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ENVIRONMENTAL AND SOCIAL COMPLIANCE REPORT (ESCR)

Klabin S.A.
PUMA Pulp Mill
Forest plantations
Transport operations
Port operations

Brazil

Reporting Period: July to December 2020

Report completion date: February 12th, 2021

• INTRODUCTION

• **The Annual Environmental and Social Report**

The Finnvera Guaranteed Loan Agreement and the Lenders Common Terms Agreement requires Klabin to prepare a comprehensive Environmental and Social Compliance Report for the PUMA facilities and related operations. This document comprises the format for environmental and social performance reporting for the period(s) required in the Loan Agreement and the Common Terms Agreement. The Annual report informs the ECA, FEC and the Lenders about the environmental and social state of the project. This format may be revised from time to time to account for additional performance reporting requirements.

Scope of the Environmental and Social Compliance Report is i) PUMA Pulp Mill and associated facilities, ii) the mill's port terminal in Paranaguá port, iii) wood supply operations of the pulp mill and iv) transport operations.

It is important to mention that, based on the project's location and nature, some processes/actions/outputs from the project cannot be distinguished from (and/or cannot be specifically associated to) PUMA I (original project) and/or PUMA II (expansion). For that reason, during PUMA II construction and before its completion, the following actions need to be conducted by the Borrower when preparing and submitting an ESCR:

- **Before PUMA II completion**
 - Klabin E&S team leading the report delivery for PUMA I would only respond/complete the sections related with PUMA I; and
 - Klabin E&S team leading the report delivery for PUMA II would only respond/complete the sections related with PUMA II construction (without references to the Paranaguá port operations, which are being considered as part of the scope of PUMAI).

- **After PUMA II completion**
 - Every section should be completed and submitted considering PUMA facilities as a whole (PUMA I + PUMA II), which also encompasses the Paranaguá port operations.

• 1 ENVIRONMENTAL AND SOCIAL MANAGEMENT

1.1 Report Preparer

<p>To be completed by Klabin's authorized representative</p>	<p>Name and Title: Francisco César Razzolini - Planning, Project and Industrial Technology Officer Phone: +55 11 3046-5975 E-mail: fcrazzolini@klabin.com.br</p> <p>Name and Title: Marcos Paulo Conde Ivo - Chief Financial Officer and Investor Relations Officer Phone: +55 11 3046-9912 E-mail: mivo@klabin.com.br</p>
<p>Klabin company information</p>	<p>Officer physical address: Av. Brigadeiro Faria Lima, 3600 Itaim Bibi - CEP 04538-132 São Paulo</p> <p>Web page address: www.klabin.com.br</p>

I certify that the data contained in this Environmental and Social Compliance Report completely and accurately represents Klabin operations during this reporting period. I further certify that analytical data summaries incorporated in Chapter 5 are based upon data collected and analysed in a manner consistent with the monitoring guidance presented in the IFC general environmental, health and safety guidelines and IFC EHS guidelines for pulp and paper mills.

Francisco César Razzolini

Marcos Paulo Conde Ivo

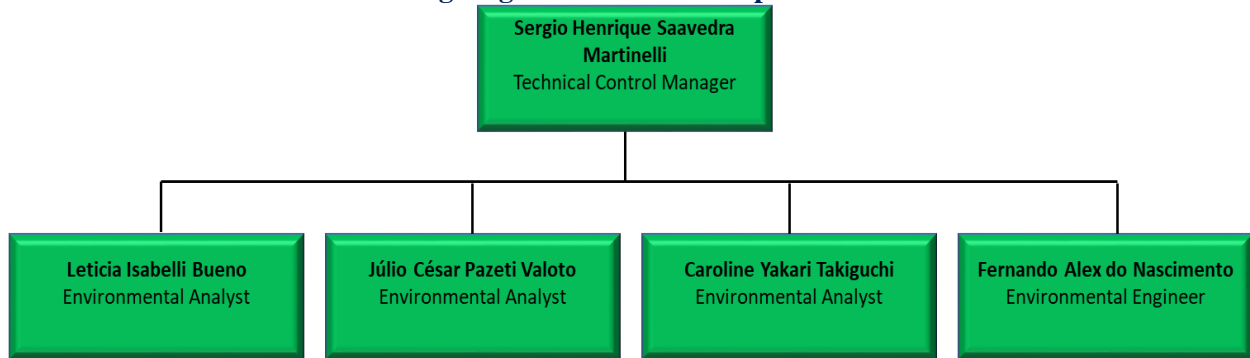
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1.2 Environmental, Social and Health and Safety Responsibility Chart

Please name the individuals in the company who hold responsibility for environmental, social and health and safety performance (e.g. Environment Manager, Occupational Health and Safety Manager, Community Relations Manager) and give their contact information (Name, Address, Telephone Number, Fax Number, E-mail Address). Include Team Chart/Organogram in Annex.

