

# **GREENHOUSE GAS EMISSIONS INVENTORY**

**ENEL DISTRIBUIÇÃO SÃO PAULO**



# **GREENHOUSE GAS EMISSIONS INVENTORY**

2020



**Trade name:** Enel Distribuição São Paulo

**National Corporation Register:** 61.695.227/0001-93

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**COMPLETE  
AND VERIFIED  
INVENTORY**

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## SUMMARY

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**24**  
cities supplied  
in the São Paulo  
Metropolitan Region

**4,526**  
Km<sup>2</sup>  
concession area

**44,028**  
Km  
distribution network

**7.5**  
million clients

**18.3**  
million  
people supplied

**A-**  
Enel Distribuição São Paulo's score on CDP Climate Change, acknowledging the company's Climate Change action "Leadership" position.



# ABOUT ENEL DISTRIBUIÇÃO SÃO PAULO

Enel Distribuição São Paulo is a publicly traded company, responsible for the electricity distribution that supplies 24 cities in the São Paulo Metropolitan Region, including the capital of São Paulo state, one of the main Brazilian economic and financial centers.

The company's 4,526 km<sup>2</sup> concession area concentrates the highest national GDP and the highest population density in the country, with 1,647 consumer units per km<sup>2</sup>, which corresponds to 8.5% of the total electricity consumed in Brazil.

To successfully meet the challenge of providing energy to approximately 18.3 million people every day, Enel Distribuição São Paulo is permanently committed to providing better and faster services. The Company is always dedicated to listening and understanding its customers, maintaining an open dialogue with all its stakeholders. Enel Distribuição São Paulo is aware of the importance of its role in the development of the state and the country.

To meet the demand of approximately 7.5 million consumer units, Enel Distribuição São Paulo, with its 5,848 employees, maintains an infrastructure consisting of 162 substations, and a distribution and subtransmission network, with aerial and underground cables, of more than 45,000 kilometers, of which 1,834 km are subtransmission lines and 44,028 km are aerial and underground distribution lines. In 2020, more than 42.7 TWh of energy were distributed.

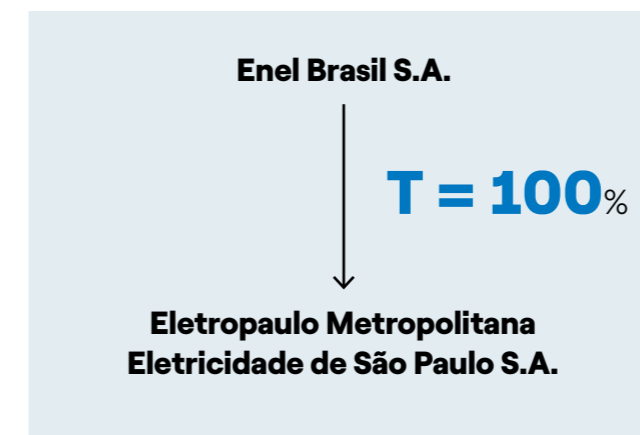
Since June 2018, Enel Distribuição São Paulo has been part of the Enel Brasil group, a multinational company and one of the main players in the global energy market – and the largest private company in the Brazilian electricity sector. Enel Brasil plays a leading role in the national development of renewable energy sources (solar and wind) and in the energy distribution, besides doing business in all parts of the energy chain, including hydraulic and thermal generation, transmission, trading, and energy solutions.

**We are the energy that moves Brazil!**



## Shareholder structure

Enel Distribuição São Paulo is controlled by the holding company Enel Brasil S.A., which owns 100% of the company's shares and, therefore, holds its operational control. As of December 31, 2020, all 197,466,862 shares of the company were common stocks.



## Commitment to the management of greenhouse gas emissions

Enel Distribuição São Paulo is committed to transparency in the management and report of information related to its greenhouse gas emissions. This commitment can be verified in the company's Climate Change Commitment Statement (which can be found in Annex II) and evidenced by the company's tradition in publishing its Greenhouse Gas Emissions Inventory. The company has been conducting and publicly disclosing its complete inventory since 2012 and has been submitting it to external verification to ensure the reliability and accuracy of the data since 2016.

## INVENTORY BOUNDARIES

### Organizational boundaries

The emissions reported in this Inventory refer to the company Eletropaulo Metropolitana Eletricidade de São Paulo S.A., under the trade name of "Enel Distribuição São Paulo".

There is no subsidiary or controlled entity.

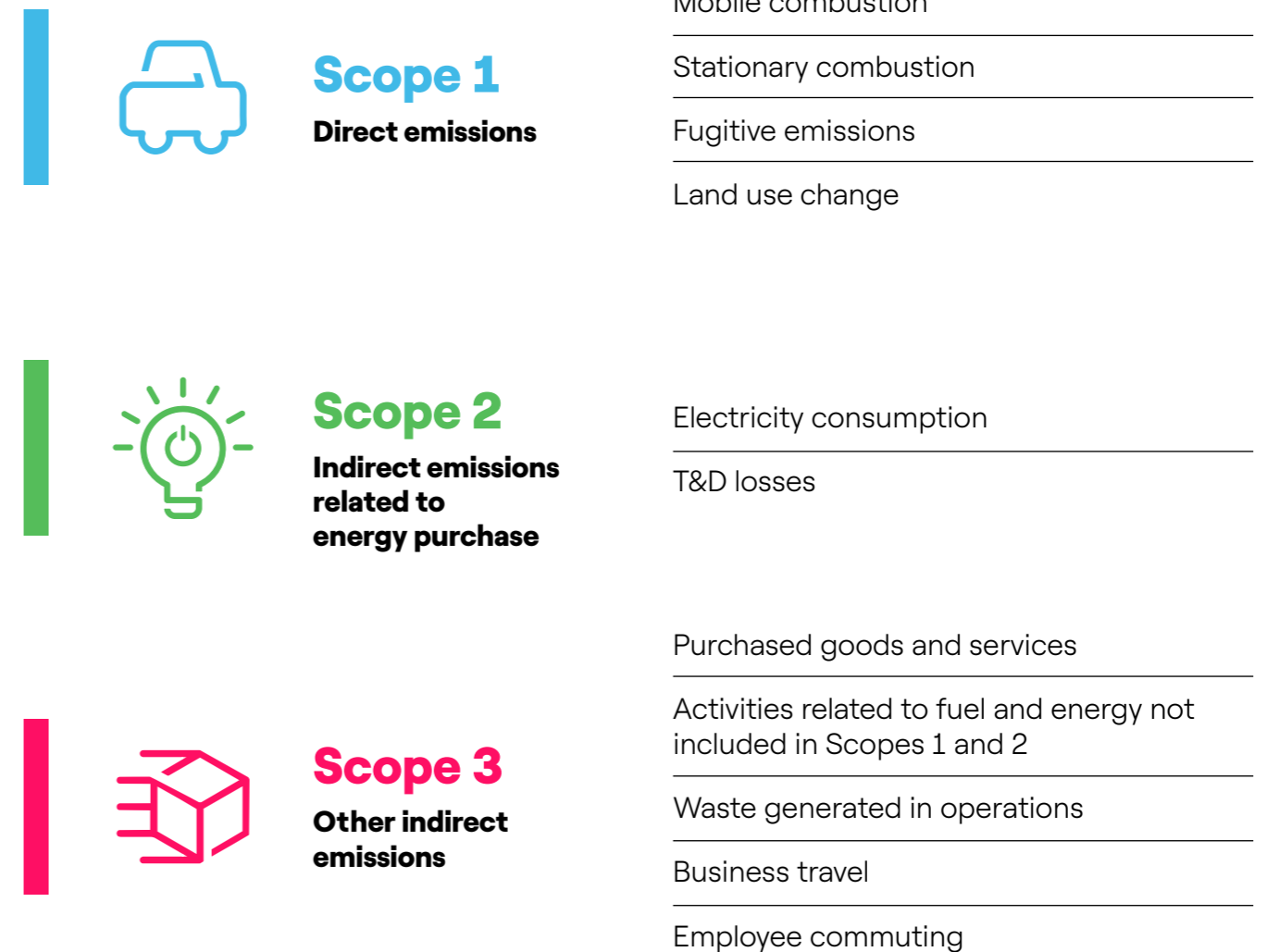
### Consolidation approach

The emissions reported in this Inventory were consolidated under the Operational Control approach.

## Operational boundaries

The emissions reported in this Inventory comprise Scopes 1, 2 and 3, in the categories indicated below.

### Greenhouse Gas Emissions



# METHODOLOGIES USED

## Brazil GHG Protocol Program



The emissions reported in this Inventory were calculated using the Brazil GHG Protocol Program's methodology, and according to the ISO 14064-1:2007 standards.

The Brazil GHG Protocol Program's calculation tool was used in its v2021.0.1 version.



# Calculation of carbon emissions and removals due to land use change

For the calculation of carbon emissions and removals related to land use change, a methodology developed by the company was used. This methodology is based on carbon emission and removal factors available in the literature.

The factors used are found in the following table.

NECESSARY DATA	REFERENCE	FACTOR USED
<b>Total Carbon Stock in Biomass</b>	Terceiro Inventário Brasileiro de Emissões e Remoções Antrópicas de Gases de Efeito Estufa (MCTI, 2015).  Table 18: "Estoques de carbono por unidade de área (tC/ha), total e nos diferentes reservatórios (acima e abaixo do solo), madeira morta e serrapilheira das fitofisionomias do bioma Mata Atlântica, bioma de origem da estimativa de biomassa acima do solo; fontes utilizadas para gerar o estoque de carbono total; critérios utilizados na escolha das fontes e outras fontes consultadas"; Column "Estoque total".	Dm = 177.75 tC/ha SN = 39.92 tC/ha Fs = 123.05 tC/ha Sa = 39.92 tC/ha
<b>Soil Carbon Change Factor</b>	Relatório de Referência Setor Uso da Terra, Mudança do Uso da Terra e Florestas (MCTI, 2015).  Table 6: "Fatores de alteração do carbono do solo com a mudança do uso da terra", Column "fc".	Ref = 0.673 Ac = 0.612 Fsec = 1 Gsec = 1
<b>Carbon Stock in the Soil</b>	Relatório de Referência Setor Uso da Terra, Mudança do Uso da Terra e Florestas (MCTI, 2015).  Table 1: "Estoque de carbono nos solos por associação solo-vegetação".	V4-S3 = 40 tC/ha V9-S2 = 43.1 tC/ha V9-S3 = 36 tC/ha

# Other methodologies or tools

No other methodologies and/or intersectoral tools or tools for specific sectors were used.

# TOTAL EMISSIONS

The table below presents a summary of the year's greenhouse gas emissions on the three Scopes, by type of gas and in tons of carbon equivalent.

GEE	Emissions in metric tons, by type of GHG			Emissions in metric tons of CO <sub>2</sub> equivalent (tCO <sub>2</sub> e)		
	SCOPE 1	SCOPE 2*	SCOPE 3	SCOPE 1	SCOPE 2*	SCOPE 3
CO <sub>2</sub>	7,127,513	299,014.924	1,861,511.229	7,127,513	299,014.924	1,861,511.229
CH <sub>4</sub>	1.260	0.001	25.576	31.500	0.025	639.400
N <sub>2</sub> O	0.322	-	0.354	95.956	-	105.492
HFCs	0.272		0.012	522.358		25.050
PFCs	-		-	-		-
SF <sub>6</sub>	0.040		-	912.000		-
NF <sub>3</sub>	-		-	-		-
<b>Total</b>				<b>8,689.327</b>	<b>299,014.949</b>	<b>1,862,281.171</b>
<b>Biogenic CO<sub>2</sub></b>				<b>3,944.217</b>	<b>1.095</b>	<b>2,860.954</b>

\* Location-based approach



The year 2020 was marked by the global pandemic of Covid-19, which profoundly impacted economic and social dynamics, with the application of circulation restriction measures and the consequent reduction in the pattern of energy consumption. This impacted both the internal dynamics of the company, reflecting on Scope 1 and 2 emissions, as well as on the dynamics of energy sales and losses, impacting on Scope 2 and Scope 3 emissions. It was also a favorable year for the generation of renewable energy in the country, which resulted

in a lower grid<sup>1</sup> emission factor, lowering the company's Scope 2 and Scope 3 emissions.

In chapters 5, 6 and 7, the variations in relation to the base year (2019) are explored, with the appropriate explanations and interpretations of the data presented. Chapter 12 presents an analysis of the history since the beginning of the company's GHG emission measurements (2012).

1 The emission factor of the grid is a reflex of the emissions related to the energy generation in Brazil, indicating how many tons of carbon the Brazilian electric system emits to produce each MWh of energy in a certain period.



# SCOPE 1

**In 2020, there was a 18.5% reduction on mobile combustion emissions, which can be partially explained by the initiatives developed by the company to improve fleet efficiency.**

This chapter presents the emissions and removals of Scope 1, disaggregated by category.

The emissions related to mobile combustion come from the company's fleet, which comprises light, utility, and heavy vehicles, powered by ethanol, gasoline, diesel and CNG (compressed natural gas). The vehicles are used for the construction and maintenance activities of the distribution network and for auxiliary needs, such as employee transportation for various needs.

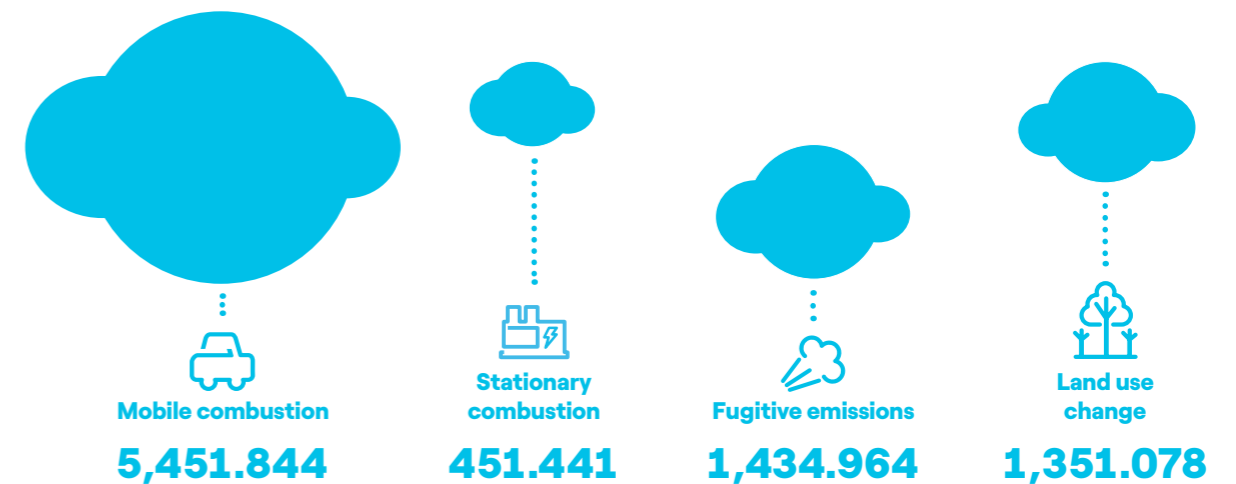
Emissions related to stationary combustion come from power generators and chainsaws. The power generators are used by the company in two situations: in the operational bases, as a backup for power outages, and as a power source to maintain supply to customers during maintenance operations (scheduled or emergency) in the distribution network, avoiding shutdowns. The chainsaws are used for trimming and removing trees, which is sometimes necessary for the construction and maintenance of sub-transmission lines and substations. The trimmings carried out for the maintenance of the distribution networks, necessary to maintain the harmonious coexistence of the distribution network and the local vegetation, are carried out using hydraulic chainsaws, without fuel consumption by the equipment.

The fugitive emissions come from small gas leaks in the air conditioning equipment, replacement of carbon dioxide fire extinguishing cylinders, and sulfur hexafluoride gas (SF6) leaks in subtransmission and aerial and underground distribution systems equipment.

Emissions related to land use change derive from vegetation suppression that is sometimes necessary for the maintenance of the existing infrastructure or the construction of new substations and subtransmission or distribution lines. The suppressions are only carried out with the proper authorizations of the competent environmental agencies and can generate the need for environmental compensation through the planting of trees in other locations, properly approved by the environmental agencies. As suppression needs vary widely from year to year, these emissions can account for more than 60% of Scope 1 emissions – as seen in 2016 and 2019, when more vegetation suppressions occurred – or about 15% of Scope 1 emissions – as seen in 2020, when a smaller area was suppressed. The carbon captured by the trees planted in the company's environmental compensation projects and in other voluntary plantings is cast as removal of biogenic CO<sub>2</sub> in this category of Scope 1.

CATEGORY	EMISSIONS (tCO <sub>2</sub> e)	BIOGENIC CO <sub>2</sub> EMISSIONS (t)	BIOGENIC CO <sub>2</sub> REMOVALS (t)
Mobile combustion	5,451.844	3,890.030	-
Stationary combustion	451.441	54.187	-
Fugitive emissions	1,434.964	-	-
Land use change	1,351.078	-	1,149.429
<b>Total</b>	<b>8,689.327</b>	<b>3,944.217</b>	<b>1,149.429</b>

## Emissions (tCO<sub>2</sub>e)



In 2020, Scope 1 emissions were reduced by 63% compared to 2019. The main factor that caused this reduction was a lower vegetation suppression, implying lower emissions related to land use change. Additionally, there was an 18.5% reduction in mobile combustion emissions, which can be explained by the initiatives developed by the company to improve fleet efficiency, aiming to reduce fuel consumption, and by the reduction in the attendance to occurrences by the company's crew, causing a lower need for transportation. Furthermore,

there was a reduction of 34.7% in fugitive emissions, caused by the decrease in decommissioning<sup>2</sup> of SF6 insulated equipment from the underground and automation systems in 2020, compared to 2019. However, stationary combustion emissions increased by 288% compared to the previous period, as there was a need for greater use of power generators to maintain energy supply to customers during network interventions, as a result of the need of meeting regulatory indicators of quality of energy supply and customer satisfaction.

1 Sulphur Hexafluoride (SF6) is a widely used gas in electrical equipment as insulator and extinguisher of electric arcs.

2 The decommissioning process consists in the equipment withdrawal of operation. This is when the SF6 gas is drained from the equipment and gas leaks are identified and accounted for, in the case of underground and automation equipment.

# SCOPE 2

**Compared to 2019, 2020 showed a 14.6% reduction in Scope 2 emissions.**

This chapter presents the Scope 2 emissions, disaggregated by category. The company consolidates its Scope 2 by the localization approach.

The emissions related to the electricity consumption come from the electricity used by the company to supply its headquarters office, its operational bases, and to operate all the infrastructure necessary for the electricity distribution system (transformer stations, protection structures, capacitor banks, among others).

Emissions related to transmission and distribution losses come from the energy lost in the distribution system. It includes technical losses, i.e. losses inherent to the processes of transporting energy through cables and transforming energy from high to low voltage, when part of the energy is lost in the form of heat. It also includes commercial losses, which are the thefts of electricity from the grid. This item accounts for approximately 99% of Scope 2.



