the Amazon biome FREL reference values to nest. The validation report can be downloaded from the ProClima registry: <https://proclima.net.co/iniciativa/?id=9>

<sup>38</sup> Validation and verification report of the Ticoya REDD+ project, version 1.1, p.16



While this does not mean that AENOR infringed any rules, it is unclear how the same verifiers could conclude that two different projects comply with the 1447 regulation, when one of them used the FREL public reference level (Ticoya), while the other did not (Kaliawiri).

## Lack of stringency from the standards

Standards are supposed to guarantee the integrity of voluntary carbon markets. Given their unregulated nature, markets rely on the credibility and integrity of standards to maintain the credibility of the entire system. Regardless of this, questionable projects have been, and continue to be, registered, as the two examples covered in this report show.

Verra, which operates the VCS, is by far the largest standard internationally. It has issued around 70% of all credits used for voluntary purposes to date.<sup>39</sup> In the case of the Mataven project, it is clear that Verra is well aware of regulation 1447, as it requested clarifications to the project developers with regards to compliance with the nesting requirements. However, Verra seemed satisfied by the developer's response which cited the absence of the national registry as the reason for not reviewing its baseline.<sup>40</sup> As mentioned above, it would have been easy for the projects to nest, or comply with the MMP rule, despite the absence of the national registry, and this response is therefore not satisfactory. Verra does not appear to have questioned the choice of reference region for the Mataven project, nor to have asked for proof that the MMP for 2016-2017 had been requested from the environment ministry by the project developers.

Verra was contacted as part of this research and explained that it issues a disclaimer to projects, informing them that not all issued credits might be eligible under the carbon tax system. The disclaimer is not public, and hence it is unclear how this contributes to guaranteeing the credibility of the credits for buyers. It is also unclear why Verra accepts to cancel credits in its registry, knowing that the use of these credits under the carbon tax policy might be illegal.

ProClima is a relatively new Colombian standard with 16 registered projects and 15 million credits issued (April 2021). It is more difficult to assess the extent to which it has discussed regulation 1447 with project developers as part of the registration process, because it discloses few documents. For each project, only the validation report seems to be available, which is a lack of transparency limiting public scrutiny of the projects.

While VCS is noticeably more transparent than ProClima, in that it makes many project-related documents publicly available, it is noteworthy that the annexes to the PDDs are not available in either registry, i.e. the VCS and ProClima registries, nor from the national registry.<sup>41</sup> This makes it difficult to verify important information, such as the precise geospatial coordinates of projects, and calculation methods which are often detailed in annexed excel files. The PDDs make numerous references to annexed documents, none of which are publicly available. Verra and Proclima should make all project documentation publicly available.

<sup>39</sup> CMW (2021): *"Five stories from new voluntary offsets data"*

<sup>40</sup> Mataven project review report, dated 1st February 2019, available through the VCS registry.

<sup>41</sup> Verra stated that it would make these annexes available very soon. At the time of finalising this report (end of May 2021), the annexes for the Mataven project were not public



Finally, it should be noted that carbon market actors in Colombia have joined forces under an industry association called Asocarbono. It was officially created in November 2018, a few months after the regulation 1447 was passed, and information on its website indicates that within the first six months of 2019, they met four times with the environment ministry. Each time, the question of reviewing regulation 1447 was raised, and Asocarbono submitted a list of suggested modifications (which is not public).<sup>42</sup> Verra, ProClima, Biofix, and the group implementing the Mataven project are all members of this association. Asocarbono's new president is the executive director of Biofix, the consultancy which developed the Kaliawiri project. It is therefore clear that Asocarbono had a vested interest in ensuring a looser interpretation of regulation 1447 by the environment ministry, since this would allow the projects to issue more credits and the market actors to sell more carbon offsets.

## **Government: lack of enforcement and transparency**

When it comes to public authorities, it remains unclear why the environment ministry is not requesting a stricter application of regulation 1447. In addition, it is noteworthy that the Colombian government seems to be fully aware of the inflated nature of the Mataven baseline. One of Asocarbono's press releases mentions disagreements between public agencies, as well as a general lack of capacity.<sup>43</sup>

In any case, there is a clear lack of transparency on the environment ministry's side. The online registry (RENARE) where projects must register does not include specific information about the issuance or retirement of credits. No public information about the quantity of credits used under the tax system could be found in the registry. For the purpose of this report, an access to information request to obtain a list of registered projects with PDDs, as well as information about project size by issuance volume was filed. The ministry failed to provide the information, more than four months later (at the time of writing, May 2021).

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<sup>42</sup> See for example the press release from February 2019 which mentions a list of proposed changes to regulation 1447: <https://asocarbono.org/2019/02/20/reunion-min-ambiente-asocarbono-20-febrero/>

<sup>43</sup> See: <https://asocarbono.org/2019/05/23/reunion-min-ambiente-asocarbono-23-mayo/>

## Conclusions

There is an urgent need to clarify and enforce regulations governing the use of carbon offsets under the Colombian tax system, as well as to assess the overall quality of projects supplying credits to companies.

This report shows that certification by standards is not a guarantee of environmental integrity. Forestry projects in particular are at high risk of gaming, given the difficulty not only of setting baselines, but also of scrutinising the validity of these baselines.

Given the difficulty of accessing information, Carbon Market Watch focused the investigation on two large scale projects for this report. In addition, the highly technical nature of the documents and the high number of pages which leads to burying key pieces of information in the project documents is a barrier to scrutiny by outside observers. While (some of) the documentation is publicly available, no effort is made to facilitate outside scrutiny.

Project developers should immediately stop selling credits from these projects and correct their baselines. In order to uphold their guarantee of integrity, the standards should purchase credits to replace the hot air units already used, and should suspend both projects from their registries.

Primax Colombia, who purchased nearly all of the hot air credits, should refrain from further purchases of offsets and instead directly finance forest conservation projects, as well as invest in renewable energy.

The Colombian Ministry of Environment and Sustainable Development must provide more easily accessible information regarding projects which are supplying carbon credits under the country's tax system, including their size and registration status. It should also enforce its regulations more strictly and ensure that no projects using inflated baselines can sell credits under the carbon tax system.

Standards and verifiers should adopt more stringent screening procedures and, if in doubt, ensure that the most conservative approach is selected. In the two cases assessed in this report, it is unclear whether the projects are legally breaching regulation 1447 or not. However, it is clear that they have chosen to adopt a lenient approach to baseline setting, thereby overly inflating the number of credits issued. Verra and ProClima, as guarantors of the credibility of the market, should have raised this problem and requested that the projects review their baseline. More oversight is therefore needed, especially given that several very large projects are still in the process of seeking registration.<sup>44</sup> As of May 2021, there are 75 other REDD+ projects registered on the national registry, which have not been analysed in this report.<sup>45</sup>

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<sup>44</sup> For example, see the “Flor de Inírida” project, developed by Ciprogress Greenlife and seeking registration under the VCS standard. This project is twice the size of the Mataven project, and could issue around 7 million credits per year. <https://registry.terra.org/app/projectDetail/VCS/1821>

<sup>45</sup> Available at: <http://renare.siac.gov.co/GPY-web/#/gpy>

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