ENVIRONMENTAL

Organogram – PUMA I – Operation

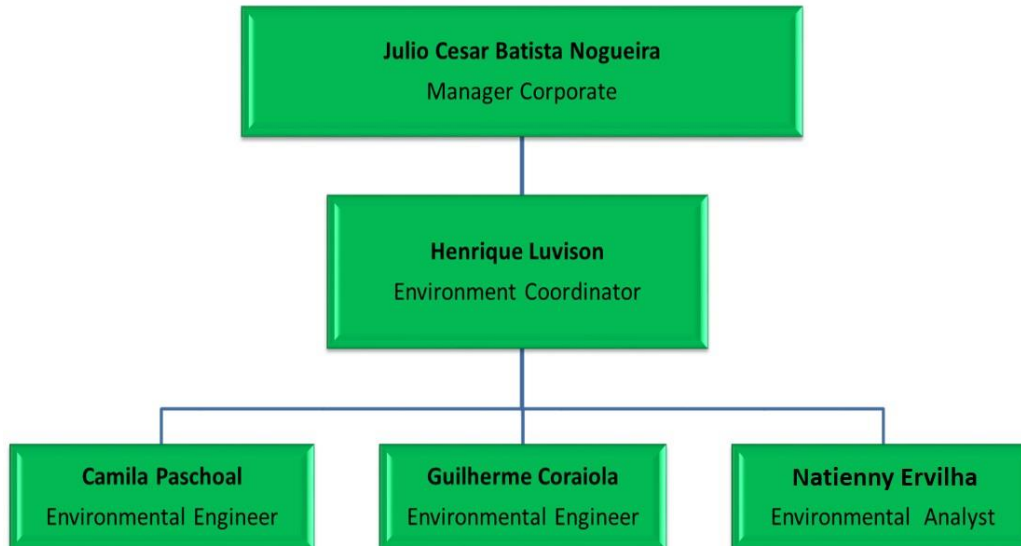


Technical Control Manager Sergio Henrique Saavedra Martinelli Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: +55 (42)99978-5468 E-mail Address: smartinelli@klabin.com.br
Environmental Analyst Júlio César Pazeti Valoto Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: +55 (42) 99155-4648 E-mail Address: jvaloto@klabin.com.br
Environmental Engineer Fernando Alex do Nascimento Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: (42) 991387507 E-mail Address: fernando.nascimento@klabin.com.br
Environmental Analyst Caroline Yukari Takiguchi Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: +55 42 99161-6575 E-mail Address: caroline.ytakiguchi@klabin.com.br
Environmental Analyst Leticia Isabelli Bueno Address: Faz. Apucarana Grande s/n – Ortigueira – PR

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Telephone Number: +55 42 99161-6575
E-mail Address: leticia.bueno@klabin.com.br

Organogram – PUMA II Project



Corporate Manager Julio Cesar Batista Nogueira Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: (42) 99973-4445 E-mail Address: julio@klabin.com.br
Environment Coordinator Henrique Luvison Gomes da Silva Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: (42) 99919-9364 E-mail Address: hlsilva@klabin.com.br
Environmental Engineer Camila Barbosa da Silva Paschoal Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: (42) 99158-9139 E-mail Address: camila.paschoal@klabin.com.br
Environmental Engineer Guilherme Conor Coraiola Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: (42) 99135-3352 E-mail Address: Guilherme.coraiola@klabin.com.br
Environmental Analyst Natienny Julia Teixeira Ervilha

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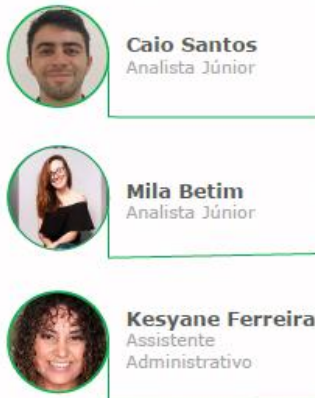
Address: Faz. Apucarana Grande s/n – Ortigueira - PR
Telephone Number: (42) 99138-3174
E-mail Address: Natienny.ervilha@klabin.com.br