CATEGORY	EMISSIONS (tCO <sub>2</sub> e)	BIOGENIC CO <sub>2</sub> EMISSIONS (t)	BIOGENIC CO <sub>2</sub> REMOVALS (t)
Electricity consumption	2,439.272	1.095	-
Transmission and distribution losses	296,575.677	-	-
<b>Total</b>	<b>299,014.949</b>	<b>1.095</b>	<b>-</b>

Compared to 2019, 2020 showed a 14.6% reduction in Scope 2 emissions. Three factors caused this decrease. The first was the decrement of energy consumption in the company's facilities, since administrative employees began to work from their homes since March, due to the Covid-19 pandemic. The second was the decrease in energy consumption by the company's customers by about 6.6%, which implies a lower energy consumption for the operation of the energy distribution infrastructure. The third and most important cause, which was de-

terminant for this decline, was the grid emission factor (subject that will be further explored in chapter 12.2), which had a diminution of 17.7%. Due to this decrease, even with the increase in total losses in 2020, Scope 2 had a reduction. The increase in energy losses in 2020 was the result of the increment in the commercial losses, resulting from the rise in market indiscipline caused by the Covid-19 pandemic.

# SCOPE 3

**In 2020, Scope 3 emissions decreased by 22.8%.**

This chapter presents the Scope 3 emissions, disaggregated by category. The categories selected for inclusion in Scope 3 are the ones:

- > That are representative, i.e., comprise the majority of Scope 3 emissions (“activities related to fuel and energy not included in Scopes 1 and 2”).
- > Which would be part of Scope 1 of the company if there was no outsourcing of core business activities (“purchased goods and services”).
- > That are easy to measure with the data available to the company (“waste generated in operations”, “business travel” and “employee commuting”).

Emissions related to purchased goods and services refer to the emissions of outsourced companies that carry out part of the company’s core business activities, i.e. construction and maintenance activities of the energy distribution infrastructure. The Scope 1 (for all tracked companies) and the Scope 2 (only for companies whose operational bases are outside the company’s concession area, otherwise it will already be accounted for in the category “fuel and energy related activities not included in Scopes 1 and 2”) of said companies are included.

Emissions from activities related to fuel and energy not included in Scopes 1 and 2 refer to emissions from the generation of the energy that the company sells to its captive customers.<sup>1</sup>

The emissions related to waste generated in the operations are related to the common/organic waste and wood waste that the company sends for disposal in landfills and will generate greenhouse gases during its decomposition. Waste that does not decompose (e.g. construction waste) or waste that is intended for reuse or recycling is not included.

Business travel related emissions include flights taken by company’s employees for various business-related activities.

Emissions related to employee commuting (home-work) include the emissions of the chartered buses hired to carry out the transport of employees between their homes and the company’s headquarters.

<sup>1</sup> Captive customers are those who buy the energy they consume from Enel Distribuição São Paulo, in addition to the energy distribution service. This is the case for most residential and commercial customers. Free customers, on the other hand, only buy the energy distribution service from Enel Distribuição São Paulo and buy the energy they consume directly from the generators, through specific contracts for the purchase and sale of energy (PPAs, Power Purchase Agreements). The energy consumed by free costumers are not included in the Scope 3 emissions.

CATEGORY	EMISSIONS (tCO <sub>2</sub> e)	BIOGENIC CO <sub>2</sub> EMISSIONS (t)	BIOGENIC CO <sub>2</sub> REMOVALS (t)
Purchased goods and services	5,007.214	2,846.234	-
Activities related to fuel and energy not included in Scopes 1 and 2	1,856,459.754	-	-
Waste generated in operations	607.975	-	-
Business travel	81.528	-	-
Employee commuting (home-work)	124.700	14.720	-
<b>Total</b>	<b>1,862,281.171</b>	<b>2,860.954</b>	<b>-</b>

In 2020, Scope 3 emissions decreased by 22.8%. This fact can be explained by two main reasons, which impacted on the activities related to fuel and energy not included in Scopes 1 and 2. The first was the decrement in energy consumption by the company’s captive customers, which fell by 8.3%, mainly due to the economic downturn and changes in social patterns resulting from the Covid-19 pandemic. The second reason was the grid emission factor (theme that will be further explored in chapter 12.2), which had a diminution of 17.7% in 2020, when compared to the previous year.

Scope 3 emissions related to business travel and employee commuting (home-work) were drastically reduced in 2020 considering that, from March on, the employees who worked at the company’s headquarters and used the chartered buses for commuting began working remotely from their homes, zeroing the emissions from this source since then. The same impact occurred on business trips, which were also cancelled from March on.



## NON-KYOTO EMISSIONS

The emissions not covered by the Kyoto Protocol consist of fugitive emissions from small gas leakages in air conditioning equipment whose refrigerant fluid is HCFC-22 (popularly known as R22). The table below presents the emissions for this gas.

GAS	EMISSIONS (tCO <sub>2</sub> e)
HCFC-22 (R22)	295.826



## OTHER BREAKDOWNS

### Emissions outside Brazil

The company has no emissions outside Brazil.

### Emissions per operating unit

The company does not have operating units with Scope 1 emissions exceeding 10,000 tCO<sub>2</sub>e, and thus no disaggregated emissions per operating unit are reported.

# EMISSIONS COMPENSATION

## Compensation of 3,000 tons of carbon.

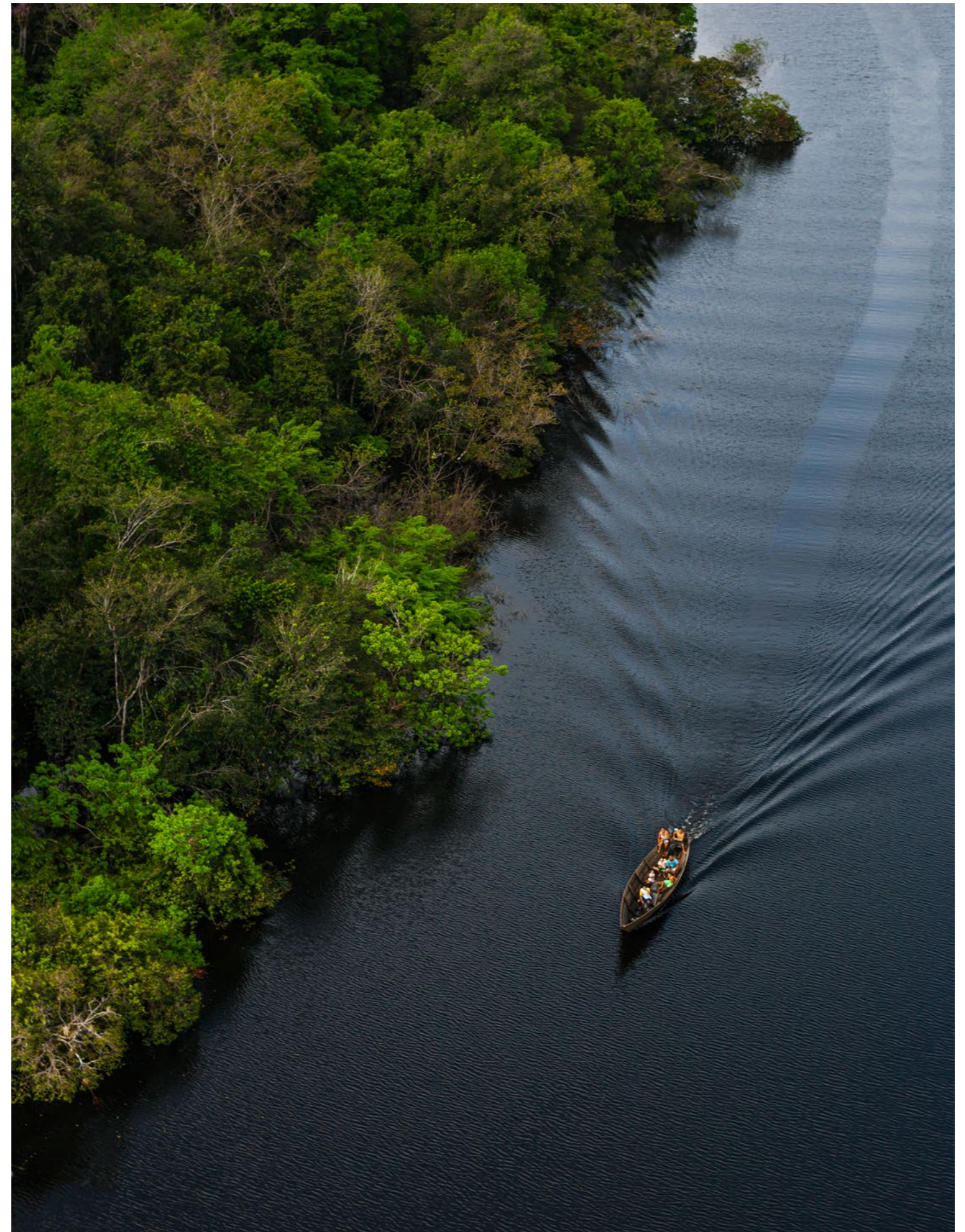
Following the company's commitment to properly manage its greenhouse gas emissions, since 2019 it has been compensating part of the Scope 1 emissions on a voluntary basis.

In 2020, 3,000 tons of carbon were compensated through purchasing of carbon credits from two projects:

- > 750 carbon credits from the REDD+ Jari-Pará project, which prevents deforestation in the Amazon forest. The credits were provided by Biofílica. The voluntary cancellation certificate can be found in Annex III.
- > 2,250 carbon credits from the Bandeirantes Landfill Gas to Energy project, which captures and burns methane in a landfill for power generation. The credits were provided by Way Carbon. The voluntary cancellation certificate can be found in Annex IV .

 **750**  
carbon credits  
from REDD+ Jari-Pará project

 **2,250**  
carbon credits  
from Bandeirantes Landfill Gas to Energy project



## ADDITIONAL INFORMATION

### Strategies and targets for reducing GHG emissions

Enel Distribuição São Paulo is committed to reducing its greenhouse gas emissions, as expressed in the **Commitment Statement on Climate Change** (Annex II), which includes reducing its emissions as a commitment of the company.

Annually, GHG emission reduction targets are established, based on the performance of the previous year, for the main sources of Scope 1 and 2 emissions: fuel consumption by the fleet, SF6 gas leaks and total losses in distribution. These goals are also monitored through the “objectives, goals and indicators” of the Company’s Integrated Management System.

The company does not have medium and long-term emission reduction targets yet, still it is internally developing a proposal that is expected to be approved by next year.

### GHG emission monitoring indicators

Enel Distribuição São Paulo monitors its Scope 1, 2 and 3 emissions monthly, from all identified sources.

It also uses, for external reporting purposes, the emissions indicator (Scope 1 + Scope 2 emissions) divided by distributed energy.

### Uncertainties, exclusions, limitations, or observations

No emission source was excluded from the GHG emissions inventory. No changes were made in the methodology of obtaining and consolidating the primary data in relation to the inventory of the previous year.

Due to the pandemic-imposed limitations brought by Covid-19, the verification visits to the company’s operational facilities were carried out remotely.



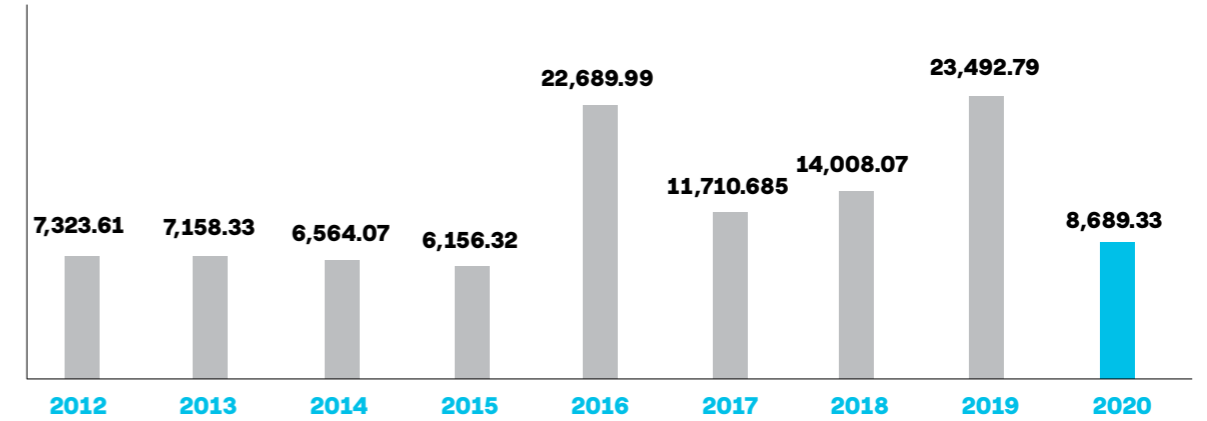
# EMISSION HISTORY

This chapter presents the greenhouse gas emissions and removals of Enel Distribuição São Paulo since the beginning of the monitoring, as well as the compensation history. Then, some general comments and explanations are drawn about the annual variations in emissions and removals.

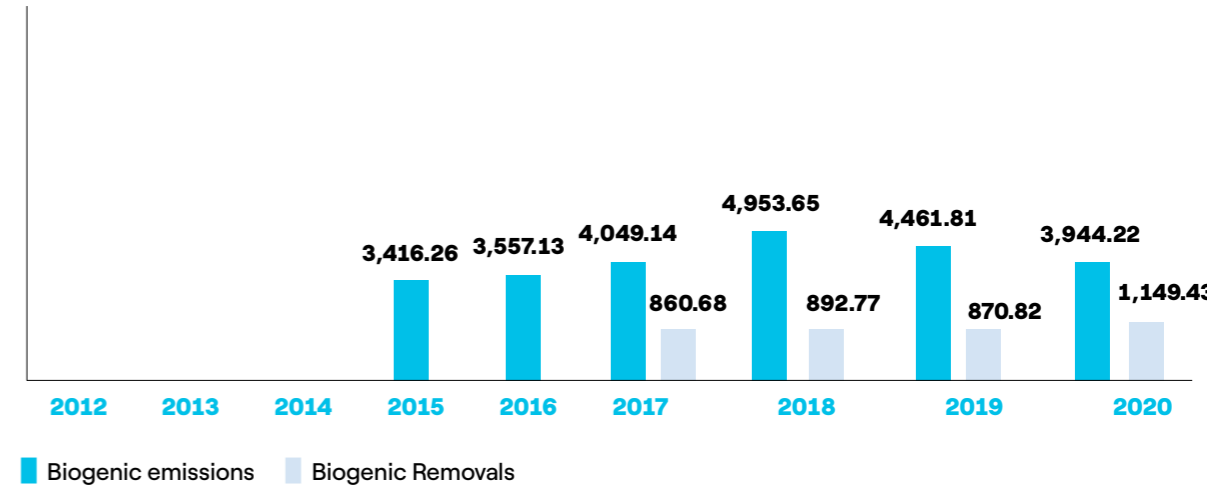


## Scope 1 emissions and removals

**Scope 1 emissions** (tCO<sub>2</sub>e)



**Scope 1 biogenic emissions and removals** (tCO<sub>2</sub>e)



There are two main sources of Scope 1 emissions in Enel Distribuição São Paulo: the fleet and the vegetation suppression.

The vegetation suppressions, whose emissions are accounted for in the land use change item, vary greatly from year to year, depending on the company's operational needs. These emissions may account for more than 60% of Scope 1 emissions – as occurred in 2016 and 2019, when more vegetation was suppressed – or about 15% of Scope 1 emissions – as occurred in 2020, when a smaller area was suppressed. Emissions related to land use change began to be accounted for in 2016,

and as a result, the company's emissions pattern drastically rose. Prior to this date this report was not required by the GHG Protocol methodology.

The emissions related to the fleet, accounted for in the mobile combustion item, have been reduced over time, mainly due to the company's initiatives to reduce fuel consumption in the fleet, which consists in the shift of light, utility and heavy vehicles for newer and more efficient models, training and awareness campaigns, and exchange of fossil fuel for renewable ones in the light fleet – where this exchange is possible.

Fugitive emissions have increased in recent years for two main reasons. The first is the company's R22 Elimination Plan, which consists on the exchange of all air conditioning systems that use R22 gas (ozone-depleting and greenhouse gas, but not accounted for in the GHG emissions inventory because it is non-Kyoto) for systems that use other non-ozone-depleting gases (but that are accounted for in the GHG emissions inventory). Thus, the leakages of R22, which are not included as Scope 1 emissions, become leaks of gases that are included as Scope 1 emissions, increasing the reported fugitive emissions. The second reason is the use of SF6 and the respective accounting of the leakage of this gas from the underground and automation equipment, which started to occur from 2019, resulting in a rise in leakages of SF6 and, consequently, an increase in fugitive emissions.

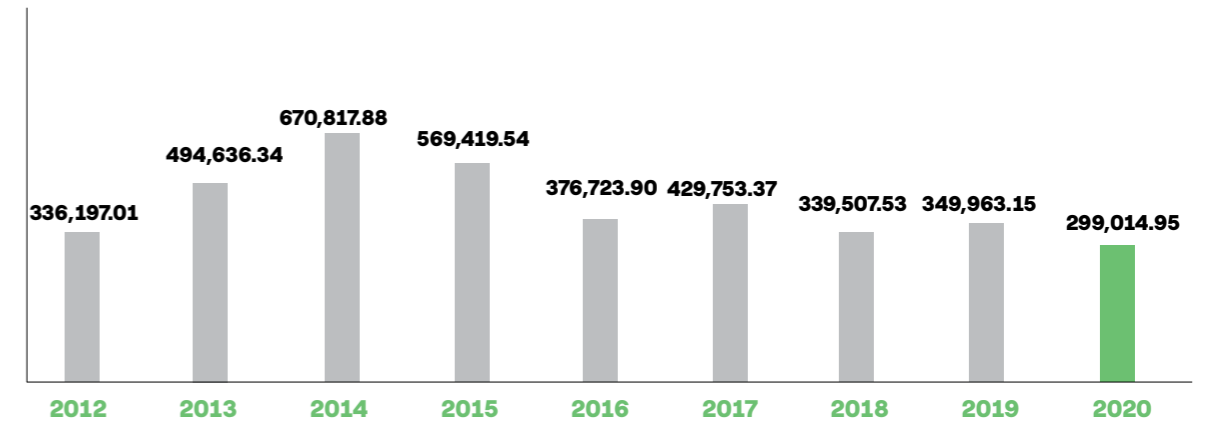
Biogenic carbon emissions are the result of the ethanol portion in the composition of the fuels used by the company. Its quantity follows the emissions of mobile combustion – the fleet.

Carbon removals, referring to the trees planted in the company's environmental compensation projects and other voluntary plantings, began to be accounted for in 2017, through a methodology developed by the company. As the reforested area maintained by the company increases, so does carbon removals. It is important to highlight that the company only includes in its inventory the removals related to the period in which it has operational control over the reforested areas, which usually occurs until the moment when the environmental agency issues the term of compliance for the environmental compensation.