SOCIAL RESPONSIBILITY AND RELATIONS WITH THE COMMUNITY

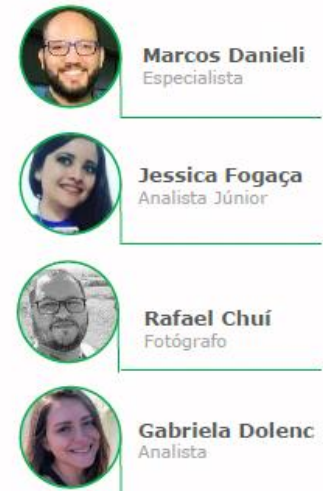


RELATIONS WITH THE COMMUNITY AND BASIC INDIGENOUS ENVIRONMENTAL PLAN - PBAI

EQUIPE RELAÇÕES COM A COMUNIDADE



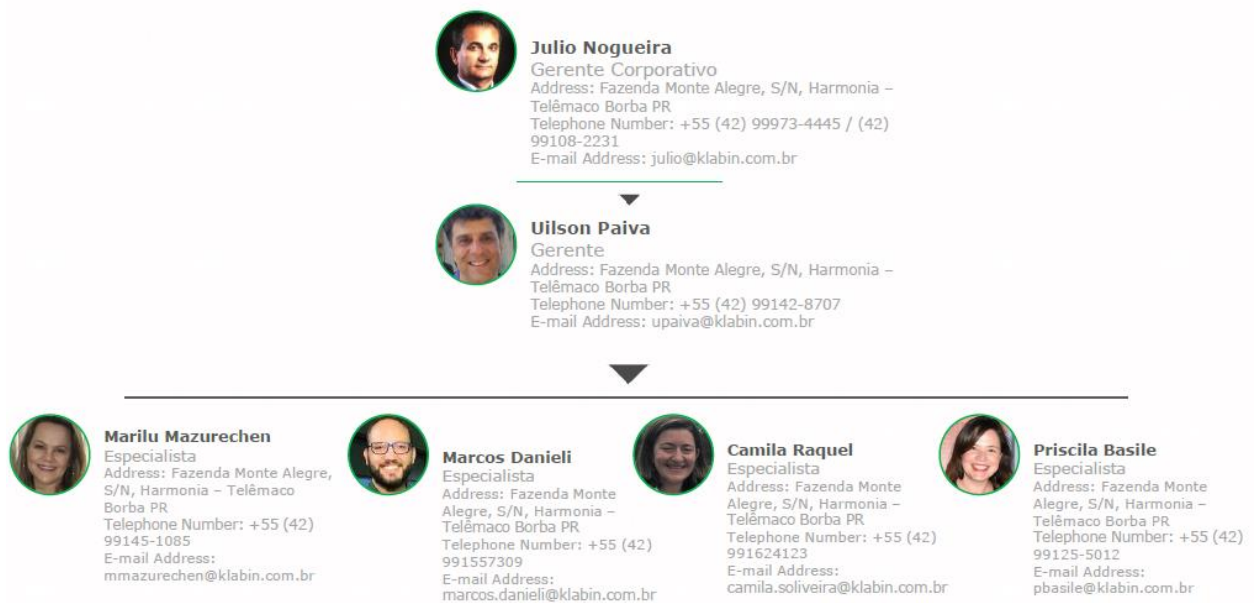
*EQUIPE PBAI



PUMA II – COMMUNICATION

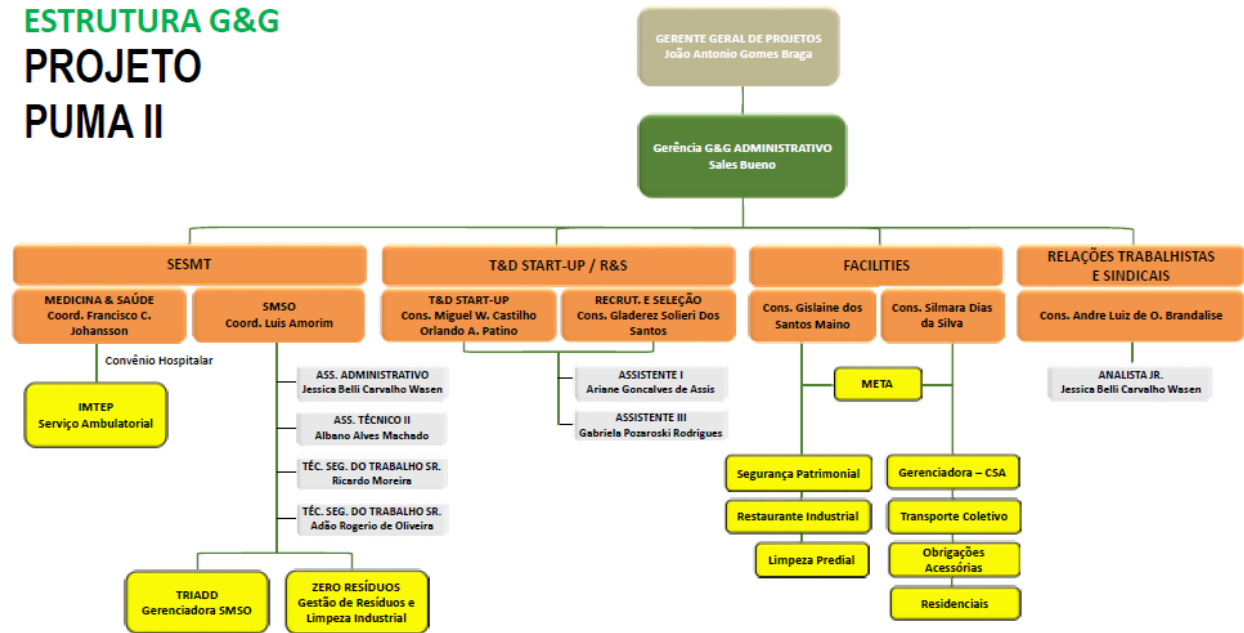


PUMA II – MANAGERS AND SPECIALIST



PUMA II PROJECT- G&G

ESTRUTURA G&G
PROJETO
PUMA II



LEGENDAS | Gerenciadora Contratada

PUMA I – SAFETY

Flavio Trioschi – Safety Coordinator
+55 11 9 9808-4995
ftrioschi@klabin.com.br

PUMA II – SAFETY (SMSO)

Luis Fernando Amorim
Coordenador de SMSO
(42) 99147 1910
Luis.amorim@klabin.com.br

1.3 Summary of Current Status

Describe the project status and level of business activity. Describe any significant changes since the last report in the company or in day-to-day operations that may affect environmental and social performance. Describe any management initiatives (e.g. ISO 14001, ISO 9001, OHSAS 18001, FSC or equivalent Quality, Environmental and Occupational Health and Safety certifications).

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In case the Project is still under construction the inclusion of a short narrative on overall physical progress for the reporting period: i) engineering; ii) procurement, iii) civil construction. Use graphics/charts e.g. general progress curve, actual/estimated manpower needs, etc.

PUMA I

Renewed their certifications and updated to the new ISO 45001 standard in Dec 2020.

PUMA II

- The project had a good evolution in the period;
- The advance was higher than planned, 68.07% against the planned 67.84%, representing a positive deviation of 0.23%, compared to a positive deviation of the previous month of 0.02%. The civil construction received the impact of a cancellation and is working to free up the assembly fronts. Electromechanical assemblies had a good general evolution, but not in the critical fronts for the plants necessary for the production of paper, influenced by the end of the year recess;

	Geral	Construção Civil	Montagem Eletromecânica
Planejado:	67,84%	71,39%	39,27%
Realizado:	68,07%	70,78%	39,44%
Desvio:	+0,23%	-0,61%	+0,17%
Desvio anterior:	+0,02%	+0,37%	-0,79%

Considering the processes and facilities required for paper production, the situation is as follows:

	Geral	Construção Civil	Montagem Eletromecânica
Planejado:	76,34%	95,37%	45,08%
Realizado:	76,37%	95,57%	43,71%
Desvio:	+0,03%	+0,20%	-1,37%
Desvio anterior:	+0,22%	+0,41%	+0,36%

- The biggest challenge and risk of the project is the evolution of the boiler assemblies;
- The mobilization of workers had a normal pace in the period, except with the Enesa company that performs the boilers assembly and the Pipe Rack, which alleges difficulties. At the end of the month, the number of registered workers is 8,342, against 8,622 in the previous month. This reduction is due to two factors, a reduction in some fronts of civil construction and a cancellation with Confer Construções, which carried out the work of Log Yard and Streets, which demobilized the team, around 250 workers;

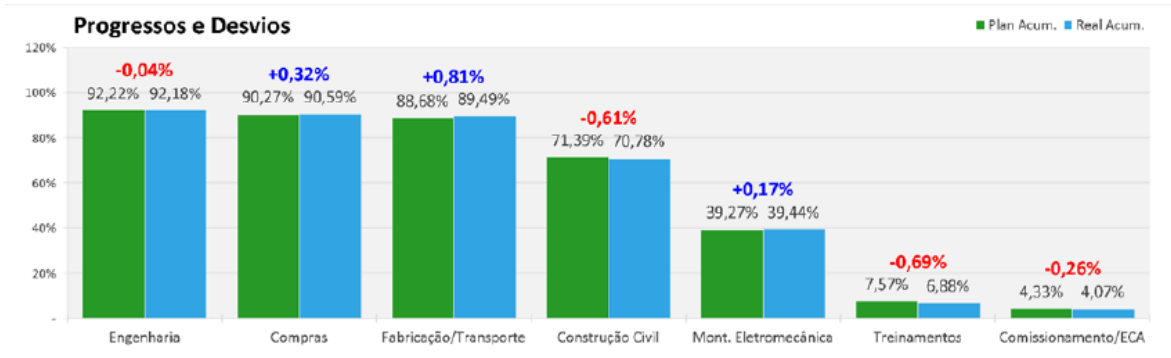
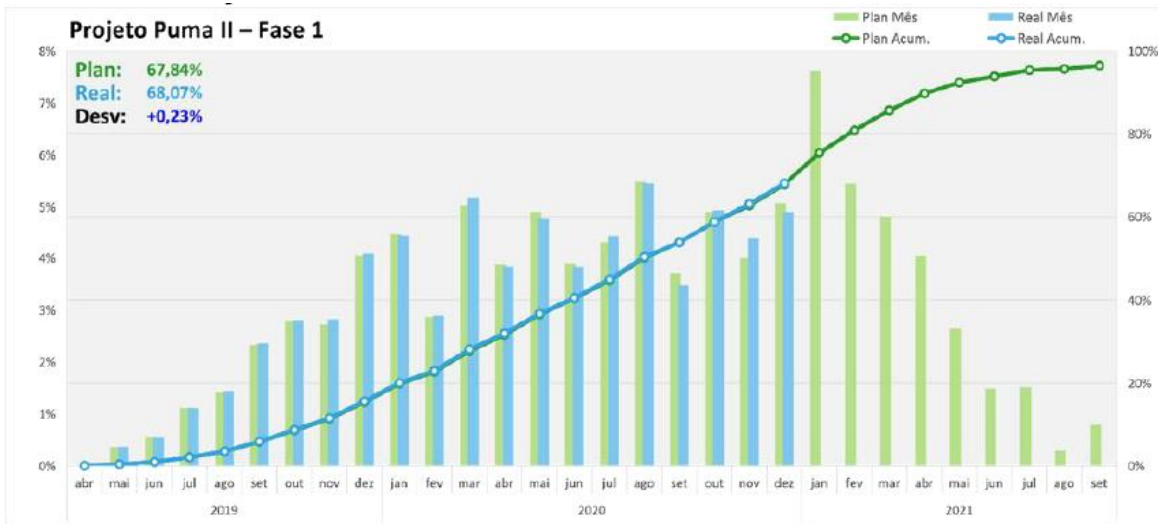
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- The climate presented a higher frequency of rains, but, within the history, which caused some impact for the execution of construction and assembly works;
- In the construction work of Log Yard and Streets, a friendly cancellation was made with the company Confer Construções caused by low performance to alleged losses with the contract. In order to improve the condition for both sides and not let the situation worsen in the future, the cancellation was carried out. New suppliers will be hired by the end of January 2021;
- Due to the condition of the Covid-19 pandemic, the in-house team works part remote, part with partial presence and part with full presence;
- In the pandemic management, there was a significant increase in positive cases in workers, in a trend similar to that of the region and state. In the period, 205 new cases were registered, against 93 in the previous month. At the end of the month there were 25 positive workers on leave. Actions in the management of the pandemic were reinforced;
- The planned shutdown of the unit was carried out with a wide list of project activities. The entire planned scope was accomplished, there were some delays in releases that impacted the production return. The deviations were with raw effluent pipes, energy distribution system, increased capacity of the Fiber Lines and Drying. The first two deviations impacted production returns;
- The steam turbine of the TG 3 set has arrived. Important parts of the Evaporation, MP27 and electrical equipment are still expected;
- The management of claims related to Covid-19 and extension of terms remains intense;
- The recess at end of the year took place between 12/24/20 and 1/3/21, in agreement with workers and unions. In the areas of boilers and MP27 teams worked during the period, with the support of an incentive program;
- For the return of the workers' recess, in order to reduce the risks of contamination of Covid-19 within the project, a detailed testing plan was structured. The objective is to test all workers who left in recess when returning, avoiding the access of possible contaminants in the work fronts. We can say that the result was quite satisfactory.
- Engineering: The engineering activities of the suppliers are still under development at the moment, below planned, with emphasis on the areas of the Recovery Boiler, Power Boiler, White Liquor Plant, 5th Effect A - Evaporation I, Gasification, Gasification Feed System, Distributed Control System (DCS), PIMS, Solid Waste Treatment Plant and Sulfuric Acid Plant;
- Procurement: Procurement activities from suppliers are as planned, with the exception of the areas of the Power Boiler, White Liquor Plant, Evaporation, Wood Yard, Fiber Line and BOP - Package 1 which are progressing less than expected;
- Manufacture/ Transport: The Supplier's Manufacturing / Transport activities are as planned, with the exception of White Liquor Plant, Evaporation, Fiber Line, ETE, ETE 1 - Complementary Tertiary Treatment, Distributed Control System (DCS) and Turbogenerator which have progresses below the expected;
- Civil Construction: Suppliers' civil construction activities are still under development at the moment, less than planned, especially in the areas of the Fiber Line, ETE, ETE 1 - Complementary Tertiary Treatment, Turbogenerator, Earthworks, Log Yard and Streets, Roll Deposit and Auxiliary Buildings;
- Electromechanical Assembly: Supplier Electromechanical Assembly activities are as planned, with the exception of the Paper Machine 27, MC25 and MC26 Upgrade, BOP - Package 2, Pipe Rack, Turbogenerator, Earthworks, Log Yard and Streets, which have progresses below the expected;