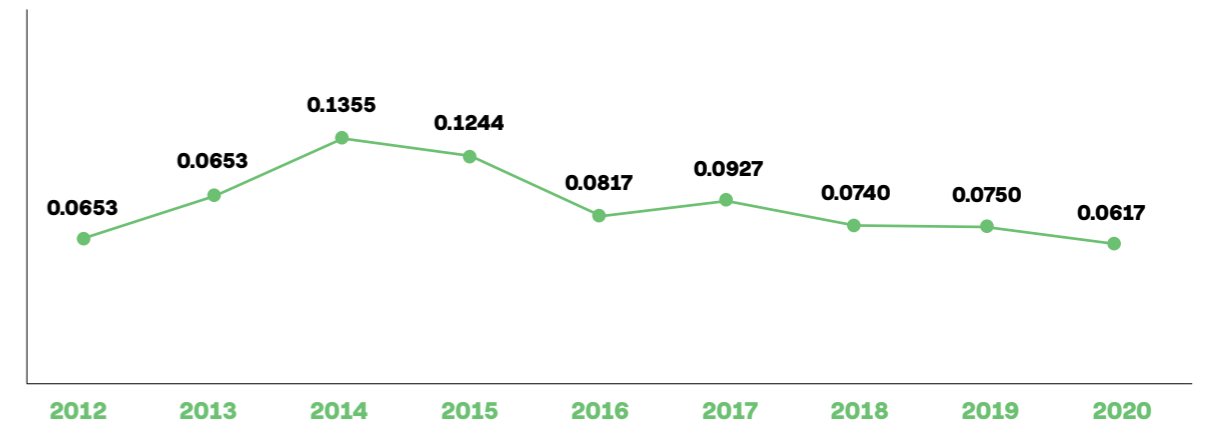


## Scope 2 emissions

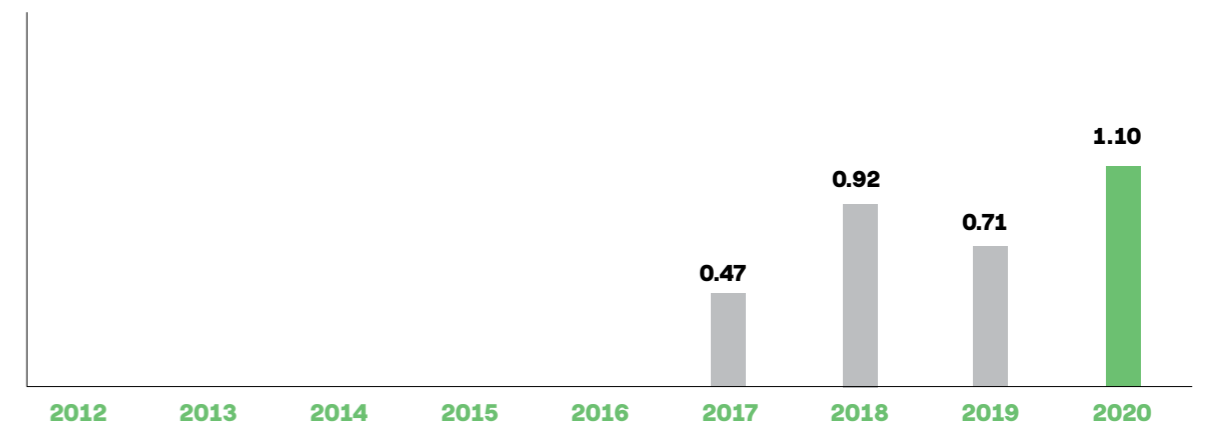
**Scope 2 emissions**  
(tCO<sub>2</sub>e)



**Grid emission factor**  
(tCO<sub>2</sub>/MWh)



**Scope 2 biogenic emissions**  
(tCO<sub>2</sub>e)





The main source of Scope 2 emissions of Enel Distribuição São Paulo are the energy losses, accountable for approximately 99% of the scope. The company develops several activities aimed at reducing energy losses, which varies between approximately 9.5% and 10.5% of the total energy that enters the distribution system. The percentage of losses is a regulatory indicator that must be met, and its reduction is one of the company's strategic objectives. The main factor influencing the percentage of energy lost are the commercial losses (or energy thefts). However, the gross value of losses in MWh is also influenced by the amount of energy entering the distribution system, which is directly proportional to the energy consumed by the customers. Thus, an increase in energy consumption by customers impacts on raise in losses (in MWh) and, consequently, in an increase in Scope 2 emissions. However, since Scope 2 emissions (in MWh) are converted into carbon emissions

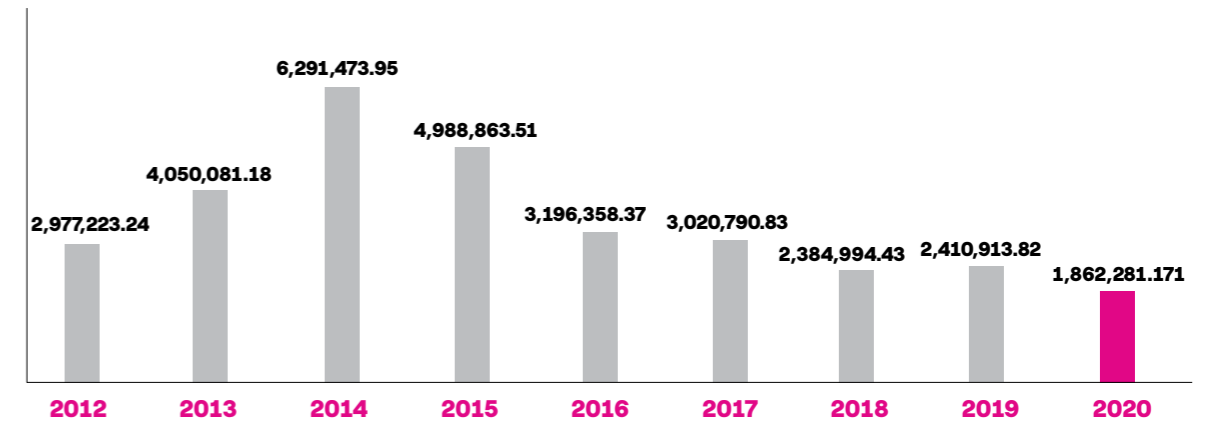
using the grid emission factor, i.e. quantity of tons of carbon that the Brazilian electric system emits to produce each MWh of energy, the crucial factor that explains most of the variation in the Scope 2 emissions is the variation of the grid emission factor. The fluctuation of Scope 2 emissions accompanies the fluctuation of the grid emission factor, as shown in graphs presented in this chapter.

From 2017 on, the emissions of the energy generators of the company's headquarters building (owned by the condominium where the company is located) began to be accounted for, and therefore the introduction of biogenic emissions (referring to the portion of ethanol in the composition of the fuels used) from that year on. A principal fonte de emissão de Escopo 3 da Enel Distribuição São Paulo é a energia vendida para os clientes cativos, responsável por mais de 99,5% do escopo. The

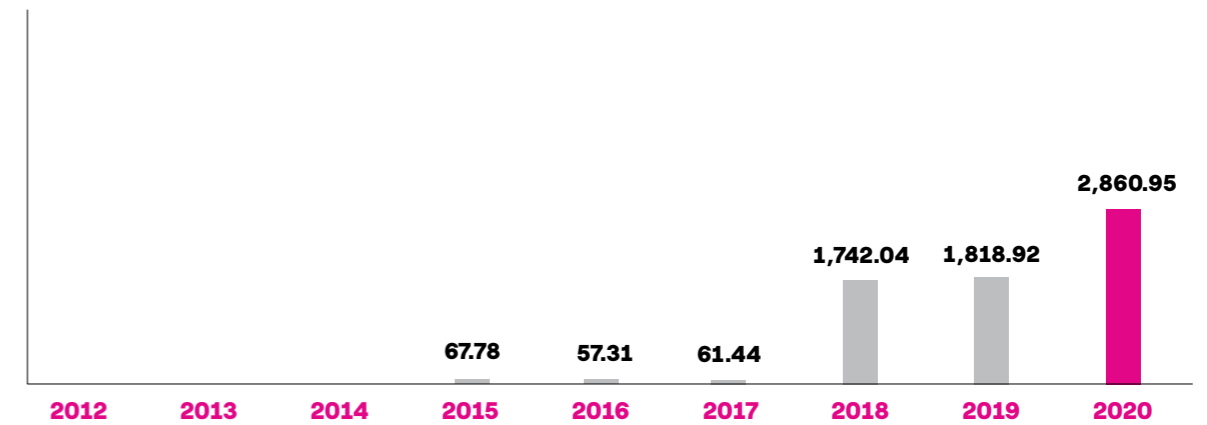


## Scope 3 emissions

**Scope 3 emissions**  
(tCO<sub>2</sub>e)



**Scope 3 biogenic emissions**  
(tCO<sub>2</sub>e)



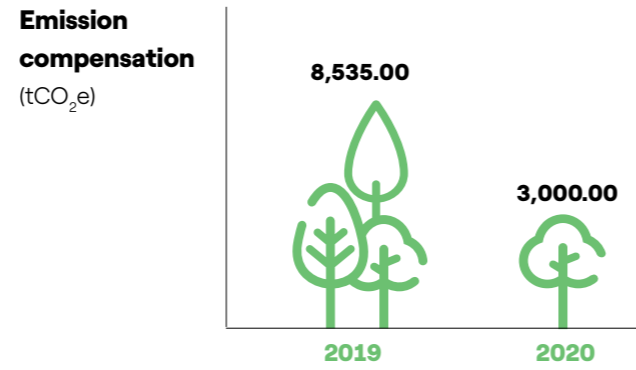
main source of Scope 3 emissions of Enel Distribuição São Paulo is the energy sold to captive customers, accountable for more than 99.5% of the scope. Thus, Scope 3 emissions reflect the behavior of the captive consumer market, in the amount of energy purchased. However, as the energy is converted into carbon emissions using the grid emission factor, it is the crucial element that explains most of the variation in Scope 3 emissions. The fluctuation of Scope 3 emissions accompanies the fluctuation of the grid emission factor.

From 2018 on, the emissions of core business contractors began to be accounted for, and therefore there can be seen an increase in biogenic emissions (referring to the portion of ethanol in the composition of the fuels used) from that year on.

## Emission compensation

Enel Distribuição São Paulo had its first experience with voluntary GHG emission compensation in 2019. At the time, 8,535 tons of CO<sub>2</sub> equivalent were compensated through the purchase of carbon credits. This action was part of the activities of the Enel Distribuição São Paulo's Climate Change Working Group, who studied the best practices in greenhouse gas emissions compensation and worked on a proposal that was appropriate to the context of the organization, aiming to maximize the positive impacts of this initiative.

In 2020, despite the budget constraints imposed by the Covid-19 pandemic and the rising price of the dollar (which also led to an increase in the prices of carbon credits traded), the company chose to maintain this initiative, even if on a smaller scale. It was able to compensate 3,000 tons of CO<sub>2</sub> equivalent of greenhouse gas emissions.



# CONCLUSION

The year 2020 brought several challenges for the company and its people, including the need for a review in the procedures and dynamics of the work activities.

Despite the difficulties, Enel Distribuição São Paulo maintains its commitment to reduce its greenhouse gas emissions, to influence its value chain to do the same, and to adequately manage the risks and opportunities related to climate change.

In 2020, the company was recognized with the “A-” score in CDP Climate Change, which means that the company is at the leadership level in the management of Climate Change, and it crowns the work that has been developed over the years on this subject.

We will continue in 2021 on this journey to build a zero-carbon future.

**We’ll get there together!**



# ATTACHMENTS

**Annex I** - Declaration of verification of the inventory of greenhouse gas emissions

**Annex II** - Commitment Statement on Climate Change

**Annex III** - Certificate of voluntary cancellation of carbon credits - REDD+ Jari-Pará Project


**Annex IV** - Certificate of voluntary cancellation of carbon credits - Bandeirantes Landfill Gas to Energy Project and Climate Friendly Company Certificate

**Annex V** - Verification Report - REDD+ Jari-Pará Project

**Annex VI** - Verification Report - Bandeirantes Landfill Gas to Energy Project



**Annex I - Declaration of verification of the inventory of greenhouse gas emissions**



## DECLARAÇÃO DE CONFORMIDADE Conformity Declaration

### Verification Statement

**Nº 367.007/21**

This **Verification Statement** documents that ABNT performed verification activities in compliance with the standard ISO 14064-3: 2007 and the verification specifications of the Brazilian GHG Protocol Programme.

<b>Eletropaulo Metropolitana Eletricidade de São Paulo S.A. (Enel Distribuição São Paulo)</b>
Responsible for Inventory: <b>Natália Ribeiro Cruz</b>
E-mail: natalia.ribeiro@enel.com

<b>Associação Brasileira de Normas Técnicas – ABNT</b>
Leader Verifier: <b>Mariana Fellows Garcia</b>
E-mail: mfellows1@gmail.com

The Greenhouse gases (GHG) Emissions reported by **Eletropaulo Metropolitana Eletricidade de São Paulo S.A. (Enel Distribuição São Paulo)** in its emissions inventory from January 1<sup>st</sup> to December 31<sup>rd</sup>, **2020**, are verifiable and meet the requirements of the standard ISO 14064-1: 2007 and the Brazilian GHG Protocol Programme, detailed in the Specifications of the Brazilian GHG Protocol Programme accounting, quantification and disclosing of Corporate Greenhouse Gas Emissions.




Confidence level

ABNT has assigned the following level of assurance to the verification process:

Verification with **limited** level of assurance.  
 "There is no evidence that the **Eletropaulo Metropolitana Eletricidade de São Paulo S.A. (Enel Distribuição São Paulo)** greenhouse gas inventory for **2020** is not materially correct, is not a fair representation of the GHG data and information and has not been prepared in accordance with the Specifications of the Brazilian Programme."

The boundaries of the verification process were:  
 The minimum number of visits to the facilities has not been reached, as the verification was done remotely, because of the covid-19 pandemic, as allowed by the PBGHGP Team

**ABNT** Associação Brasileira de Normas Técnicas  
 Av. Treze de Maio, 13 – 28º Andar – Centro – Rio de Janeiro – RJ – CEP 20031-901  
 Rua Conselheiro Nebias, 1.131 – Campos Eliseos – São Paulo – SP – CEP 01203-002

## DECLARAÇÃO DE CONFORMIDADE Conformity Declaration

### Verification Statement

Verification Scope Description

The inventory of **2020** of **Eletropaulo Metropolitana Eletricidade de São Paulo S.A. (Enel Distribuição São Paulo)** has been verified within the following scope:

Organizational boundaries	Operational boundaries
<input checked="" type="checkbox"/> Control approach	<input checked="" type="checkbox"/> Scope 1
<input type="checkbox"/> Equity share approach	<input checked="" type="checkbox"/> Scope 2
	<input checked="" type="checkbox"/> Scope 3

Were excluded from the verification: N/A

Visited installations

Installation list visited during the verification process:  
 The verification took place on 17 and 18 and 20 to 22<sup>nd</sup> March, 2021 remotely.



Total verified emissions from entire Organization  
(Control approach)

GHG	Metric Tons of CO2 equivalent (tCO2e)			
	Scope 1	Scope 2 Location-based method	Scope 2 Market-based method	Scope 3 (if applicable)
CO <sub>2</sub>	7.127,513	299.014,924	-	1.861.511,229
CH <sub>4</sub>	31,500	0,025	-	639,400
N <sub>2</sub> O	95,956	0,000000	-	105,492
HFCs	522,358	-	-	25,050
PFCs	0,000000	-	-	0,000000
SF <sub>6</sub>	912,000	-	-	0,000000
NF <sub>3</sub>	0,000000	-	-	0,000000
<b>TOTAL</b>	<b>8.689,327</b>	<b>299.014,949</b>	<b>-</b>	<b>1.862.281,171</b>
Biogenic CO <sub>2</sub>	3.944,217	1,095	-	2.860,954

Total verified removals from entire Organization  
(Control approach)

GHG	Remoção de CO <sub>2</sub> biogênico (tCO <sub>2</sub> e)			
	Scope 1	Scope 2 Location-based method	Scope 2 Market-based method	Scope 3 (if applicable)
Biogenic CO <sub>2</sub>	1.149,429	-	-	-


**ABNT** Associação Brasileira de Normas Técnicas  
 Av. Treze de Maio, 13 – 28º Andar – Centro – Rio de Janeiro – RJ – CEP 20031-901  
 Rua Conselheiro Nebias, 1.131 – Campos Eliseos – São Paulo – SP – CEP 01203-002



**Annex II – Commitment Statement on Climate Change**

INTERNAL



**Commitment Declaration on Climate Change**  
*Enel Distribuição São Paulo*

Enel Distribuição São Paulo is committed to:

**1. ENGAGEMENT**

Contributing to a low-carbon economy, seeking to influence public policies, business forums and organized civil society, and to develop strategic partnerships that contribute to the promotion of the climate agenda.

**2. REDUCTION OF GHG EMISSIONS**

Actively pursuing the reduction of GHG emissions in our activities, through the priority use of renewable energies (fuels), the reduction of representative emission sources, the promotion of energy efficiency in the value chain, and the prioritization of suppliers with good practices in greenhouse gas (GHG) and climate risks management.

**3. INNOVATION**

Promoting strategic solutions that generate value for our stakeholders, considering risks, opportunities and trends, for the climate change adaptation and mitigation in smart cities, adopting assessment instruments to support business decisions.

**4. TRANSPARENCY**

Periodically publishing the GHG Emissions Inventory and the actions that the company develops regarding the commitments on adaptation and mitigation related to climate change.

**Annex III – Certificate of voluntary cancellation of carbon credits – REDD+ Jari-Pará Project**




**Certificate of Verified Carbon Unit (VCU) Retirement**

Verra, in its capacity as administrator of the Verra Registry, does hereby certify that on 11 Dec 2020, 750 Verified Carbon Units (VCUs) were retired on behalf of:

Enel Distribuição São Paulo

Project name:  
Jari/Pará REDD+ Project

VCU serial number:  
9205-74283660-74284409-VCS-VCU-262-VER-BR-14-1811-08072015-07072016-0

**Additional Certifications:**

Additional details on this retirement can be found on the Verra Registry.



**Annex III - Certificate of voluntary cancellation of carbon credits - REDD+ Jari-Pará Project**

**Annex IV - Certificate of voluntary cancellation of carbon credits - Bandeirantes Landfill Gas to Energy Project and Climate Friendly Company Certificate**

# CERTIFICADO




COD: AC20208

O PROGRAMA AMIGO DO CLIMA certifica que a **ENEL Distribuição São Paulo (Eletropaulo Metropolitana Eletricidade de São Paulo S.A.)** compensou as emissões de Gases de Efeito Estufa referentes ao Escopo 1 no ano de 2020. Foram compensadas **2250 tCO<sub>2</sub>e** através do cancelamento voluntário de créditos de carbono no âmbito do Mecanismo de Desenvolvimento Limpo (MDL) vinculado à Convenção Quadro das Nações Unidas sobre Mudança do Clima (UNFCCC). Detalhes sobre essa ação de responsabilidade climática podem ser acessados pelo website do programa [www.amigodoclima.com.br](http://www.amigodoclima.com.br), utilizando o código de rastreamento **AC20208**.

Belo Horizonte, 15 de dezembro de 2020.



Felipe Bittencourt  
Programa Amigo do Clima



**United Nations**  
Framework Convention on  
Climate Change

Date: 09 December 2020  
Reference: VC/0484/2020

## VOLUNTARY CANCELLATION CERTIFICATE

**Presented to:**  
CDM Project 0164: Bandeirantes Landfill Gas to Energy Project (BLFGE)

**Reason for cancellation:**  
Cancelamento voluntário em nome da Enel Distribuição São Paulo (Eletropaulo Metropolitana Eletricidade de São Paulo S.A.) para compensação de emissões de gases de efeito estufa de escopo 1 relativas ao ano de 2020. / Voluntary cancellation on behalf of Enel Distribuição São Paulo (Eletropaulo Metropolitana Eletricidade de São Paulo S.A.) to offset scope 1 greenhouse gas emissions of 2020.


---

**Number and type of units cancelled**

Start serial number: BR-5-93571180-1-1-0-164  
End serial number: BR-5-93573429-1-1-0-164

**2,250 CERs**  
Equivalent to 2,250 tonne(s) of CO<sub>2</sub>

The certificate is issued in accordance with the procedure for voluntary cancellation in the CDM Registry. The reason for cancellation included in this certificate is provided by the canceller.





Annex V – Verification Report – REDD+ Jari-Pará Project

**VCS** VERIFICATION REPORT: VCS Version 3

# VERIFICATION REPORT JARÍ/PARÁ REDD+ PROJECT



<b>Project Title</b>	Jari/Pará REDD+ Project
<b>Version</b>	1
<b>Report ID</b>	18BQ41MD

<b>Report Title</b>	VCS Verification Report Jari/Pará REDD+ Project
<b>Client</b>	Bioflica Investimentos Ambientais S.A
<b>Pages</b>	55
<b>Date of Issue</b>	27-11-2019
<b>Prepared By</b>	RINA Services S.p.A. (RINA)
<b>Contact</b>	Via Corsica 12 – 26124 GENOVA (Italy), +39 0105385730 ghg_services@rina.org <a href="http://www.rina.org">www.rina.org</a>
<b>Approved By</b>	<b>Laura Severino</b> (Authorized officer signing for the DOE) Head of Certification Innovation & Sustainability Unit 
<b>Work Carried Out By</b>	Lead Assessor and Technical Expert: Talita C. BECK (Rina Brazil – external auditor) Technical Reviewer and Technical Expert: Rekha Menon (Rina Índia –

v3.4 1

**VCS** VERIFICATION REPORT: VCS Version 3

external TR)

**Summary:**

RINA Services S.p.A. (RINA), commissioned by Bioflica Investimentos Ambientais S.A., verified the greenhouse gas emission reductions reported for the project activity “REDD+ Jari/Pará Project” in Brazil, with regards to relevant requirements for VCS rules.

The objective of the verification is to have an independent review ex post determination of the monitored reductions in GHG emission reductions. Verification was conducted using RINA procedures in line with the requirements specified in the VCS Version 3 Requirements and applying standard auditing techniques. The verification consisted of desk review, on-site assessment and the resolution of outstanding issues and the issuance of the final verification report and certification

The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable VCS requirements in order to be certified.

This is the first verification assessment of REDD+ Jari/Pará Project for the Monitoring Period of 08/07/2014 to 22/10/2017. RINA has simultaneously carried out the Validation and Verification visits for this project and will issue separate Validation and Verification Reports.

The GHG emission reductions were calculated on the basis of the approved methodology VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012 and the monitoring plan included in the validated VCS PD v5.1 of 07/10/2019.

In conclusion, it is RINA’s opinion that the project activity “REDD+ Jari/Pará Project” in Brazil, meets all relevant requirements for VCS standard and guidelines and correctly applies the baseline and monitoring methodology VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012. The monitoring system is in place and the emission reductions are calculated without material misstatement. Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 08/07/2014 to 22/10/2017 amount to 1,012,082 tCO<sub>2</sub>e and that tradable VCU are 900,753tCO<sub>2</sub>e.

v3.4 2



**VERIFICATION REPORT: VCS Version 3**

**Abbreviations**

AFOLU	Agriculture, Forestry and Other Land Use
AUD	Avoided Unplanned Deforestation
AUTEX/ AUTEF	Authorisation for the Exploration of Sustainable Forest Management Plan (from the Portuguese Autorização para Exploração de Plano de Manejo Florestal Sustentado)
CAR	Corrective Action Request
CL	Clarification Request
CO2	Carbon Dioxide
CO2e	Carbon dioxide equivalent
GHG	Greenhouse Gas
I	Interview
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute for the Environment and for the Renewable Natural Resources)
INPE	Instituto Nacional de Pesquisas Espaciais (National Institute for Space Research)
IPCC	Intergovernmental Panel on Climate Change
LAR	Rural Activity License (from the Portuguese Licença de Atividade Rural)
PA	Project Area
PD	Project Description
PP	Project Proponent
Pronaf	National program for strengthening of agriculture (from the Portuguese: Programa nacional de fortalecimento da agricultura)
NTFPs	Non-Timber Forest Products
LKB	Leakage Belt
REDD	Reduced Emissions from Deforestation and Degradation
RR	Reference Region
SEMAS	Secretariat of Environment and Sustainability of the State of Pará (from the Portuguese Secretaria do Meio Ambiente e Sustentabilidade)
SFMP	Sustainable Forest Management Plan
UPA	Annual Production Unity (from the Portuguese Unidade de Produção Anual)
VCS	Verified Carbon Standard
VCUs	Voluntary Carbon Units



**VERIFICATION REPORT: VCS Version 3**

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**VERIFICATION REPORT: VCS Version 3**

**1 INTRODUCTION**

**1.1 Objective**

RINA has been commissioned by “Biofíllica Investimentos Ambientais S.A.” to perform an independent verification of its VCS project, “Jari/Pará REDD+ Project”, for the reported GHG emission reductions for the monitoring period between July 8th, 2014 to October 22nd, 2017. The VCS projects must undergo independent third party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs/VCUs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD) and that all physical features (technology, project equipment, and monitoring equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Voluntary Emission Reductions (VERs/VCUs) without any double counting, and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

**1.2 Scope and Criteria**

The verification scope is:

- to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- to evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- to verify that reported GHG emission data is sufficiently supported by evidence.

The project is assessed against the requirements of VCS version 3 and related rules and guidance. RINA has, based on the recommendations in the latest version of CDM Validation and Verification Manual, employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring.



VERIFICATION REPORT: VCS Version 3

1.3 Level of Assurance

All the revisions of the verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent RINA instructions, with reasonable level of assurance.

The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for VCS and CDM validation and verification.

The verification team and the technical reviewers consist of the following personnel.

Role	Last Name	First Name	Country
Lead Assessor and Technical Expert – Scope 14.1	C. BECK	Talita	External Auditor - Rina Brazil
Technical Reviewer and Technical Expert – Scope 14.1	MENON	Rekha	External – Rina India

1.4 Summary Description of the Project

The primary objective of the Jari/Pará REDD+ Project is to avoid unplanned deforestation (AUD) in the 496,988 ha of the Project Area (PA), shown in figures 10 and 15 of the PD v4.1 /7/, and validated in sections 1.12.47 and 1.13.3 of the Validation Report v02Aa /8/ to be inside the following properties (also shown in table 16 of the PD v4.1./7/): Alzira Antunes Martins, Ayres Julio da Fonseca, Benedito de Oliveira Feitosa, Cajueiro Serra de Almeirim, Campo Saracura, Castanhal do Urucurituba, Crispim Joaquim de Almeida, Fazenda Saracura, Flávia Freitas de Almeida Maia, José Fernandes Fonseca, Maria de Nazare de Almeida Guedes, Panama ou Mapau, Pau Grande, Santo Antonio da Cachoeira, Santo Antônio do Urucurituba, Serra Grande, Terra Preta do Castanhal.

The process carried out to validate the coordinates of these properties are described in section 1.13.3 of the Validation Report v02Aa /8/. The coordinates, shown in fig.15 of the PD v4.1 /7/, were confirmed to be situated in the municipality of Almeirim, in the State of Pará, Legal Amazon Region of Brazil. This information is also shown in section 1.7 of the Monitoring Report /10/.

The project proponents are Biofílica Investimentos Ambientais S.A., Jari Celulose S.A. and Fundação Jari. The proponents started the implementation (initial studies, communities mobilisation and agroforest systems) of a multiple use forest management in the area, with non-timber forest products extraction for local communities and sustainable forest timber extraction for Jarí Celulose, as well as extra monitoring activities for the protection of the forest in the project area.



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Project Proponent(s)	Biofílica Investimentos Ambientais S.A., Jari Celulose S.A. and Fundação Jari.
Project Title	Jari/Pará REDD+ Project
Location of the project	The Project area Properties: Alzira Antunes Martins Ayres Julio da Fonseca Benedito de Oliveira Feitosa Cajueiro Serra de Almeirim Campo Saracura Castanhal do Urucurituba Crispim Joaquim de Almeida Fazenda Saracura Flávia Freitas de Almeida Maia José Fernandes Fonseca Maria de Nazare de Almeida Guedes Panama ou Mapau Pau Grande Santo Antonio da Cachoeira Santo Antônio do Urucurituba Serra Grande Terra Preta do Castanhal  Municipality: Almeirim
Methodology(ies)	VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012
Sectoral Scope(s)	14
Project's crediting period	from 08/07/2014 until 07/07/2044



## VERIFICATION REPORT: VCS Version 3

### 2 VERIFICATION PROCESS

This is the first verification assessment of Jari/Pará REDD+ Project for the Monitoring Period of 08/07/2014 to 22/10/2017. The Project is being verified by RINA who also carried out the Validation. RINA will issue almost simultaneously but separately Validation /08/ and Verification Reports.

#### 2.1 Method and Criteria

Verification was conducted using RINA's procedures in line with the requirements specified in the VCS Requirements, (i.e. VCS Program Guide v3.7 /1/, VCS Validation and Verification Manual v3.2 /3/ and AFOLU Requirements v3.6 /5/). The GHG emission reductions are on the basis of the approved baseline and monitoring methodology VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012 /4/.

The verification consisted of the following three phases

- Document review;
- On site assessments including inspections and interviews, and site assessments using satellite image and GIS (all data, no sampling);
- Resolution of any material discrepancy and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

#### 2.2 Document Review

The monitoring report (MR) versions 1 to 4 of 29/10/2019 /10/, the emission reduction calculations spreadsheet version 3 and v4 /11/, were assessed against documents referenced below as part of the verification. All documents are cited throughout the report.

Below is a list of documents reviewed during verification:

- /1/ VCS Program Guide – Requirement documents v3.7 of 21/06/2017
- /2/ VCS Standard Version 3.7 of 21/07/2017
- /3/ VCS Validation and Verification Manual v3.2 of 19/10/2016;
- /4/ VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012
- /5/ AFOLU Requirements, v3.6 of 21/06/2017
- /6/ AFOLU\_Non-Permanence\_Risk\_Tool\_v3.3 of 16/10/2016
- /7/ PD\_JariPara\_VCS\_CCB\_v.3.0\_eng\_4.1 dated 01/07/2019  
PD\_JariPara\_VCS\_CCB\_v.3.0\_eng\_5.1 dated 07/10/2019
- /8/ Validation Report of the Jari/Pará REDD+ Project v03Aa of 15/10/2019
- /9/ VCS-Monitoring-Report-Template-v3.4  
Jari/Pará REDD+ Project Monitoring Report V1 13/11/2018
- /10/ Jari/Pará REDD+ Project Monitoring Report V2 02/09/2019  
Jari/Pará REDD+ Project Monitoring Report V3 22/10/2019  
Jari/Pará REDD+ Project Monitoring Report V4 29/10/2019



## VERIFICATION REPORT: VCS Version 3

- Jari/Pará REDD+ Project Monitoring Report V5 24/11/2019
- /11/ ER Calculations\_VCS MonitoringReport JariPara\_2015\_17\_v3  
ER Calculations\_VCS MonitoringReport JariPara\_2015\_17\_v4
- /12/ Jari Para - VCS-Risk-Report-Calculation-Tool-v3.2
- /13/ Rural Activity License N°651 of July 2009
- /14/ Rural Activity License N° 3152 of October 2014  
Jari/Amapá REDD+ Project VCS webpage  
[https://www.vcsprojectdatabase.org/#/project\\_details/1115](https://www.vcsprojectdatabase.org/#/project_details/1115) last accessed  
13/08/2016
- /15/ Casa da Floresta "Regional contextualisation and work plan - socioeconomic module - REDD+ Project Jari Pará" 2016.
- /16/ Casa da Floresta "Final Report Biodiversity Assessment - REDD+ Jari Pará Project" 2016
- /17/ Casa da Floresta "Final Report Characterization of the Physical Environment - REDD+ Jari Pará Project" 2016
- /18/ Jari/Pará Monitoring Bulletin 2015, 2016 and 2017 dated August 2018
- /19/ Invasion records Year 2015 (from the portuguese "Planilha de Invasão - ANO 2015")
- /20/ Invasion reports Year 2016 1st semester
- /21/ Invasion reports Year 2016 2nd semester
- /22/ PRODES DIGITAL WEBPAGE [www.dpi.inpe.br/prodesdigital](http://www.dpi.inpe.br/prodesdigital) last accessed on  
13/08/2019
- /23/ VCS Errata-and-Clarifications-VM0015-v1.1-03-NOV-2017
- /24/ Validação\_prodes\_1.0\_excel file
- /25/ Prodes\_PA\_excel file
- /26/ Prodes\_LKB\_excel file
- /27/ Analise PRODES\_AP\_LKB\_excel file
- /28/ Main road maps for UPA 9 Estradas\_09\_areaprinshp
- /29/ Secondary road maps for UPA 9 Estradas\_09\_arearamalshp
- /30/ Forest patios area register (Patios florestais por UPA.xlsx)
- /31/ Jari Para - VCS-Non-Permanence-Risk-Report\_4.0
- /32/ PRODES\_AP\_data
- /33/ Orsa Florestal - Relatório de Atividade Pós-Exploratório POA 06 of 08/07/2013
- /34/ Orsa Florestal - Relatório de Atividade Pós-Exploratório UPA 07 of 18/10/2013
- /35/ SEMAS - Processing History of Annual Production Unit 08 created in 19/11/2012  
SEMAS - AUTEF (from the Portuguese, Authorisation for the Exploration of Sustainable Forest Management Plan) for UPA 08 dated 27/06/2013 valid till  
27/06/2014
- /36/ SEMAS - AUTEF Extention (from the Portuguese, Authorisation for the Exploration of Sustainable Forest Management Plan) for UPA 08 dated 27/06/2013 valid till  
27/06/2015
- /37/ SEMAS - Processing History of Annual Production Unit 09 created in 02/04/2014  
SEMAS - AUTEF (from the Portuguese, Authorisation for the Exploration of Sustainable Forest Management Plan) for UPA 09 dated 14/10/2014 valid until  
14/10/2015
- /38/ SEMAS - AUTEF (from the Portuguese, Authorisation for the Exploration of Sustainable Forest Management Plan) for UPA 09 dated 21/02/2017 valid until  
21/02/2018
- /39/
- /40/
- /41/



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- /42/ State Justice Court of Pará - Judgement rendered in September 2016.
- /43/ Jarí Celulose - Surveillance of the land area ver.16 of 28/11/2018
- /44/ Jarí Celulose - Surveillance of the land area ver.11 of 25/09/2013
- /45/ Grupo Jarí - Surveillance of the land area report of 19/05/2015  
Grupo Jarí - Surveillance of the land area report of 15/06/2015  
Grupo Jarí and Fundação Jarí - Social Environmental Agents Report for the II Quarter of 2017
- /46/ Grupo Jarí and Fundação Jarí - Social Environmental Agents Report for the IV Quarter of 2017
- /47/ Land surveillance of High Conservation Value Areas - Planalto Springs - (from the Portuguese "Vistoria Fundiaria AAVC - Nascente Planalto - Maio - 2016"
- /48/ Record of land invasions 2nd Semestre 2014 (from the Portuguese "Planilha Invasões - 2o Semestre - 2014")
- /49/ Fundação Jarí. Human sustainable development in the Amazon, Impact Report 2016
- /50/ Fundação Jarí. Human sustainable development in the Amazon, Impact Report 2017
- /51/ Sustainable Forest Management Plan dated 2016
- /52/ Emater and Fundação Jarí - ATER first semester of 2015 report
- /53/ Pronaf - self aptitude statement filled by José Almir Caldeira Brazão, small land holder of Santo Antonio community on 03/06/2017
- /54/ CDM Guidelines on the assessment of different types of changes from the project activity as described in the registered PDD of 17 July 2009.
- /55/ Jarí Foundation Website page describing prizes wined – Year 2005  
[http://www.fundacaojari.org.br/pt/linha\\_do\\_tempo.aspx](http://www.fundacaojari.org.br/pt/linha_do_tempo.aspx) last accessed 24/11/2019.
- /56/ UPA 09 roads and patios map protocolled at SEMAS by Jarí.  
Patrimonial Surveillance Activity Control 2014
- /57/ Patrimonial Surveillance Activity Control 2015  
Patrimonial Surveillance Activity Control 2016  
Patrimonial Surveillance Activity Control 2017

2.3 Interviews

The key personnel interviewed and the main topics of the interviews are summarized in the table below:

Date	Name and Role	Organization	Topic
11/12/2018 and 12/12/2018	Arnaldo Santos Agronomist	Fundação Jarí	Relationship Jarí and local communities.
11/12/2018	José Jussian da Silva Native forestry technician	Fundação Jarí and local resident	Survey of potential areas of Brazil nuts
11/12/2018	Otacílio França Alves Community leader	Cafezal  (community in the PA directly involved in the	Community activities and views regarding the Jarí Para REDD+ Project



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Date	Name and Role	Organization	Topic
11/12/2018	Sidiana Paixão  Teacher	Cafezal  (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Jarí Para REDD+ Project and education
11/12/2018	Maria Zilda  Resident	Cafezal  (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Jarí Para REDD+ Project and gender equality
11/12/2018	Edson Fonseca Santos  Community leader	Recreio  (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Jarí Para REDD+ Project
11/12/2018	Iderlio G da Silva  President of the Amoruré Association	Recreio  (community in the PA directly involved in the activities of the Jarí Para REDD+ Project)	Jarí Para REDD+ Project
12/12/2018	Davi  Environmental Department	Jarí Celulose	Environmental Licenses
18/12/2018	Edson Francisco dos Reis Lanes Patrimonial Security	Jarí Celulose and Fundação Jarí	Forest and biodiversity patrolling
14/02/2019	Luana Cordeiro Analist	Biofílica	MR, Satellite data acquisition and processing with GIS (measurement of carbon change), Calibration of data (QA & QC), Records and Storage of data, ER Calculations, Non-permanence risk, Actual implementation as per PD
14/02/2019	Caio Gallego Project Coordenator	Biofílica	Non-permanence risk



**2.4 Site Inspections**

The site inspection of the Project Area in Pará was carried out between 10/12/2018 and 19/12/2018. The onsite visit was performed in order to understand and evaluate the project area and the reference region as well as the leakage belt and leakage management areas.

Unexplored as well as explored parts of the project area were visited in order to visualise biomass and validate the baseline carbon stock estimates that area later used for ER estimates in the verification process too. An interview with Jari security staff was carried out to understand the implementation of the extra activities regarding monitoring and ground patrolling of unplanned deforestation.

The town of Monte Dourado was visited and communities that utilise non-wood-forest-products, involved and not involved in the initial activities of the project activity, were interviewed to make sure practices described in the PD /7/ were in place in the whole of the project zone. Thus, it was possible to assess the condition of the forest areas of the project, the socioeconomic dynamics of the reference region and the field monitoring implementation from data collection up to the production of the Monitoring Report.