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- Commissioning: The Commissioning activities of suppliers are still under development at the moment, below the planned level, with emphasis on the areas of Upgrade MC25 and MC26 and Earthmoving, Log Yard and Streets;
- Training: Supplier training activities are currently under development, below schedule, with emphasis on the Upgrade MC25 and MC26 and Fiber Line areas.

CURVA GERAL E MAPA DE PROGRESSO DO PROJETO - PUMA II (Fase I)



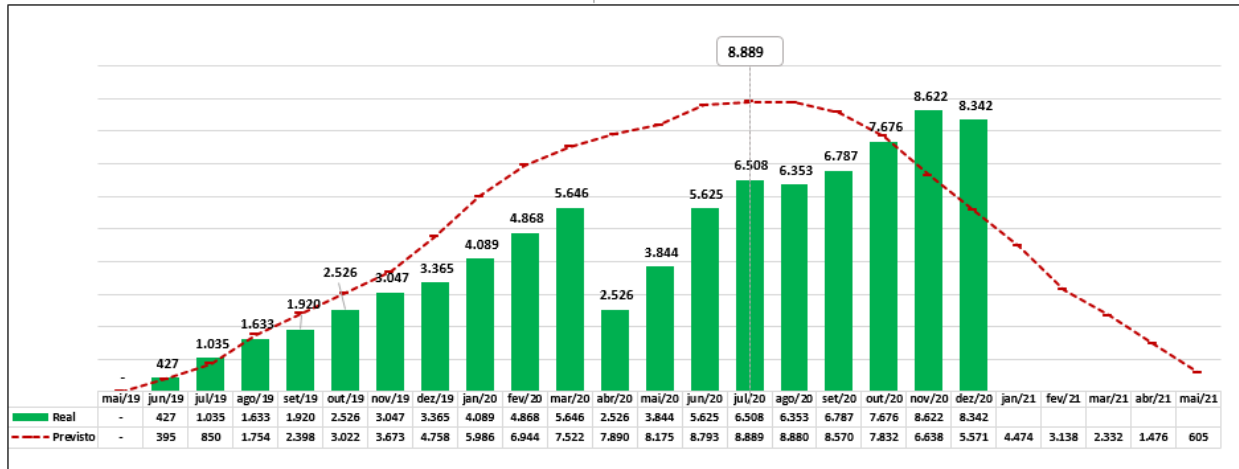
Area	Weight	Deviation	WeightedDeviation
Puma Project II – Phase 1	100,0%	0,23%	0,23%