The visit to the offices of Jari Celulose and Biofílica in São Paulo were carried out between the 12/02/2019 and 15/02/2019. There the monitoring by remote sensing and GIS analysis were shown to the verification team.

**2.5 Resolution of Findings**

The objective of this phase of the verification is to resolve any outstanding issues, which need to be clarified for RINA's positive conclusion on the monitoring report and emission reductions.

A corrective action request (CAR) is raised if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements, which refer to CDM rules, have been met.

In this verification 8 CARs and 1 CL were identified. These and the resolution of these are included in Appendix 1 of this report.

**2.5.1 Forward Action Requests**



Rina has carried out the Validation activities of Jari/Pará REDD+ Project simultaneously to the activities of the first VCS Verification.

One FAR was raised during the validation, this FAR has to do with extra requirements of the CCB standard, comparing to VCS standard, with regards to effective communities consultation and free prior informed consent, which is not in the VCS standard and therefore is to be resolved by the first verification of the CCB Standard (which can be carried out separately). The text of this FAR can be seen on the validation report /8/ approved, and already registered in the VCS webpage.

One FAR was raised during this first verification. This FAR can be seen in Appendix 1 of this report.

**2.6 Eligibility for Validation Activities**

Rina has carried out the Validation activities of Jari/Pará REDD+ Project simultaneously to the activities of the first VCS Verification. The VCS Validation Report of the Jari/Pará REDD+ Project by Rina /8/ was issued to the client just before the issuance of this Verification Report.

**3 VALIDATION FINDINGS**

For the Validation activities please see VCS Validation Report Jari/Pará REDD+ Project by Rina /8/.

**3.1 Participation under Other GHG Programs**

Not applicable as stated in sections 2.5.12, 2.5.13 and 2.5.14 of the VCS PD of Jari/Pará REDD+ Project the "Jari/Pará REDD+ Project did not receive or sought to be registered in any other GHG program, in addition to submitting the Project to validation and verification in the VCS (Verified Carbon Standard) and CCBS (Climate, Community and Biodiversity Standard)" and the "Project is not intended to generate any other form of environmental credits related to the reductions and removals of GHG emissions claimed under the VCS (Verified Carbon Standard) program."

**3.2 Methodology Deviations**

The VVB observed no methodological deviations during the process of verification of this monitoring period.

**3.3 Project Description Deviations**



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The activity “deforestation monitoring via satellite imagery”, listed in table 10 of the PD/7/, was carried out for the purposes of ERs calculations but not for the generation of the Annual Deforestation Bulletins. The annual bulletins were a short term output, which were implemented in 2018 /19/, and in turn had the following medium term outputs: “greater understanding of deforestation dynamics to conduct a more effective patrimonial surveillance”, “Providing inputs for the design of field interventions” and “Improvement of the techniques of forest monitoring activities”. Because of the delay on the generation of these bulletins, the activity was not reported in the Monitoring Report /10/. This was then justified in section 2.2.2 of the Monitoring Report v 4 of 29th October 2019 /10/.

The VVB checked that this action of internally reporting the location of deforestation was replaced by other deforestation mitigating activities which were not planned to start during this first monitoring period, but to begin after 2019. These actions refer to the theme “*Technical Assistance and Rural Extension (TARE)*” which involved the activities of Strengthening Family Agriculture and Sustainable Extractivism through the implementation of the SAF projects /49//50//52//53/, and the Environmental Education Program, with the holding of workshops for the prevention of environmental degradation by communities /46/.

The VVB then agrees that, the replacement of one activity by another in time, anticipating activities planned for 2019 to 2015 /49//50//52//53/, and the implementation of the activity planned for 2015 in 2018 /19/, show that no impact on additionality occurs. That is, the extra costs with activities like technical assistance for agroforestry, besides the costs with sustainable timber extraction, which are not included in the alternative scenario (the forest management, only with timber extraction) and which help to mitigate deforestation will carry on higher than in the alternative scenario, regardless of changes in implementation dates of such activities, as these are extra activities to forest management.

The VVB also agrees that the change does not impact applicability of the methodology AM0015 /4/ since the project activity continued, throughout the delay, to be “forest protection with controlled logging” and baseline scenario continued as per baseline in the PD v 5.1 /7/. This is therefore in accordance with the VCS Standard v3.7 /2/ and the CDM Guidelines on the assessment of different types of changes from the project activity as described in the registered PDD /54/.

3.4 Grouped Project

This project is not a grouped project. Hence, this section is not applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project area is located within the private properties listed in section 1.4 (Summary Description of the Project Activity) of this report, in the municipality of Almeirim, in the state of Pará. The geographical coordinates of the project are shown in fig.15 of the PD v5.1 /7/ and have been checked during validation, as per Validation Report /8/, which has been carried out at the same time as this verification process.



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The project activity is under sectoral scope 14 (Agriculture, Forestry, Land Use). In accordance with VCS requirements, stipulated in Approved VCS Methodology VM0015, version 1.1./4/ The project proponents are Biofíllica Investimentos Ambientais S.A., Jari Celulose S.A. and Fundação Jari. The project developers are Biofíllica Investimentos Ambientais S.A. in consultation with BRGEO, Harmonia Socioambiental e Florestal Recursos Manejo Brasil Consultoria e Assessoria Ltda. (FRM BRASIL).

The 496,988 ha of the forest in the PA are managed by the project proponents for multiple uses. Project start date is the 8th of July 2014 as per validation report /8/, when an addendum to the contract between Jari and Biofíllica was signed in order to expand the project Jari/Amapá REDD+ Project /15/ into the area held by Jari in the state of Pará.

During the first monitoring period which goes from the Project starting date until 22<sup>nd</sup> of October 2017, besides conducting initial socioeconomic /16/ and environmental studies (including biodiversity assessment of the area) /17//18/, which suggested the types of actions relating to social inclusion aimed at reducing forest loss, the PPs also adopted, since 2015, as seen from surveillance records /45/ new procedures for surveillance /43/ compared to previous version of the same procedure /44/. The VVB confirms that the new procedure /43/ now mentions surveillance activities to be carried out in the REDD+ framework as well as previous patrimonial surveillance activities and that patrol records evidence, with reasonable level of assurance, that the procedures are being put into place /45//47//48/. These records have information on deforestation that can be used to better understand forest loss and its dynamics. This surveillance and its feedback to Fundação Jari’s technical team is listed in table 10 of the PD v5.1 /7/.

The VVB also checked the reports on educational activities about environmental legislation and controlled fire as well as risks of forests uncontrolled fires during 2017 /46/, with the local communities initially involved in the project activities

Despite this connection between evidence of improved patrolling and necessary courses and field patrol actions, for the next verification, the PP is required to make procedures clearer about the feedback that the surveillance team should be giving to the technical teams that work with the local communities, about deforested areas in possession of local communities, as well as the forestry team, already in the procedure “Surveillance of the land area” /43/. A FAR was opened for the next VCS verification (see Appendix 1).

The validation team observed no material discrepancies between the monitoring plan in the PD /7/ and its implementation. Vector data published by PRODES /23/ every year were used by Biofíllica to calculate achieved ERs. A list of the parameters monitored and how they have been verified are presented below in section 4.3 of this report.





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The PP provided the following rural activity licenses for the period: N°651 valid from July 2009 to July 2014 /13/ and N°3152 valid from October 2014 to October 2019 /14/. Furthermore, the following AUTEFS (Authorisation for the Exploration of Sustainable Forest Management Plan) issued by Secretariat of Environment and Sustainability of the State of Pará (SEMAS) were issued for the 2 UPAs (annual production units, logged during the monitoring period): 1) UPA 8 AUTEF N°20140/2013 dated 27/06/2013 valid till 27/06/2014, later extended from 27/06/2014 till 27/06/2015 /37//38/; 2) UPA9 AUTEF N°27936/2014 issued on 14/10/2014 and valid until 14/10/2015 /40/ and AUTEF N°272981/2017 issued on 21/02/2017 and valid till 21/02/2018 /41/.

As per validation report v3 /8/ the VVB saw no evidence that the GHG emission reductions or removals generated by the project have become included in a different emissions trading program or any other mechanism that includes GHG allowance trading.

The VVB confirms that through the verification process it became confident that the PP correctly chose the Contribution to the UN Sustainable Development Goals it helps to achieve. These are listed in table 1 of the Monitoring Report v4 /11/

With regards to sustainable development goal 2, Zero Hunger, the VVB checked the information on the MR v4 /10/ which states that during the monitored years, Fundação Jari carried out the implementation of agroforestry systems (SAFs in Portuguese) in the municipalities of Monte Dourado and Almeirim, contributing to increased productivity and diversification of family production through the rationalized use of already altered areas, combating and mitigating deforestation. The VVB verified this activity through the evidence sent by PPs, Fundação Jari's Impacts Report 2016 /49/ and Impacts Report 2017 /50/. The VVB reviewed this documentation with information regarding the activities of Fundação Jari in those years and confirms that the reports state that the Fundação was successful in helping communities of Almeirim to acquire rural credit to the SAFs in those years in the sum of R\$ 739,253 in 2016 and R\$ 2,105,992.

The VVB also checked Emater and Fundação Jari - ATER first semester of 2015 report /52/ which states the SAFs objectives and brings 2015 results on the Project's actions in the communities of Almeirim and Monte Dourado, more specifically Serra Grande/Recreio Community which is listed in the PD /7/.

Furthermore, the VVB checked one of the self-appraisal statements presented by the PP /53/ as evidence of the assistance Fundação Jari gave to families, small holders of land, in constructing a plan needed to access rural investments and has met and interviewed Fundação Jari's agronomist who liaises with communities.

The statement on sustainable development goal 4, quality education, was checked from reports on educational activities about environmental legislation and controlled fire as well as risks of forests uncontrolled fires during 2017 /46/, with the local communities initially involved in the project activities. These reports have photos, list of attendance and didactic material on the courses.

During the site visit the VVB checked that gender equality, that is, sustainable development goal 5, is supported through the encouragement of woman on consultations, meetings and courses.



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Evidence of responsible consumption and production was obtained from interviewing , Fundação Jari's native forestry technician and local resident who is helping in the survey of potential areas of Brazil nuts.

The Project's main objective is to reduce forest emissions from avoided unplanned deforestation, and in this monitoring period it was seen to reduce 1,012,082 tCO<sub>2</sub> e as will be seen in subsequent sections. It is thus evident that the project contributes to sustainable development goal 13, climate action, and 15 life on land.

Apart from the deviation in dates of the introduction of internal reporting by the Surveillance team with the production of bulletins from the data published by PRODES /23/, already discussed in section 3.3, which does not impact additionality, applicability and baseline scenario, and which has been implemented in 2018 /19/, the VVB confirms that the project has been implemented as per PD v 5.1 /7/.

**4.2 Accuracy of GHG Emission Reduction and Removal Calculations**

• **Baseline Carbon Stock Change:**

The methods and formulae used to calculate total net carbon stock changes in the baseline scenario in the project area in the years 2015, 2016 and 2017 were already checked during validation /8/ and thus, for the verification these values were simply crosschecked with the values in the validated PD /7/. The actual values verified are presented in the table with the ex-ante parameters of section 4.3 of this report below. Since the validation and the verification visits were carried out simultaneously and the estimates in the baseline of the PD /7/ have changed, the estimates of the baseline carbon stock change had to be corrected in the Monitoring Report too so CAR4 was opened. The PPs changed the values of the estimated total net carbon stock changes in the MR v3 /10/ to reflect the ones in the registered PD version 5.1 dated 07/10/2019 /7/. The table in section 4.3 with the ex-ante parameters show both initially reported and actually verified values now in the latest version of the MR v4 /10/.

• **Project Emissions:**

The calculation of the ex post net carbon stock change in the project area under the project scenario is as follows.

$$\Delta CPSPA_t = \Delta CUDdPA_t + \Delta CPAdPA_t - \Delta CPAiPA_t$$



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Where,

**ΔCPSPAt** Sum ex post actual carbon stock changes in the project area at year t; tCO<sub>2</sub>e

**ΔCUDdPA<sub>t</sub>** Total ex post actual carbon stock change due to unavoidable unplanned deforestation at year t in the project area; tCO<sub>2</sub>e

**ΔCPAdPA<sub>t</sub>** Total decrease in carbon stock due to all planned activities at year t in the project area; tCO<sub>2</sub>e

**ΔCPAiPA<sub>t</sub>** Total increase in carbon stock due to all planned activities at year t in the project area; tCO<sub>2</sub>e

As the Project foresees no planned activities that will result in increased carbon stocks the last part of the equation (- ΔCPAiPA<sub>t</sub>) was 0. This is considered conservative by the applied methodology /4/.

**1) Unplanned:**

a) The carbon stock decrease due to unplanned deforestation in the project area was calculated using the following equation:

$$\Delta CUDdPA_t = \sum_{y=1}^t \left( \sum_{icl=1}^{icl} AUDPA_{icl,y} * \Delta Ctot_{icl,t-y} - \sum_{fcl=1}^{fcl} AUDPA_{fcl,y} * \Delta Ctot_{fcl,t-y} \right)$$

Where,

**ΔCUDdPA<sub>t</sub>** Total ex post actual carbon stock changes due to unavoidable unplanned deforestation in the project area at year t; tCO<sub>2</sub>e

**AUDPA<sub>icl, t</sub>** Area of unplanned deforestation in forest class icl at year t in the project area; ha

**ΔCtot<sub>icl, Ac</sub>** Lost carbon stock in the initial forest class icl at the age of change Ac (number of years after the change of use and soil cover) in tCO<sub>2</sub>;

**AUDPA<sub>fcl, t</sub>** Areas of post deforestation in the project area at time t; ha

**ΔCtot<sub>fcl, Ac</sub>**: Gained carbon stock in the post deforestation area at the age of change Ac (number of years after the change of use and soil cover) in tCO<sub>2</sub>.



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Both unplanned deforestation area (**AUDPA<sub>icl,t</sub>**) and the carbon stock lost in that area (**Ctot<sub>icl, Ac</sub>**) values and assessment are reported in section 4.3 below. The former in "Parameters and Data Monitored" and the latter in "Parameters Available at Validation and Fixed Ex-ante". The area of unplanned deforestation (**AUDPA<sub>fcl, t</sub>**) becomes the post deforestation area (**AUDPA<sub>icl,t</sub>**), as soon as it is deforested. In the year subsequent to deforestation, this area is multiplied by the post deforestation carbon stock increase per year (to account for regeneration), which is calculated according to the applied methodology /4/ and the VCS Errata-and-Clarifications-VM0015-v1.1 /24/ using the **Ctot<sub>fcl, Ac</sub>** value reported below in section 4.3 in "Parameters Available at Validation and Fixed Ex-ante".

The calculation for the value of **ΔCUDdPA<sub>t</sub>** was verified in the ERs spreadsheets /11/ and the following values confirmed.

Project Year t	ΔCUDdPA <sub>t</sub> Annual (tCO <sub>2</sub> e)
2015	152.870
2016	51.463
2017	76.378

Non-CO<sub>2</sub> emissions from forest fires are not accounted for as the PP justified in table 24 of the registered PD /7/, which shows the included and excluded sources of GHG within the boundary of the proposed Project activity, that this source of emissions were not considered significant. This information was already validated /8/ to be in accordance with section 1.4 of the applied methodology VM0015 /4/. The validation report explains that table 24 of the PD correctly excludes biomass burning as a source of GHG included in the proposed Project Activity as any CO<sub>2</sub> emissions from burning will be accounted as changes in carbon stocks and non-CO<sub>2</sub> emissions are considered insignificant (CH<sub>4</sub> as per PP reasonable assumptions in the PD /7/ and Schroeder *et al.* 2009 also cited in the PD /7/, and in the validation report /8/, and N<sub>2</sub>O as per table 4 of the VM0015 itself /4/).

**2) Planned Activities:**

**a) Planned Deforestation:**

The carbon stock decrease, and therefore emissions, due to planned deforestation in the project area was calculated using the following equation:

$$\Delta CPDdPA_t = (APDPA_{icl,t} * Ctoticl)$$

Where,



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**ΔCPDdPA<sub>t</sub>** Total decrease in carbon stock due to planned deforestation at year t in the project area; tCO<sub>2</sub>e

**APDPA<sub>icl,t</sub>** Areas of planned deforestation in forest class icl at year t in the project area; ha

**C<sub>toticl,t</sub>** Average carbon stock of forest class icl at time t; tCO<sub>2</sub>e/ha

Both planned deforestation area **APDPA<sub>icl,t</sub>** and average carbon stock **C<sub>toticl,t</sub>** values and assessment are reported in section 4.3 below. The former in "Parameters and Data Monitored" and the latter in "Parameters Available at Validation and Fixed Ex-ante".

For **ΔCPDdPA<sub>t</sub>** the following results were verified in the ERs spreadsheets /11/:

Project Year t	annual ΔCPAdPA <sub>t</sub> tCO <sub>2</sub> e
2015	30.286
2016	0
2017	0



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**b) Planned logging activities**

The VVB checked the latest Forest Management Plan /51/ and confirms that with regards to logged wood the types are intended to building which are high density and long lived. According to VCS VM0015 methodology /4/ long-term fraction is assumed to never decay (i.e. it never results in an emission) and therefore the PP has correctly not considered emissions in wood from logging activities as per section 4.2.2 of the Monitoring Report v4 /10/.

**c) Planned degradation**

x Although an option given by the methodology as a Project Activity, charcoal production or firewood collection are not going to be introduced by the project activity as per section 3.2.2 of the PD v5.1 /7/.

X

**• Leakage**

Leakage formula used was:

$$\Delta CBSLLK_t = \sum_{y=1}^t \left( \sum_{icl=1}^{icl} AUDLK_{icl,y} * \Delta Ctot_{icl,t-y} - \sum_{fcl=1}^{fcl} AUDLK_{fcl,y} * \Delta Ctot_{fcl,t-y} \right)$$

Where:

ΔCBSLLK<sub>t</sub>: Total carbon stock changes due to unavoidable unplanned deforestation in the area of the Leakage Belt in year t;

AUDLK<sub>icl,y</sub>: Unplanned deforestation area in the initial forest class icl in year t in the area of the Leakage Belt in the Projectscenario;

ΔC<sub>toticl,Ac</sub>: Loss in the carbon stock in the initial forest class icl at the age of change Ac (number of years after the change of LU/LC);

AUDLK<sub>fcl,y</sub>: Post deforestation non-forest class area fcl in year t in the Leakage Belt after unplanned deforestation in the Project scenario;

ΔC<sub>totfcl,Ac</sub>: Gain in carbon stock in the final post deforestation non-forest class fcl at the age of change Ac (number of years after the change of LU/LC).

As the results of this formula returned ex post net carbon stock change of the leakage belt area smaller than the estimated ex ante net carbon stock change of the leakage belt area /7/, no leakage emissions were considered in the calculations. This is in accordance with the applied methodology VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012 /4/.



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• Summary of net GHG emission reductions or removals.

According to the applied methodology VM0015 v1.1 /6/, and the validation report /4/, the emission reductions are the baseline subtracting project emissions and leakage emissions. It is calculated as follows:

$$\Delta REDDt = (\Delta CBSLPAt - \Delta CPSPAt) - (\Delta CLKt + ELKt)$$

Where:

**ΔREDDt** Ex post estimated net anthropogenic greenhouse gas emission reduction attributable to the AUD project activity at year t; tCO2e

**ΔCBSLPAt** Sum of baseline carbon stock changes in the project area at year t; tCO2e

**ΔCPSPAt** Sum of ex post estimated actual carbon stock changes in the project area at year t; tCO2e

**ΔCLKt** Sum of ex post estimated leakage net carbon stock changes at year t; tCO2e

**ELKt** Sum of ex post estimated leakage emissions at year t; tCO2e

Regarding the number of Verified Carbon Units (VCUs) to be generated through the proposed

**AUD** project activity per year were calculated as follows:

$$VCUt = \Delta REDDt - VCBt$$

$$VCBt = (\Delta CBSLPAt - \Delta CPSPAt) \times Rft$$

Where:

**VCUt** Number of Verified Carbon Units that can be traded at time t; tCO2e

Note: If **VCUt** < 0 no credits (VCUs) will be awarded to the proponents of the AUD project activity.

x The values for each of the parameters in the formula used to calculate ΔREDDt are reported in section 6 below.

It is the opinion of the VVB that the GHG emission reductions have been quantified correctly in accordance with the project description and applied methodology /4/.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals



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• Parameters Available at Validation and Fixed Ex-ante

Parameter (see PD for descriptions)	Source of data	Initially Reported value	Verified value	Assessment/ Observation
Total Net ΔCBSLPA 2015 (tCO2)	Calculated from the modelled areas of deforestation and the fixed parameters ...from the PD v.5.1	454,012.3	454,699	/7//8/
Total Net ΔCBSLPA 2016 (tCO2)		444,916.5	444,881	
Total Net ΔCBSLPA 2017 (tCO2)		433,713.1	423,498	
Total Net ΔCBSLLK 2015 (tCO2)		769,359.2	773,798	
Total Net ΔCBSLLK 2016 (tCO2)		883,394.8	859,759	
Total Net ΔCBSLLK 2017 (tCO2)		889,902.3	890,989	
Ctot, icl (tCO2)	PD v.5.1	413.7	413.7	/7//8/
Ctot, fcl (tCO2)	PD v.5.1	60.1	60.1	
CF(dimensionless)	Nogueira et al. (2008).	0.5	0.5	
CO2 to carbon ratio (dimensionless)	Scientific literature: 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 AFOLU	44/12	44/12	

• Parameters and Data Monitored

Data/Parameter	<b>ABSLPA<sub>icl,t</sub></b> (expost, as per monitoring plan of the PD v4.1) / <b>AUDPA<sub>icl,t</sub></b> (as per section 4.2 of this report)	
Data Unit	Hectare (ha)	
Description	Areas of forest cover converted into non-forest cover areas within the Project area of the Jari/Pará REDD+ Project at time t	
Source of data	Vector data from PRODES, derived from Satellite Images	
Value data for the monitoring period	<b>Project year<sub>t</sub></b>	<b>ha</b>
	Data from 2015 (deforestation from 06/09/2014 to 23/08/2015)	453
	2016 (24/08/2015 to 09/08/2016)	149
	2017 (10/08/2016 to	222

VCS		VERIFICATION REPORT: VCS Version 3	
	22/10/2017)		
Frequency of monitoring/recording	Annual		
Monitoring equipment and its accuracy	Images of remote sensing of digital processing program, geographic information system.		
QA/QC procedures to be applied	The PP built a confusion matrix to evaluate the accuracy of the PRODES classification. For each class of land use it used QGIS to generate a shape with random points. A total of 198 points were generated and the classification from PRODES was checked against Google Earth images visually. The classification carried out with Google Earth was then passed on to ArcGis and with both classifications in the attribute tables they were then extracted to excel spreadsheet "Validação_prodes_1.0" /25/ and the confusion matrix built and analysed. This confusion matrix is the one shown in the MR. The accuracy calculated was of 83% so greater than the accuracy established at the PD which states it should come to a minimum accuracy of 80%.		
Purpose of Data	Calculation of project emissions		
How were the values in the monitoring report verified and cross-checked ?	<p>Rina verified that the shapes constructed with satellite images of the above dates, with all deforested areas till 2017 (which contain areas deforested in previous years too, that is 2014, 2015 and 2016) can be downloaded from PRODES Digital Project: <a href="http://www.dpi.inpe.br/prodesdigital/prodes.php">http://www.dpi.inpe.br/prodesdigital/prodes.php</a> last accessed 13/08/2019.</p> <p>Rina verified that the PP used the following scenes from PRODES: 226/60, 226/61, 227/60 and 227/61. They georeferenced to WGS84 and cut the images with GIS. The values were then extracted from the attribute tables of the shape files of the newly cut PA images to a spreadsheet "Prodes_PA" /26/ and the areas of deforestation for each respective year calculated.</p> <p>The PP repeated the calculations from the extracted values of shapefiles to the "Prodes_PA" during site visit and the resulting values were as per the ones reported above which are the ones reported in the MR v1 (see also Analise PRODES_AP_LKB spreadsheet /28/)</p>		
Data/Parameter	ABSLLK <sub>icl,t</sub> (expost, as per monitoring plan of the PD v4.1)		
Data Unit	Hectare (ha)		
Description	Areas of forest cover converted into non-forest cover areas within the leakage belt of the Jari/Pará REDD+ Project		
Source of data	Vector data from PRODES, derived from Satellite Images		
Value data for the monitoring period	Project year <sub>t</sub>	ha	
	Data from 2015 (deforestation from 06/09/2014 to	836	

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VCS		VERIFICATION REPORT: VCS Version 3	
	23/08/2015)		
	2016 (24/08/2015 to 09/08/2016)	208	
	2017 (10/08/2016 to 22/10/2017)	156	
Frequency of monitoring/recording	Annual		
Monitoring equipment and its accuracy	Images of remote sensing of digital processing program, geographic information system.		
QA/QC procedures to be applied	The PP built a confusion matrix to evaluate the accuracy of the PRODES classification. For each class it used QGIS to generate a shape with random points. A total of 198 points were generated and the classification from PRODES was checked against Google Earth images visually. The classification carried out with Google Earth was then passed on to ArcGis and with both classifications in the attribute tables they were then extracted to excel spreadsheet "Validação_prodes_1.0" /25/and the confusion matrix built and analysed. This confusion matrix is the one shown in the MR. The accuracy calculated was of 83% so greater than the accuracy established at the PD which states it should come to a minimum accuracy of 80%.		
Purpose of Data	Calculation of leakage emissions		
How were the values in the monitoring report verified and cross-checked ?	<p>Rina verified that the shapes with constructed with satellite images of the above dates, with all deforested areas till 2017 (which contain areas deforested in previous years too, that is 2014, 2015 and 2016) can be downloaded from PRODES Digital Project: <a href="http://www.dpi.inpe.br/prodesdigital/prodes.php">http://www.dpi.inpe.br/prodesdigital/prodes.php</a> last accessed 13/08/2019.</p> <p>Rina verified that the PP used the following scenes from PRODES: 226/60, 226/61, 227/60 and 227/61. They georeferenced to WGS84 and cut the images with GIS. The values were then extracted from the attribute tables of the shape files of the newly cut Leakage Belt Area images to a spreadsheet "Prodes_LKB" /27/ and the areas of deforestation for each respective year calculated.</p> <p>The PP repeated the calculations from the extracted values of shapefiles to the "Prodes_LKB" during site visit and the resulting values were as per the ones reported above which are the ones reported in the MR v1 (see also Analise PRODES_AP_LKB spreadsheet /28/)</p>		
Data/Parameter	APDPA <sub>icl,t</sub>		
Data Unit	Hectare (ha)		
Description	Survey and mapping of areas of forest cover converted into non-forest cover areas due to the construction of forest management infrastructures (planned deforestation).		
Source of data	Technical maps for the POAs		

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Value data for the monitoring period	Project Year <i>t</i>	Areas of planned deforestation x Carbon stock change (decrease) in the project area
		ID <sub>cl</sub> =
		APDPA <sub>icl,t</sub>
		ha
	2015	73
	2016	0
	2017	0
Frequency of monitoring/recording	During the management year of each UPA	
Monitoring equipment and its accuracy	Field card, post-exploratory reports and geographic information system	
QA/QC procedures to be applied	The mapping of planned deforestation areas for the implementation of the Forest Management infrastructures was carried out through the field planning carried out by the Jari team.	
Purpose of Data	Calculation of project emissions	
How were the values in the monitoring report verified and cross-checked ?	Maps of main and secondary road shape files /29//30/ for the UPA 9 POA (annual operational plan). These were crosschecked with main and secondary road maps protocolled at the environmental regulators /56/. Patios from internal control spreadsheet "Patios florestais por UPA.xlsx" /31/.	

Data/Parameter	ΔCabBSLLKt
Data Unit	tCO <sub>2</sub> -e
Description	Changes in total carbon stock in the leakage belt area
Source of data	Calculated
Value data for the monitoring period	0
Frequency of monitoring/recording	To be determined depending on the activity
Monitoring equipment and its accuracy	To be determined depending on the activity
QA/QC procedures to be applied	To be determined depending on the activity
Purpose of Data	Calculation of leakage
How were the values in the monitoring report verified and cross-checked ?	Area of deforestation in the leakage belt was checked against Prodes_LKB_excel file /27/. The calculation of leakage emissions was then compared to the ex-ante calculation in the PD v5.1 /7/. Estimated total, ex ante net carbon stock change of the leakage belt area is greater than calculated total ex post net carbon stock change of the leakage belt area and thus leakage can be considered zero. This is in accordance with applied methodology /4/. For more details see CAR7 in appendix 1 of this report.



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Data/Parameter	Frequency of surveillance and patrol operations
Data Unit	Number of operations per year
Description	Record of the number of surveillance operations carried out in the design area and leakage belt during the monitoring period
Source of data	Patrimonial Surveillance Reports
Value data for the monitoring period	Set. – Dez. 2014: 25 river operations and 73 land operations; Jan. – Dez. 2015: 46 river operations and 196 land operations; Jan. – Dez. 2016: 14 river operations and 155 land operations; Jan. – Out. 2017: 22 river operations and 227 land operations.
Frequency of monitoring/recording	Monthly
Monitoring equipment and its accuracy	Property surveillance team field sheets
QA/QC procedures to be applied	Until the finalization of this monitoring report QA/QC procedures were not applied
Purpose of Data	Evaluation of the efficiency of surveillance operations
How were the values in the monitoring report verified and cross-checked ?	Patrimonial Surveillance Activity Control 2014, 2015, 2016 and 2017 /57/.



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Monitoring of forest cover by high-resolution satellite imagery are to be monitored from the validation of the Project onwards as per monitoring plan of the PD /7/.

The VVB considers that evidence used to determine GHG emissions reduction are sufficient and appropriate.

4.4 Non-Permanence Risk Analysis

Since the validation and the verification visit were carried out together, all evidences used for the assessment of the Non-Permanence Risk Analysis in the Jari Para - VCS-Non-Permanence-Risk-Report\_4.0 discussed in the Validation Report /8/ are the same as for this first monitoring period. There is therefore no need to repeat the information but refer the reader to the validation report as/for evidence to the Non-Permanence Risk Analysis of these first monitoring period.

The validation team confirms that the buffer is of 11% of the total ERs.

5 SAFEGUARDS

5.1 No Net Harm

Potential negative environmental and socio-economic impacts have been identified by the project proponent in the MR version 1 and the steps taken to mitigate such impacts too. As stated in the MR "In order to mitigate these risks, some measures have been established such as the implementation of participatory stakeholder strategies in the design of activities and decision-making, creating a more appropriate interaction structure and building together an agenda that minimizes the overlap of activities. In addition, the involvement of the parties in decision-making was strengthened, mainly through the DRP workshops and by improving existing communication channels and, finally, improving patrimonial surveillance, making it more effective, aligning the monitoring data with existing schedules."

The VVB opened a FAR in the validation report /8/ which must be addressed by the PP by the first verification assessment of the CCB.

5.2 Local Stakeholder Consultation

Since this first verification was carried out together with the validation there is no further comments with regards to the local stakeholder consultation to those in the validation report /8/.

6 VERIFICATION CONCLUSION

RINA Service S.p.A (RINA) has performed verification of the emission reductions reported for the project activity "REDD+ Jari/Pará Project" in Brazil, for the VCS monitoring period from 08/07/2014 to 22/10/2017, with regards to the relevant requirements of VCS rules.



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It is the responsibility of RINA to express an independent verification opinion about the project's conformity with the VCS requirements and procedures and on the reported greenhouse gas emission reductions from the project.

Based on documented evidence and corroborated by an on-site assessment RINA can confirm that:

- The project has been implemented and operated as per the registered VCS PD;
- The monitoring plan in the registered VCS-PD is as per the applied baseline and monitoring methodology.
- The monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS requirements.

It is RINA's opinion that the GHG emissions reduction stated in the VCS monitoring report version V5 of 24/11/2019 for the "REDD+ Jari/Pará Project" in Brazil for the period 08/07/2014 to 22/10/2017 are fairly stated. The GHG emission reductions were calculated correctly on the basis of the baseline and monitoring methodology VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of 03/12/2012 /4/.

Hence, RINA is able to certify that the total emission reductions from the project during the monitoring period 08/07/2014 to 22/10/2017 amount to 1,012,082 tCO<sub>2</sub>e and that tradable VCU are 900,753tCO<sub>2</sub>e.

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO <sub>2</sub> e)	Project emissions or removals (tCO <sub>2</sub> e)	Leakage emissions (tCO <sub>2</sub> e)	Net GHG emission reductions or removals (tCO <sub>2</sub> e)
July 8, 2014 - July 7, 2015	454,699	183,156	0	271,543
July 8, 2015 - July 7, 2016	444,881	51,463	0	393,418
July 8, 2016 - October 22, 2017	423,498	76,378	0	347,120
<b>Total</b>	<b>1,323,079</b>	<b>310,997</b>	<b>0</b>	<b>1,012,082</b>

APPENDIX 1: FINDINGS

Corrective action and/or clarification requests	Response by project participants	Verification Conclusion
CAR 1 The VCS-Monitoring-Report-Template-v3.4 /9/ requires section 1.7 of the Monitoring Report to "Indicate the project location and geographic boundaries (if applicable) including geodetic coordinates." Include in this section a more precise location of the PA as well as RR, Leakage Belt and Leakage Management Area (this might be a map showing coordinates as the one in figure 14 v.5.1 of the PD).	To make the description of the project location more accurate in section 1.7, the paragraph referring to the location of the Project Area in MR (2) had its final part changed to: <i>"The Project Area (496,988 hectares) is located within the property Gleba Jari I (Project Zone), which totaling an area of 909,461 hectares (Receipt of registration of rural property in the CAR – "Recibo de inscrição do imóvel rural no CAR" in portuguese, 2016)."</i> And in addition, Figure 1 (1) was complemented by the addition of RR, PA, Leakage Belt, Leakage Management Area featuring a square grid with coordinates covering its boundaries.  Evidence files contemplated by CAR: (1) LocationJariParáProject.png (2) REDD Jari Para_VCS-Monitoring-Report_2.0	A map with coordinates was added to the monitoring report v3 /10/. The VVB checked the coordinates of this map to the ones already validated in the PD v5.1 /7/ and confirms project boundaries are as per validation. Validation and initial verification were carried out simultaneously. CAR1 is closed.
CAR 2 the Monitoring Report states that the monitoring period is from 8th of July 2014 to 7th of July 2017. However PRODES' images to calculate unplanned deforestation are from september 2014 to october 2017.	The data generated by PRODES/INPE is the main basis used for the preparation of the Project baseline scenario, as it is used for the preparation of Monitoring Reports. The PRODES Project has been monitoring deforestation in the Legal Amazon through satellite imagery since 1988, and annual deforestation results in the region are considered	The VVB checked that the end date of the monitoring period was corrected to 22nd of October 2017 in the MR v3 /10/, so that the information aligns with the PRODES 2017 data file PRODES_AP_data /33/ where the last dates of the images area shown.

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Corrective action and/or clarification requests	Response by project participants	Verification Conclusion
	official data, being the most reliable and accurate for the Brazilian Amazon (1).  Due to the complexity and scale of the Amazon region, as well as the high cloud coverage in certain periods and locations, it is necessary to use images from different dates to completely cover the monitored area. This process aims to get the best view of the terrain and reduce the incidence of misclassification. Because of this, the dates of the images used for monitoring and consequently the period of coverage may vary annually.  Thus, the PRODES coverage periods are formed as follows: the image collection dates correspond to the end of the analysis period in question, where the accumulated deforestation between the observation date of the monitored year and the observation date of the year before is mapped. from the previous year. For example, for the Project Area, PRODES 2014 collected images in September 2014, ie based on this image were mapped the deforestation that occurred since the last collection, in September 2013 (PRODES 2013), until September 2014 (PRODES 2014). The Table below shows how PRODES coverage periods are formed in the Project Area (2) since 2013 and throughout the monitoring period (2015 - 2017).	CAR2 is closed.