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BOP Klabin – Rolls Storage and Auxiliaries Buildings	2,4%	- 7,19%	- 0,175%
BOP – Pipe Rack	4,6%	- 0,91%	- 0,042%
Upgrade MC25 and MC26	1,5%	- 1,62%	- 0,024%
BOP Klabin – Earthwork, Log Yard and Streets	1,6%	- 0,86%	- 0,014%
Balance of Plant	8,6%	- 0,16%	- 0,014%
Dedicated Systems	0,1%	- 0,85%	- 0,001%
BOP – Industrial Restaurant	0,2%	- 0,50%	- 0,001%
ETE 1 – Complementary Tertiary Treatment	0,3%	- 0,36%	- 0,001%
PIMS	0,1%	- 0,37%	-
5ª Effect A – Evaporation Plant I	0,5%	- 0,01%	-
Evaporation Plant	6,8%	-	-
Chlorine Dioxide Plant	0,4%	-	-
Fiberline	7,5%	0,02%	0,001%
Water Treatment	0,4%	0,62%	0,002%
BOP – Package 1	0,1%	1,90%	0,002%
Fiberline 1 – Capacity Increase	1,5%	0,18%	0,003%
Solids Residues Treatment Plant	0,5%	0,79%	0,004%
BOP – Package 2	0,8%	0,59%	0,005%
Boiler Water Treatment Plant	1,4%	0,44%	0,006%
Gasification Feed System	0,5%	1,15%	0,006%
Effluent Treatment	3,0%	0,32%	0,010%
Distributed Control System	0,6%	2,21%	0,013%
External Container Yard	3,3%	0,45%	0,015%
Power Distribution	1,2%	1,53%	0,019%
BOP- Turbogenerator	2,5%	0,84%	0,021%
Turbogenerator	2,5%	0,84%	0,021%
White Liquor Plant	5,5%	0,55%	0,030%
Power Boiler	4,8%	0,78%	0,038%
Gasification	2,0%	2,07%	0,041%
Recovery Boiler	10,0%	0,61%	0,061%
Wood Yard	5,0%	1,62%	0,080%
Paper Machine 27	22,3%	0,59%	0,131%

HISTOGRAMA DA OBRA

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1.4 Status Of The Environmental, Social, Health & Safety Management System (ESH&S-MS)

- Status of Corrective Action Plan [only where applicable]
- Status of Environmental & Social Action Plan [Short narrative on progress towards closing key activities as per priority milestones. Include entire ESAP with updated 'status' fields as Annex]
- Environmental Management and Indicators

[The ESAP update is available at the link with the documents.](#)

1.5 Status of Relevant Permits

Include table of Relevant Permits as per Schedule IV of the Loan Agreement

Ref.	Scope of permit (aspect)	Project component	Official permit name	Granted by (Institution)	Issue date	Expiration date
					dd/mm/yyyy	dd/mm/yyyy
1	Water	Puma I e Puma II	Grant - 2812/2019	Paraná Water Institute	16/07/2019	29/03/2026
2	Effluent	Puma I e Puma II	Grant - 289/2016	Paraná Water Institute	04/03/2016	04/03/2022
3	Environmental License Operation	Puma I	RLO 148369	Paraná Environmental Institute	03/05/2020	30/09/2020
4	Environmental License Operation Renewal	Puma I	Protocol 16.510.806-0	Paraná Environmental Institute	03/04/2020	
5	Environmental License Operation	Transmission Line 230kV	LO 34265	Paraná Environmental Institute	25/05/2016	25/05/2022
6	Environmental License Operation	Railway Branch	LO 34882	Paraná Environmental Institute	14/03/2017	14/03/2021

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7	Environmental License Operation	Paranaguá Port Terminal	LO 112499	Paraná Environmental Institute	14/06/2016	14/06/2020
8	Environmental License Operation Renewal	Paranaguá Port Terminal	Protocol 16.406.942-7	Paraná Environmental Institute	17/02/2020	-
9	Environmental License Operation	Campina's Highway	LO 34266	Paraná Environmental Institute	25/05/2016	25/05/2022
10	Environmental License Operation	Fuel station	LO 185675-R1	Paraná Environmental Institute	10/07/2020	10/07/2026
11	Preliminary Permit	Puma II	LP 148370	Paraná Environmental Institute	30/09/2018	19/09/2020
12	Installation Permit	Puma II	LI 157633	Paraná Environmental Institute	26/05/2020	29/06/2026

• 2 SIGNIFICANT ENVIRONMENTAL AND SOCIAL EVENTS

Personnel are required to report all environmental and social events¹ that may have caused damage; caused health problems; attracted the attention of outside parties; affected Klabin’s labour or adjacent populations; affected cultural property; or created liabilities for Klabin.

Attach photographs, plot plans, newspaper articles and all relevant supporting information of any significant environmental or social event.

Please report on the following topics, expanding or collapsing the table where needed.

<i>Date of event</i>	<i>Event description</i>	<i>Affected people/environment</i>	<i>Reports sent to local regulatory agencies</i>	<i>Corrective actions (including cost and time schedule for implementation)</i>

So far, there were no significant social events.
There were no significant environmental events during this report period.