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Corrective action and/ or clarification requests	Response by project participants				Verification Conclusion
	PRODES Year	Observation date	Cover Period	Reference	
	2014	2014-09-05	september/2013 – september/2014	Last year of historical reference period	
	2015	2015-08-23	september/2014 – august/2015		
	2016	2015-11-27 2016-08-09	august/2015 – august/2016	First monitoring period	
	2017	2017-07-18 2017-08-12 2017-10-22	august/2016 – october/2017		
The consolidated data from PRODES 2014					

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
<p>CAR 3 The monitoring report v1 states that the 'REDD+ activities are related to the greenhouse gas emission reduction by containing unplanned deforestation, promoting social inclusion and socio economic development'. Make table 1 of the MR v1 clearer on how each of the actions listed help to contain unplanned deforestation. Activities which existed previous to project start date can not be considered project activities unless properly justified and evidenced. Review to reflect all implementing real actions (implementation of management, social inclusion, socio economic development and deforestation containment actions) and place all documental evidence of the actions in one single link.</p>	<p>(1) <a href="http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes">http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes</a></p> <p>(2) PRODES_AP_data.xls</p> <p>(3) REDD Jari Para_VCS-Monitoring-Report_2.0</p> <p>The old Table 1, current 2, has been redesigned (1), focusing on actions taken during the monitoring period (2015 - 2017). During this period not only activities to contain deforestation were carried out, but also it was development activities of the project itself, such as technical studies and diagnosis. All actions are described, with their documentation referenced and made available to the VBB (2) (3) (4) (5) (6) (7).</p> <p>The containment of deforestation in the monitored period is directly related to the actions taken by the Jari Group surveillance team, which has been operating in the area since 2003, but that since 2014 has acted in accordance with the principles of REDD+ certification, aimed at identifying and mitigating environmental degradation in the property, valuing the conservation of the environmental asset (8). During the monitored period, the surveillance team kept its activities independent of the PRODES data based on satellite images, since the improvement of the surveillance process by joining the remote monitoring</p>	<p>Table 1 of the MR v1 /10/ is now table 2 of the MR v3 /10/ and was revised to include:</p> <p>1) A better explanation of how the surveillance carried out from the beginning of the project until the end of the first monitoring period differs from the surveillance carried out before Jari Pará REDD+ Project started. The VVB requests the PP to make a more clear statement in the MR about the surveillance activities before and after the start of the project as was explained here in the answer to this CAR and through direct communication that «surveillance before was more in the sense of protecting Jari's property and now it also includes identifying and mitigating environmental degradation in the property». Also explain here how the evidence sent shows that the surveillance activities are now happening more in the sense of mitigating deforestation. This was not clear to the VVB from evidence sent;</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
<p>Corrective action and/ or clarification requests</p>	<p>information with the field actions was not completed until the end of this monitoring period. The field checks based on PRODES data have actually started only after the current monitoring period and additionally, the implementation of strategic actions to apply intelligence and technology in environmental monitoring will begin after the project's capitalization aiming to increase the efficiency of combating deforestation in subsequent years. In addition, during the monitored period the Fundação Jari also played a very important role working with the communities of the state of Pará, precisely in the municipality of Almeirim and the district of Monte Dourado. This work focuses on working with smallholder communities that have degraded areas in their lands. The focus was on the empowerment of families through technical assistance, mainly aimed at reducing the risks of increased deforestation in previously open areas, thereby promoting social inclusion and supporting the region's socioeconomic development (9).</p> <p>Complementing these activities, the Grupo Jari also carried out, during the monitored period, the follow up of the feedback extracted from the company's communication channels, the "Fale Conosco" (Contact Us). With regard to the control and monitoring of deforestation, these channels enable actors to make complaints about deforested areas, often identifying those responsible for them.</p>	<p>2) With regards to the satellite monitoring, the information is not what is mentioned in the PD v5.1;</p> <p>3) The table has also been revised to now state the following «Fundação Jari carried out with the communities of the municipalities of Monte Dourado and Almeirim the project to implement Agroforestry Systems (SAFs in Portuguese). With the objective of contributing to containment of non-productive areas expansion" As this information was recently added to the MR version 3 /10/ and the PD states that this activity would only start from 2019 onwards, the VVB verified this activity through the evidence sent by PPs, Fundação Jari's Impacts Report 2016 /49/ and Impacts Report 2017 /50/. The VVB reviewed this documentation with information regarding the activities of Fundação Jari in those years and confirms that the reports state that the Fundação was successful in helping communities of Almeirim to acquire rural credit to the SAFs in those years in the sum of R\$ 739,253 in 2016 and R\$ 2,105,992. Please provide more objective evidence that the Fundação Jari participated in the</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>assisting in the work of land tenure surveillance, beside been essential for receiving complaints, suggestions or doubts about the REDD+ Project (10).</p> <p>Evidence files contemplated by CAR:</p> <p>(1) REDD Jari Para_VCS-Monitoring-Report_2.0</p> <p>(2) Folder: Atas Reuniões</p> <p>(3) Folder: Contratos</p> <p>(4) Folder: Estudos Técnicos</p> <p>(5) Folder: Gestão Financeira</p> <p>(6) Folder: TDR</p> <p>(7) Folder: Workshops</p> <p>(8) Folder: Vigilancia</p> <p>(9) Folder: ATER_Fundação Jari</p> <p>(10) Folder: Comunicação_Fale Conosco</p>	<p>activities described in the reports. For example, it mentions the elaboration of a «use of property plan for those families and access to rural investments» and «training of families in the management of agroforestry systems» ;</p> <p>4) VVB checked records of contact us channels and how follow up action till its closure is carried out.</p> <p>CAR3 remains opened due to 1 to 3 above.</p> <p>1) The PP sent the procedure «Surveillance of the land area»/43/ dated 28/11/2018 that shows changes in surveillance compared to previous version of the same procedure /44/ and records of surveillance patrols to show that this procedure was already in place since 2015 /45/. The VVB confirms that the new procedure now mentions surveillance activities to be carried out in the REDD+ framework as well as previous patrimonial surveillance activities and that patrol records evidence, with reasonable level of assurance, that the procedures are being put into place as evidenced by surveillance records /47//48/, and that this records have information on deforestation that can be used to better understand its dynamics. The VVB also checked the</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>Response Updated October 29, 2019:</p> <p>The old version of Table 1, current Table 2, has been redesigned (1), focusing on actions taken during the monitoring period (2015 - 2017). During this period not only activities to contain deforestation were carried out, but also it was development activities of the project itself, such as technical studies and diagnosis. All actions are described, with their documentation referenced and made available to the VBB (2) (3) (4) (5) (6) (7).</p> <p>1) The identification of deforestation in the monitored period is directly related to the actions of the Grupo Jari property security (surveillance) team, which has been operating in the area since 2003, but which has been working since the beginning of the project in accordance with the principles of REDD+ certification. The beginning of the change of position of the team's actions can be seen in the evidences (11) and (12) that refer to the first Workshop held between the proponents and the research institutions that participated in the project development, where the team was represented by Mr. Augusto Praxedes, responsible for the transfer of information to the property security area (19). At this event, the case of the Jari/Amapá REDD+ project was presented, which showed positive results from the surveillance team's work allied with the surveys conducted by Biofilica from the data provided by PRODES monitoring, and the challenge</p>	<p>reports on educational activities about environmental legislation and controlled fire as well as risks of forests uncontrolled fires during 2017 /46/, with the local communities initially involved in the project activities. However, for the next verification, the PP is required to make procedures clearer about the feedback that the surveillance team should be giving to the technical team that works with the local communities, about deforested areas in possession of local communities, as well as the forestry team already in the procedure «Surveillance of the land area»/43/. A FAR was opened for the next VCS verification. Item 1 is closed.</p> <p>2) The activity "evaluation of new deforestation points and areas through satellite imagery for the generation of annual deforestation bulletins", which in turn had the following short term deforestation mitigation outputs: "greater understanding of deforestation dynamics to conduct a more effective patrimonial surveillance" and "Providing inputs for the design of field interventions" and "Improvement of the techniques of forest monitoring activities" listed in table 10 of the PD/71 has been implemented with a delay</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>to implementation of these actions on Pará's property (Slide 42 - 44 of the document (12)).</p> <p>Since then, certain actions have been raised in order to improve and complement the work performed by the property security team, which initially focused only on collecting GPS points from degraded areas, identifying the location of these locations on maps prepared by the geoprocessing sector and making the complaint official with the relevant environmental agencies, as described in the procedure (Page 5-6 document (20)). The new positioning of the team's actions is demonstrated in the update of the procedure regarding the patrolling conditions on Jari's lands (Revision 16 (22)) that was built over the monitoring period. When compared to the previous procedure (Revision 11 (21)) some items were created and changed as: conflict resolution (Page 2-3 (22)), the internal process flowchart (Page 3 (22)), the conditions and conduct of monitoring (Page 3-4 (22)), the definition of monitoring actions in High Conservation Value Areas (Page 5-6 (22)) and control of activities in the areas (Page 6-7 (22)).</p> <p>Among the implemented actions is the improved monitoring of high conservation value areas, can be verified by the examples of monitoring records available (23). In addition, the other activities performed during the monitoring period by the surveillance team are evidenced with the bulletins,</p>	<p>as seen from the bulletins issued in 2018 /19/. This represents a deviation from the PD which has been justified in section 2.2.2 of the Monitoring Report v 4 of 29th October 2019 /10/.</p> <p>The VVB checked that this action of internally reporting the location of deforestation was replaced by other activities which were not planned to start during this first monitoring period, but planned to begin after 2019. These actions refer to the theme "Technical Assistance and Rural Extension (TARE)" which involved the activities of Strengthening Family Agriculture and Sustainable Extractivism, through the implementation of the SAF projects (evidences were discussed below in item 3), and the Environmental Education Program, with the holding of workshops for the prevention of environmental degradation by communities (evidences discussed item 1 above).</p> <p>The VVB then agrees that the replacement of one activity for another in time, anticipating activities planned for 2019, and the evidence seen that the monitoring by satellite imagery was implemented with a delay /19/, shows that no impact on additionality would occur. That is, the extra</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>invasion spreadsheets and control of sector activities (8). Among the mitigating actions, were those that are associated with the technical assistance work carried out by the Fundação Jari which offer environmental guidance and education to local communities (13) (14) (15). In addition, mitigation actions related to conflict management were also performed (16) (Page 2-3 (22)).</p> <p>The mitigation actions implemented by the Fundação Jari technicians dealt with the themes related to practice of illegal and environmentally incorrect practices such as the use of fire, deforestation for land clearing ((Page 3 - 14 (14)) (Page 3 - 9 (15)), and contamination of rivers and soils ((Page 1 - 10 (13)) (Page 15 (14)). These actions are considered one of the main means of communication with the communities pointed out by the procedure (Page 6 (19)), but not the only one since, as well as technicians of Fundação, other technicians from various areas of the Grupo Jari work with the Project Zone communities, such as Technicians of Fomentation and Surveillance (Page 3 (19)).</p> <p>Other work focused on mitigating deforestation and illegal actions in the area refers to the conflict management procedure (16) that conciliate the activities of various sectors of the company (Institutional Relations, Infrastructure Management (comprising the Surveillance Team (Header (22))),</p>	<p>costs with activities like technical assistance for agroforestry, besides the costs with sustainable timber extraction, which are not included the the alternative scenario (the forest management only with timber extraction) and which help to mitigate deforestation will carry on higher than in the alternative scenario, regardless of changes in implementation dates of such activities, as these are extra activities to forest management (the alternative scenario used in additionality analysis).</p> <p>The VVB also agrees that the change does not impact applicability of the methodology AM0015 /4/ since the project activity continued, throughout the delay to be «forest protection with controlled logging» and baseline scenario also continued the same as per PD v 5.1 /7/. Item 2 is closed.</p> <p>3) The VVB checked Emater and Fundação Jari - ATER first semester of 2015 report /52/ which states the SAFs objectives, and brings 2015 results on the Project's actions in the communities of Almeirim and Monte Dourado, more specifically Serra Grande/Recreio Community.</p> <p>The VVB also checked one of the self aptitude statements presented by the PP</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>Fundação Jari and Legal Area) forming a Committee with the mission of seeking a solution to any and all land, environmental and social conflicts between third parties involving the forest management units under the management of the Grupo Jari (Page 2-3 (22)) and (Page 2 (16)). An example of the performance of this Committee was a case that began in 2015 and continues to the present day, but throughout the monitoring period had several developments with regard to land tenure and deforestation detected in the areas of Grupo Jari (Page 1-2 (17)).</p> <p>2) One of the actions foreseen in the Table 10 of the PD was to conduct field checks of deforested areas detected by satellite images surveyed by Bioflica (PRODES monitoring), described as "Deforestation Monitoring via Satellite Imagery", that focuses on improving the surveillance process by adding remote monitoring information to field actions, as well generates more knowledge about the dynamics of the deforestation in the Project Zone and contributes directly to the work of technical assistance realized by Fundação Jari, strengthening it throughout the Project's execution.</p> <p>This activity has started after the end of the first monitoring period (18), and therefore, was not included in the Monitoring Report. So far, only a partial check of the deforestation points raised by satellite images has been verified, which can be</p>	<p>/53/ as evidence of the assistance that Fundação Jari gave in the use of property plan for families of small land holders and access to rural investments.</p> <p>Item 3 is now closed.</p> <p>CAR3 is now closed.</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>verified by the evidence (24) (25). Therefore, during the period covered by this monitoring report, the actions belonging to the "Forest Monitoring Intelligence" activity axis provided in the PD, were partially performed with the activity described in Monitoring Report "Intensify and improve the efficiency of Patrimonial Surveillance". In contrast, other activities aimed at mitigating and combating deforestation and environmental degradation such as those related to the theme of "Technical Assistance and Rural Extension (ATER)" which involved the activities of Strengthening Family Agriculture and Sustainable Extractivism, through the implementation of the SAF projects (9) (26)(27)(28), and the Environmental Education Program (13)(14)(15), with the holding of workshops for the prevention of environmental degradation by communities. The realization of these activities was essential for the project to achieve results in reducing deforestation in the Project Area and Leakage Belt and would not take place in the common practice scenario as they required additional investments from the proponents. Therefore, failure to carry out a planned activity, does not affect the financial additionality as it has been replaced by other activities, which in turn required additional investments for the project to succeed in reducing unplanned deforestation.</p> <p>The Proponents understand that this is part of the</p>	

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>initial process of implementing such a complex project, and in the next monitoring cycles, it is intended that these, among other activities will be fully implemented, generating greater effectiveness in combating deforestation.</p> <p><b>3)</b> In addition, during the monitored period the Fundação Jari also played a very important role working with the communities of the state of Pará, in the municipality of Almeirim and the district of Monte Dourado. These activities were focused on working with smallholder families that have degraded areas in their properties. The main objective of these actions was to stimulate the recovery of these altered areas through the implantation of agroforestry systems with emphasis on the cultivation of subsistence crops and fruit species, such as açai in consortium with cocoa, cupuaçu, orange tree and other traditional production systems, thus contributing to the strengthening of policies of combat rural poverty and to combat deforestation and illegal exploitation of natural resources (Page 1 (26)). The focus was on the empowerment of families through technical assistance, mainly aimed at mitigating and reducing the risks of increased deforestation in previously open areas, thereby promoting social inclusion and supporting the region's socioeconomic development (9).</p> <p>The report about the "Prestação de Serviços de</p>	

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p><i>Assistência Técnica e Extensão Rural – ATER</i> (26) focused on the project "Sistema Agroflorestal – EMATER/Banco da Amazônia S.A/STTR/Fundação Jari" exemplifies how the Fundação Jari works in region since 2015, the document reports actions taken in the communities located in Almeirim and Monte Dourado as: Extractive and agricultural financing projects, enabling access to rural credit and Technical Assistance and Rural Extension – TARE (Communities Recreio and Serra Grande) (Pages 4 and 5 (26)); Seedling distribution focusing on diversification of fruit species (Communities Arumanduba, Bananal, Bandeira, Bituba, Buritizal, Braço, Cafezal, Estrada Nova, Goela (Goela da Morte), Itatinga, Loral, Nova Vida, Panama, Pedral, Pimental, Recreio, Repartimento, São Miguel, Serra Grande and Vila Nova) (Pages 10-12, 14-16 (26)); and Training for seedling production and nursery implantation (Communities Braço, Pimental, Nova Arumanduba (Arumanduba), Cafezal, São José, Santo Antônio, Padaria, Repartimento, São Miguel and Nova Conquista) (Pages 12 and 13 (26)). In addition, the presentation "Avaliação de resultados no I semestre de 2016 – Programa Negócios Agroflorestais" (27) presents dates and images of the results of these actions in 2016, exemplifying these activities from communities Água Azul, Aniramba, Arumanduba, Bananal, Bandeira, Bituba, Braço, Buritizal, Cafezal, Estrada Nova, Freguesia, Goela (Goela da Morte),</p>	

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>Itatinga, Nova Conquista, Nova Vida, Padaria, Panama, Pedral, Pimental, Praia Verde, Ramal Fé em Deus, Ramal França Rocha, Recreio, Repartimento, Santo Antônio, São José, São Miguel, São Militão, Saracura, Serra Grande, Sombra da Mata, Tira-Couro and Vila Nova (Pages 4-5, 7-10, 20, 36-37 (27)).</p> <p>4) Complementing these activities, the Grupo Jari also carried out, during the monitored period, the follow up of the feedback extracted from the company's communication channels, the "Fale Conosco" (Contact Us). With regard to the control and monitoring of deforestation, these channels enable actors to make complaints about deforested areas, often identifying those responsible for them, assisting in the work of land tenure surveillance, beside been essential for receiving complaints, suggestions or doubts about the REDD+ Project (10).</p> <p>Updated evidence files contemplated by CAR:</p> <p>(1) REDD Jari Para_VCS-Monitoring-Report_2.0                      (2) Folder: Atas Reuniões                      (3) Folder: Contratos</p>	

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>(4) Folder: Estudos Técnicos                      (5) Folder: Gestão Financeira                      (6) Folder: TDR                      (7) Folder: Workshops                      (8) Folder: Vigilancia                      (9) Folder: ATER_Fundação Jari                      (10) Folder: Comunicação_Fale Conosco                      (11) ATA I WORKSHOP – PROJETO REDD+ PARA.pdf                      (12) JariPara_Workshop.pdf                      (13) RELATÓRIO DO I e II SEMESTRE DE 2016 – ASA.pdf                      (14) Relatório_ASA_II TRI_2017.pdf                      (15) Relatório_ASA_IV TRI_2017.pdf                      (16) SIG PI - Gestão de Conflitos 0004 ok ECM.pdf                      (17) mediacao de conflitos.pdf                      (18) Boletim de Monitoramento Jari Para -</p>	

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Corrective action and/or clarification requests	Response by project participants	Verification Conclusion
	<p>2015_2016_2017_2.1.pdf</p> <p>(19) PI - Comunicacao com Partes Interessadas rev 017 ok ecm.pdf</p> <p>(20) PA - Conservação da Flora e Fauna Rev 08 ok ECM.pdf</p> <p>(21) IT-FiscalizaçãoFundiária_2013.pdf</p> <p>(22) SIG PI -FiscalizaçãoFundiária_2018.pdf</p> <p>(23) Folder: Fiscalização AAVC</p> <p>(24) Checagem pontos Bioflica - Jari pará.pdf</p> <p>(25) Mapa Auxiliar - Projeto REDD Jari PA 2015 2016 2017.pdf</p> <p>(26) Relatório I SEMESTRE SAF 2015_Mudas.pdf</p> <p>(27) APRESENTAÇÃO SAF I SEMESTRE 2016 PEDRO.pdf</p> <p>(28) Folder: ProjetosPRONAF</p>	
CAR 4 Baseline carbon stock changes in PA and Leakage Belt Area must be corrected to reflect the values of the validated last version of the ER spreadsheet calculations and PD.	The values were corrected in the MR (1) and ex-post calculation spreadsheet (2), and are now in accordance with the validated PD and in the RE spreadsheet.	Value for Baseline carbon stock changes in PA and Leakage Belt areas now corrected according to ERs spreadsheet version 5.2 and PD v 5.1. CAR4 is closed.