¹ Examples of significant incidents: chemical and/or hydrocarbon materials spills; fire, explosion or unplanned releases; industrial injuries; fatalities including transportation; ecological damage/destruction; local population disruption; disruption of emissions or effluent treatment; legal/administrative notice of violation; penalties, fines, or increase in pollution charges; negative media attention; chance cultural finds; labor unrest or disputes.

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• 3 GENERAL INFORMATION AND FEEDBACK

Provide any additional information including the following:

1. In detail, describe print or broadcast media attention given to Reporting scope of companies during this reporting period.

External Communication – Press, divulgation and monitoring

Klabin considers press as a fundamental relationship public for communication with its different stakeholders. In Project Puma II, the journalists' service structure includes several activities – such as release production and support to press professionals, monitoring of all published information about the Project and related subjects.

A structured team is responsible for media monitoring (clipping), which consists on reading the daily news from main regional media vehicles, in addition to radio stations, websites and Internet blogs. For this reason, there is the possibility of giving a prompt feedback to the media vehicles in the case of the publication of divergent information. Every time a divergent new is divulgated, the communication team gets in touch with the press to avoid expectations or negative wishes of the community by receiving non-official information.

Releases

In this report's period, there were 6 press releases divulgated to local press. In majority, notes consisted on information about Klabin's social projects and programs such as Território Empreendedor and Semeando Educação, actions in partnership with the public sector and eventual Puma II and adjacent constructions' interferences on the region's day-by-day (charges transportation).

RELEASES	DATA
“Cargas com mais de 8 metros de diâmetro devem chegar a Ortigueira nesta sexta-feira”	02/07
“Klabin e Sebrae lançam Programa Território Empreendedor”	09/07
“Cerca de 120 empresários e novos empreendedores da região participam do Programa Território Empreendedor”	14/09
“Com apoio da Klabin, Delegacia de Ortigueira terá sala para atendimento a mulheres e crianças”	11/11
“Ortigueira recebe tecnologia inovadora e sustentável para combate à dengue”	19/11
“Klabin divulga lista de vencedores 1ª edição do Concurso de Boas Práticas do Programa Klabin Semeando Educação”	23/12

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Besides proactive press releases, there is reactive media treatment. The company might be called to clarify any theme of interest of the journalists, or its spokesperson might be invited to speak about a Project Puma II related theme in the media vehicles. In the period between July and December of 2020, Social Responsibility and Community Affairs Manager Uilson Paiva went to a radio program to speak about Project Puma II's new program – Território Empreendedor:

ENTREVISTAS

DATA

Rádio T – Entrevista Uilson Paiva sobre o Programa Território Empreendedor

10/jul

Media Monitoring (clipping)

Everything that is divulgated on the media is monitored daily – news classification by themes: the ones that mention Project Puma II directly, the ones the in any form might quote Klabin, and the others that bring relevant subjects for the region (health, public security, environmental issues, etc.).

A group of workers in Klabin, related to Project Puma II, receives the clipping weekly with an abstract of week news about the Project and relevant subjects, aiming the comprehension of the published subjects' inter-relation. A number of 62 media vehicles, 45 websites, 7 radios, 10 newspapers, more than 40 influencers and 18 WhatsApp Groups are monitored daily – except the ones that have different periodicities. Summary of weekly report and press performance report from July to December in annex.

2. In detail, describe interactions with non-governmental organizations (NGOs) or public scrutiny of Reporting scope of companies.

Klabin and support to Municipalities in the Covid-19 pandemic scenario

Since the beginning of the health global crisis, Klabin engaged in the fight against Covid-19 by increasing its compromise of social responsibility and people care, especially in the operations' area of influence. For example, Klabin integrates since March the Covid-19 Inter Sectorial Committee, formed by the Municipal and State Secretariat of Health, Municipal Council of Health and the city hospitals (Instituto Doutor Feitosa e Hospital Moura). In the daily meetings there are discussions related to regional infrastructure and follow up of the pandemic situation.

Klabin is aware of the importance of its social role in a difficult moment and, in 2020, designated R\$ 2 million to the fight against Covid-19 in Paraná State. The actions focus on the health and social assistance areas, in addition to other sectors impacted by the crisis. The main investment was related to the works and equipment acquisition that allow the Campaign Hospital in the Regional Hospital installations in Telêmaco Borba. Ten new Intensive Care rooms and 40 other nursery rooms that benefits seven municipalities of the region (Telêmaco Borba, Ortigueira, Imbaú, Curiúva, Reserva, Tibagi and Ventania).

Klabin also donated 10 respirators to the Regional Hospital and distributed other equipment (masks and hand sanitizers) for neighboring communities and health professionals. More information about the Campaign Hospital and general donations in 2020 are available in the following links:

Campaign Hospital:

- <https://klabin.com.br/sala-de-noticias/press-release/klabin-entrega-as-obras-do-hospital-de-campanha-de-telemaco-borba/>

General Donations:

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- <https://klabin.com.br/sala-de-noticias/press-release/doacoes-da-klabin-para-combater-a-covid-19-no-parana-somam-r-2-milhoes/>
- <https://klabin.com.br/sala-de-noticias/press-release/klabin-apoia-terras-indigenas-de-ortigueira-e-cooperativas-de-reciclagem-no-combate-ao-coronavirus/>
- <https://klabin.com.br/sala-de-noticias/press-release/klabin-realiza-novas-doacoes-para-combater-o-coronavirus-no-parana/>
- <https://klabin.com.br/sala-de-noticias/press-release/klabin-doa-10-respiradores-para-o-hospital-regional-de-telemaco-borba/>

3. Describe Reporting scope of companies' public relations efforts.

Project Puma II and the pandemic

During the year of 2020, Project Puma II communication efforts and company's relations with the region communities were related to contention measures of Covid-19 dissemination among the workers and the population.