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Corrective action and/or clarification requests	Response by project participants	Verification Conclusion
	<p>Evidence files contemplated by CAR:</p> <p>(1) REDD Jari Para_VCS-Monitoring-Report_2.0</p> <p>(2) VCS MonitoringReport JariPara_2015_17_v4.xlsx</p>	
CAR 5 correct the timing of the post deforestation regeneration in the calculations according to Errata-and-Clarifications-VM0015-v1.1-03-NOV-2017 /24/.	<p>As well as for the Validation process, the PP revised the recently published VCS (2017) errata with updates to the VM0015 Methodology regarding post-deforestation class inventory increases. The appropriate changes were made in the Monitoring Report (1). Evidence can also be verified in ex-post calculation spreadsheets (2).</p>	ER Calculations_VCS MonitoringReport JariPara_2015_17_v4 /1/1/ and MR v3 /10/ checked by the VVB and post deforestation now calculated as required by Errata-and-Clarifications-VM0015-v1.1-03-NOV-2017 /24/. CAR5 is now closed.
CAR 6 Formulae used to calculate planned deforestation and logging activities as well as the justification for choices according to methodology are not in the MR. If harvested wood was	<p>Evidence files contemplated by CAR:</p> <p>(1) REDD Jari Para_VCS-Monitoring-Report_2.0</p> <p>(2) VCS MonitoringReport JariPara_2015_17_v4.xlsx</p> <p>Calculation of planned activities:</p> <p>The item "3.3.3 Monitoring Plan for Climate Impacts" do MR, mostly precisely the sub-item ". 1 Monitoring current changes in carbon stock and GHG emissions in the Project Area", was</p>	The VVB checked the latest Forest Management Plan /5/1/ and confirms that with regards to logged wood the types are intended to building which are normally high density and long lived. This is better

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
<p>considered permanent provide evidence that they were destined to long term products (i.e. &gt; than 100 years as per applied methodology)</p>	<p>reformulated to clarify the understanding of the application of calculation formulas for planned deforestation, their registration and their justification for use according to the methodology. Briefly, the same formulas used for monitoring carbon stocks in the Project Area are applied to planned deforestation areas, in the case of the 2015-2017 MR these activities refer to forest management.</p> <p><u>Long-lived wood products:</u></p> <p>As outlined in the most up-to-date Forest Management Plan 2016 (1) (page 201), logging was mainly directed to the production of raw sawn materials and surfaced two sides (S2S) and surfaced four sides (S4S). The materials intended for export are aimed at the floor, door, window, frame, facade cladding, garden, civil construction and hydraulic and sleepers' industries. While the materials aimed at the domestic market were for the production of boards, planks, beams, stakes, rafters, rulers and other cuts.</p> <p>In addition, VM0015 assumes that long-lived wood products never decompose (ie never results in an emission), so it is conservative to disregard these products in emissions calculations (footnote 43).</p> <p>This was also proven by calculating the projection of</p>	<p>justified now in section 4.2.2 of the MR v3 /10/.</p> <p>The MR also now shows formula used to calculate planned deforestation.</p> <p>CAR6 is closed.</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
<p>CAR7 Calculation of leakage in the leakage belt area is not explained in the MR. Justification of why leakage was not discounted from ERs making reference to the appropriate applied methodology requirement needs to be included.</p>	<p>emissions of these products performed during project validation, in the table "Significance_assessment" of the Worksheet (2), delivered to VVB during validation, where the carbon stock stored in these products was very higher than estimated for the baseline.</p> <p>Based on these facts, PP conservatively understand that it is not necessary to consider this Carbon Pool since the project does not cover monitoring activities of these parameters and its emission is practically zero as mentioned by VM00015.</p> <p>Evidence files contemplated by CAR:</p> <p>(1) FRMBrasil_PMF5_2015_Vfinal_dEZEEMBRO 2016.pdf</p> <p>(2) VM0015_planiha de calculo_JariPara_5.2.xlsx</p> <p>The item "1.2 Monitoring of Leakage" which is inserted in the section "3.3.3. The Monitoring Plan for Climate Impacts" was adjusted to clarify the method used to calculate leakage, its parameters and procedures, according to the methodology used.</p> <p>In the item "4.3.2 Total ex post estimated leakage" the calculation method is explained again and it is</p>	<p>The VVB checked v3 of the MR /10/ and it now states formula used to calculate leakage and the justification of the fact that no leakage emissions were considered as the calculations showed leakage to be smaller than the estimated in the baseline. This is in accordance with the applied methodology VCS VM0015 Methodology for Avoided Unplanned Deforestation v1.1 of</p>

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Corrective action and/or clarification requests	Response by project participants	Verification Conclusion
	<p>shown why the leakage did not occur, the results are presented in Table 26 of the MR. Leakage is calculated by the difference between ex post and ex ante evaluation, and as shown in both MR (1) and ex post calculation worksheet (2), the value of the carbon stock change within the Monitoring Period from 2015 to 2017 is less than zero (&lt;0), so the ex post leakage has been set as zero in these years as recommended by section 1.2 - Leak Monitoring in footnote 48 of VCS VM0015.</p> <p>Evidence files contemplated by CAR:</p> <p>(1) REDD Jari Para_VCS-Monitoring-Report_2.0 (2) VCS MonitoringReport JariPara_2015_17_v4.xlsx</p>	<p>03/12/2012 /4/. CAR7 is closed.</p>
<p>CAR8 Correct monitoring parameters as per validated PD</p>	<p>All monitoring parameters were corrected in MR (1) according to the parameters established in the validated PD, since only those parameters related to Climate were considered in this monitoring. The evidences regarding the dates of satellite images (2) (3) used in the monitoring parameters are available to the VVB.</p>	<p>VVB checked MR v3 /10/ and confirms Climate parameters are now in accordance with sections 3.1 and 3.2 of PD v5.2 /7/.  CAR8 is closed.</p>

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Corrective action and/or clarification requests	Response by project participants	Verification Conclusion
	<p>Evidence files contemplated by CAR:</p> <p>(1) REDD Jari Para_VCS-Monitoring-Report_2.0 (2) PRODES_AP_data.xls (3) PRODES_LKB_data.xls</p>	
<p>CL1 If the unplanned deforestation in the year named 2015 goes from september 2014 to august 2015 the planned deforestation in UPA 8, in the second semester of 2014, if any, should be included in calculations. Please inform and provide evidence whether UPA 8 was logged during the second semester of 2014 and if so provide the AUTEF for that period too since the AUTEF provided for UPA 8 only covers first semester of 2014.  Furthermore, the following AUTEFS (Authorisation for the Exploration of Sustainable Forest Management Plan) for UPA9 were verified: AUTEF N°27936/2014 issued on 14/10/2014 and valid until 14/10/2015 and AUTEF N°272981/2017 issued on 21/02/2017 and valid till 21/02/2018. Please provide AUTEF for the period in</p>	<p>The Forest Exploration Authorization (AUTEF) is issued by the Pará State Secretariat of the Environment (SEMA/PA), authorizing the beginning of the exploration of a UPA, where the maximum volume per species allowed for exploitation is specified, having a validity of 12 months. According to article 16 of Normative Instruction No. 04 (1), AUTEF may be extended for another 12 consecutive months in compliance with the appropriate guidelines. In addition, it should be noted that logging activities in the Amazon region occur during the periods of the year with the lowest rainfall, so the activity does not last a full year, and it is often necessary to extend.  According to the most up-to-date Forest Management Plan (2) for the Gleba Jari I areas issued in 2016, during the 10 years of PMFS-JARI FOREST projects, the areas of 8 UPAs were explored, namely: UPA- 01, UPA-02, UPA-03, UPA-04, UPA-05, UPA-06, UPA-07 and partially UPA-08 and UPA-09. In this case, UPAs 08 and 09 were the last to be explored on the property, within the</p>	<p>The VVB checked that the AUTEF for UPA 08 was extended from 27/06/2014 till 27/06/2015 /37//38/.  The VVB also checked the post-exploratory reports of annual producing unities (from the abbreviation in Portuguese UPAs) 06 and 07 /34//35/, and confirms that it has been recorded that infrastructure for annual planning unit 08 was carried out while planned logging for UPAs 6 and 7 were being carried out between september 2012 and dezembro 2013. It also confirmed from the environmental regulator (SEMAs) document Processing History of the UPA 08 /36/ that post exploratory reports were presented to the environmental regulators in July 2015. So the VVB confirms with reasonable level of assurance that most planned deforestation of infrastructure for UPA 08 was carried out before the monitoring period.  With regards to UPA 09 the VVB checked the Processing History of Annual Production Unit 09</p>

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Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
between these two AUTEFs of UPA 9.	<p>analyzed period, this is proven because the others already had their post-exploratory reports ready (3) (4) (5) (6) (7).</p> <p>In the case of UPA-08, the first AUTEF issued was valid until 06/27/2014 (8), being extended until 06/27/2015 (9), according to the history of processing of the AUTEF of UPA-08 taken from SEMAPA website (10) its management was finalized in July 2015, when post-exploratory reports were submitted and analyzed by SEMAPA (page 45 of document (10)). However, the post-exploratory reports of POAs 06 and 07 show in the activity schedules that between 2012 and 2013 the infrastructure for UPA-08 had already been opened in conjunction with the exploration activities of UPAs 06 and 07 (6) (7). Therefore, based on this evidence, it was decided not to incorporate in the calculations for 2015 the planned deforestation related to the infrastructure opening of UPA-08. Taking into account the working methodology applied, and since we did not have access to the UPA-08 post-exploratory report, we consider that the planned deforestation to open the UPA 09 infrastructures was fully carried out in 2015 (11).</p> <p>Since the expiration of the first UPA-09 AUTEF on 10/14/2015 (12), documents related to UPA-09 have been processed within SEMAPA as shown in its processing history (13) taken from the SEMA website. The document states that only in July 2016</p>	<p>/39/ issued by the environmental regulators and confirms that Jari Florestal requested extension of the AUTEF in 2016 /39/ and that a favourable sentence was issued by the courts regarding the area being managed in that same year, supporting the argumentation of the PP that between 14/10/2015 and 21/02/2017 no activity was carried out with regards to the SFMP.</p> <p>CL1 is closed.</p>

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**VERIFICATION REPORT: VCS Version 3**

Corrective action and/ or clarification requests	Response by project participants	Verification Conclusion
	<p>did the company Jari Florestal express an interest in extending AUTEF (page 25 of document (13)), which process was completed in February 2017 (14) (page 39 of document (13)).</p> <p>This period in which there was no management corresponds to the period in which the Jari Group underwent investigations (later cleared as already shown) and had to temporarily paralyze its native forest management activities, because of this there are no documents regarding the activity of this period.</p> <p>Evidence files contemplated by CAR:</p> <ul style="list-style-type: none"> <li>(1) <a href="https://www.semas.pa.gov.br/2011/05/13/10986/">https://www.semas.pa.gov.br/2011/05/13/10986/</a></li> <li>(2) FRMBrasil_PMF5_2015_Vfinal_dEZEMBRO 2016.pdf</li> <li>(3) Relatório de Atividades POA 03-2007_final.pdf</li> <li>(4) Relatório de Atividades POA 04 Final.pdf</li> <li>(5) Relatório de atividades POA 05 (Final).pdf</li> <li>(6) Relatório Final de Atividades POA 06.pdf</li> <li>(7) Relatório de atividades POA 07_FINAL.pdf</li> </ul>	

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Corrective action and/or clarification requests	Response by project participants	Verification Conclusion
FAR 1 the PP is required to make procedure "Surveillance of the land area" /43/ clearer about the feedback that the surveillance team should be giving to the technical team working with the local communities about deforested areas in possession of identified local communities, as well as the forestry team which is already in such procedure. This FAR such be checked at the next VCS verification.	(8) AUTEF N° 20140-2013_POA 08.pdf (9) AUTEF N° 20140-2013_POA 08-Prorrogação.pdf (10) HistoricoTramitação_AUTEF08_2014_2015.pdf (11) VCS MonitoringReport JariPara_2015_17_v4.xlsx (12) AUTEF_POA09.pdf (13) HistoricoTramitação_AUTEF09_2014_2018.pdf (14) AUTEF N° 272981 POA09_VAL 21.02.2018 – prorrogação.pdf	

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**CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI\***  
**QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES\***

Si attesta che il sig./sig.ra:  
We declare that Mr/Mrs/Ms:

**Talita Carvalho Beck**

è qualificato come:  
is qualified as:

**TEC, VAL, VER, TL  
LOCAL EXPERT**

per le seguenti aree tecniche:  
for the following technical areas:

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal energy generation	1
1.2	Renewables	1
13.1	Solid waste and wastewater	13
14.1	Forestry	14

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)
1	14/06/2017	Update qualification in TA 14.1 and Local expert

Responsabile di schema  
Scheme Leader  
Laura Severino


\*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

RINA Services S.p.A. è accreditato/riconosciuto da  
RINA Services S.p.A. is accredited /recognized by

UNFCCC	quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects
VCSA	per condurre la Validazione e la Verifica di Progetti VCS to carry out Validation and Verification of VCS Projects
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS to carry out Validation and Verification of GS Projects
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS to carry out Validation and Verification of SCS Reports
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR to carry out Validation and Verification of ACR projects
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB to carry out Validation and Verification of co-benefit CCB projects

Annex VI - Verification Report - Bandeirantes Landfill Gas to Energy Project



**CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI\***  
**QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES\***

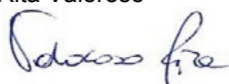
Si attesta che il sig./sig.ra: Rekha Menon  
 We declare that Mr/Mrs/Ms: \_\_\_\_\_

è qualificato come: TEC, VAL, VER, TL, ITRP  
 is qualified as: \_\_\_\_\_

per le seguenti aree tecniche:  
 for the following technical areas:

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Renewables	1
2.1	Electricity distribution	2
13.1	Solid waste and wastewater	13
13.2	Manure	13
14.1	Afforestation and reforestation	14

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)

Responsabile di schema  
 Scheme Leader  
 Rita Valoroso  


\*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

RINA Services S.p.A. è accreditato/riconosciuto da  
 RINA Services S.p.A. is accredited /recognized by

UNFCCC	quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects
VCSA	per condurre la Validazione e la Verifica di Progetti VCS to carry out Validation and Verification of VCS Projects
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS to carry out Validation and Verification of GS Projects
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS to carry out Validation and Verification of SCS Reports
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR to carry out Validation and Verification of ACR projects
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB to carry out Validation and Verification of co-benefit CCB projects


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VCS VERIFICATION DEED OF REPRESENTATION

BY

EARTHOOD SERVICES PRIVATE LIMITED

v3.3 -1-



THIS DEED OF REPRESENTATION is made on 07/01/2020

**BY**

Earthood Services Private Limited, 424A, Tower B4, Spaze I-Tech Park, Sector 49, Sohna Road, Gurgaon-122018, India (as **VVB**)

THIS DEED WITNESSES as follows:

**1. INTERPRETATION**

1.1 In this Deed:

"**Accountholder**" means any person holding a VCU account with a VCS Registry;

"**AFOLU**" means agriculture, forestry and other land use;

"**GHG**" means greenhouse gas;

"**GHG Program**" means a formal or organized program, scheme or arrangement for the recognition of activities leading to Reductions, or the crediting or issuance of instruments representing, or acknowledging, Reductions;

"**Project**" means "Ticket Log Fleet Fuel Substitution";

"**Project Crediting Period**" means the time period for which GHG emission reductions or removals generated by the Project are eligible for issuance as VCUs (the rules with respect to the length of such time period and the renewal of the project crediting period are set out in the *VCS Standard*);

"**Project Ownership**" means the legal right to control and operate the project activities. Distinct from proof of right;

"**Project Proponent**" means an individual or organization that has overall control and responsibility for the Project, or an individual or organization that together with others, each of which is also a Project Proponent, has overall control or responsibility for the Project. The entity(s) that can demonstrate Project Ownership in respect of the Project;

"**Reduction**" means a reduction or removal of one tonne of CO<sub>2</sub>e caused by the activities of a Project during the Project Crediting Period;

"**VCSA**" means the Verified Carbon Standard Association;

"**Validation/Verification Body**" or "**VVB**" means an organization approved by the VCSA to act as a validation/verification body in respect of providing validation and/or verification services in accordance with the VCS Rules;

"**VCS Program**" means the GHG Program operated by the VCSA which establishes the rules and requirements that operationalize the VCS to enable the validation of GHG projects and the verification of GHG emission reductions and removals;

"**VCS Project Database**" means the central project database that records all projects registered and VCUs issued under the VCS, and provides public access to all project and VCU information, including retirement and tracking of the AFOLU pooled buffer account;

"**VCS Registry**" means a registry operating within the VCS Registry System and holding a current, valid agreement with the VCSA to provide registry services on behalf of the VCSA. VCS Registries interact with the VCS Project Database to issue VCUs, and hold, transfer (to and from other VCS registries), retire, suspend, cancel and provide custodial services for VCUs on behalf of its Accountholders;

"**VCS Registry System**" means the system established by the VCS Program, comprised of the VCS Project Database and the VCS Registries, to provide project proponents with the ability to register projects, and issue, transfer, hold and retire VCUs;

"**VCS Rules**" means the rules and requirements set out in the *VCS Program Guide*, the *VCS Standard* and the other VCS Program documents, as such rules and requirements may be updated from time to time;

"**Verification Report**" means the written report of verification covering the Reductions generated by the Project from 01-July-2018 to 30-June-2019 and prepared by the VVB in accordance with the VCS Rules; and

"**Verified Carbon Unit (VCU)**" means a unit issued by, and held in a VCS Registry representing the right of an Accountholder in whose account the unit is recorded, to claim the achievement of a Reduction that has been verified by a validation/verification body in accordance with the VCS Rules. Recordation of a VCU in the account of the Accountholder at a VCS Registry is *prima facie* evidence of that Accountholder's entitlement to that VCU.

1.2 Documents referred to in this Deed but not defined shall be the VCS documents, as updated from time to time, to which the relevant term relates.

**2. REPRESENTATIONS**

2.1 I am the Validation/Verification Body in relation to the verification of the Project.

2.2 I hereby represent and warrant that:

2.2.1 I have independently verified the Reductions generated by the Project in accordance with the VCS Rules;

2.2.2 In relation to any validation findings and conclusions provided in the Verification Report, I have independently validated the Project's compliance with the VCS Program requirements as set out in the VCS Rules; and

2.2.3 All factual information that I provide in relation to this Deed or have provided in the Verification Report is to the best of my knowledge following due inquiry true, accurate and complete in all material respects and I have not made or provided, and will not make or provide, false, fraudulent or misleading statements or information in relation to this Deed or the Verification Report.

2.3 I hereby acknowledge and agree that:

2.3.1 The following persons may rely on and enforce the terms of this Deed:

- (a) the VCSA;
- (b) each person who is an Accountholder holding VCUs relating to the Project at any given time;

  
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- (c) each person on whose behalf VCUs relating to the Project were retired by an Accountholder; and
- (d) each of the successors and assigns of those persons listed in clauses 1.1.1(a), 1.1.1(b) or 2.3.1(c);

2.3.2 Neither the VCSA, the VCS Registries, nor any of their respective affiliates, directors, employees, agents, licensors and/or contractors, shall be liable with respect to any claims whatsoever arising out of this Deed or erroneous information within the Verification Report submitted to the VCS Registry System for indirect, consequential, special, punitive or exemplary damages, including, without limitation, claims brought against the VCSA or the VCS Registries by Accountholders, other VCS Registries, Project Proponents, other Validation/Verification Bodies or any other third party. This paragraph shall apply regardless of any actual knowledge or foreseeability of such damages;

2.3.3 I have read, understood and will abide by the VCS Rules; and

2.3.4 The VCSA has an absolute right to amend any of the VCS Rules at any time and shall not bear any liability for loss or damage or liability of any kind sustained by the Validation/Verification Body or any other party involved in the Project in any way under the VCS Program as a consequence of such amendment.

**3. GOVERNING LAW AND JURISDICTION**

This Deed is governed by and interpreted in accordance with English law, and the English courts shall have exclusive jurisdiction to settle any dispute arising from or connected with this Deed including a dispute regarding the existence, validity or termination of this Deed or the consequences of its nullity.

**4. SOVEREIGN IMMUNITY**

To the extent that the Validation/Verification Body enjoys any right of immunity from set-off, suit, execution, attachment or other legal process with respect to its assets or its obligations under this Deed, the Validation/Verification Body waives all such rights to the fullest extent permitted by law.

**5. COUNTERPARTS**

This Deed may be executed in any number of counterparts, each of which when executed and delivered is an original and all of which together evidence the same deed.

**6. DELIVERY**

This Deed is delivered on the date written at the start of the Deed.

EXECUTED by EARTHOOD SERVICES PRIVATE LIMITED as a deed



Dr. Kaviraj Singh

Signature of director  
Name of director