After its interruption in March, the Project Puma II constructions continued during the year of 2020 without any demobilizations. After protocol implementation by the State and Municipal Governments, Klabin worked along with the Covid-19 Inter Sectorial Committee and Ortigueira City Hall.

For the work continuity, Klabin developed a robust protocol of health and security and presented to the Covid-19 Inter Sectorial Committee, Ortigueira and Imbaú City Halls. Covid-19 testing in the worker's city of origin, seven days social distancing and new testing before accessing the site, daily temperature measurement of all workers, ozone tunnels in the site entrance and exit, Covid-19 ambulatory are examples of the protocol actions. In addition, the company implemented a daily "active search" in Project Puma II – health professionals checking temperature and measuring symptoms or workers that have been in contact with asymptomatic people. In case of any sign of contamination, the worker would be forwarded to the ambulatory and, if necessary, secluded. The protocol is also applied in the workers' residential, restaurants and transportation (buses and vans), along with intense communication efforts. A detailed and illustrated report of the protocol and communication actions are available in annex.

By the end of the year, Puma Mill had its General Maintenance. It was an essential period for the bond between the new existing plants. For the General Maintenance, more actions regarding Covid-19 prevention had to be done, as far as another 3,000 new workers arrived.

Detailed and illustrated measures available in annex. More information about the actions and H&S protocols during the General Maintenance in Puma Mill in the following links:

- <https://klabin.com.br/sala-de-noticias/press-release/klabin-exige-testes-de-covid-19-na-cidade-de-origem-dos-trabalhadores-do-puma-ii/>
- <https://klabin.com.br/sala-de-noticias/press-release/forca-tarefa-das-operacoes-da-klabin-apoia-na-seguranca-da-parada-geral-da-unidade-puma/>

4 REPORTS TO ILLUSTRATE COMPLIANCE WITH HOST COUNTRY REGULATIONS AND INTERNATIONAL ENVIRONMENTAL POLICIES AND GUIDELINES

4.1 Noise

PUMA/Klabin is required to monitor point source air emissions as specified in the relevant environmental permit. Monitoring should take place while the pulp mill is operating.

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PUMA/Klabin is required to monitor sound pressure levels as specified in the relevant environmental permit. Monitoring should take place while the pulp mill is operating and compared with the background levels defined in the project’s ESIA/EIA.

Please complete the following table.

MONITORING SITES	COORDINATES	
	UTM X (m)	UTM Y(m)
P1	526836	7320893
P2	525480	7320143
P3	524504	7319320
P4	524536	7316963
P5	527670	7316371



Location of noise monitoring points

MONITORING SITES	RECEPTOR	UNITS	LIMITS NBR 10151		LIMITS IFC Guidelines		LIMITS Adopted by the Project	
			DAYTIME	NIGHTTIME	DAYTIME	NIGHTTIME	DAYTIME	NIGHTTIME
P1	Residential	dB	55	50	55	45	55	45
P2	Residential	dB	55	50	55	45	55	45
P3	Industrial	dB	70	60	70	70	70	60
P4	Industrial	dB	70	60	70	70	70	60
P5	Residential	dB	55	50	55	45	55	45

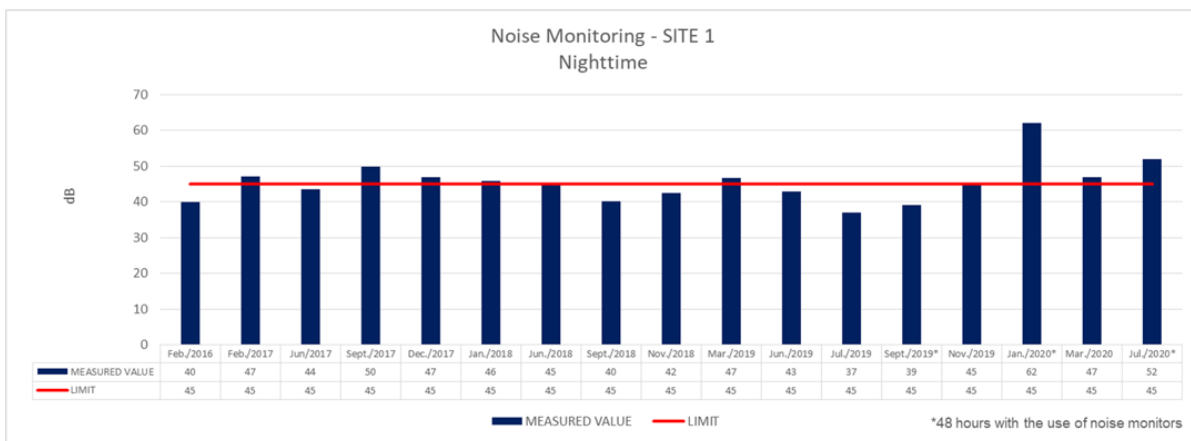
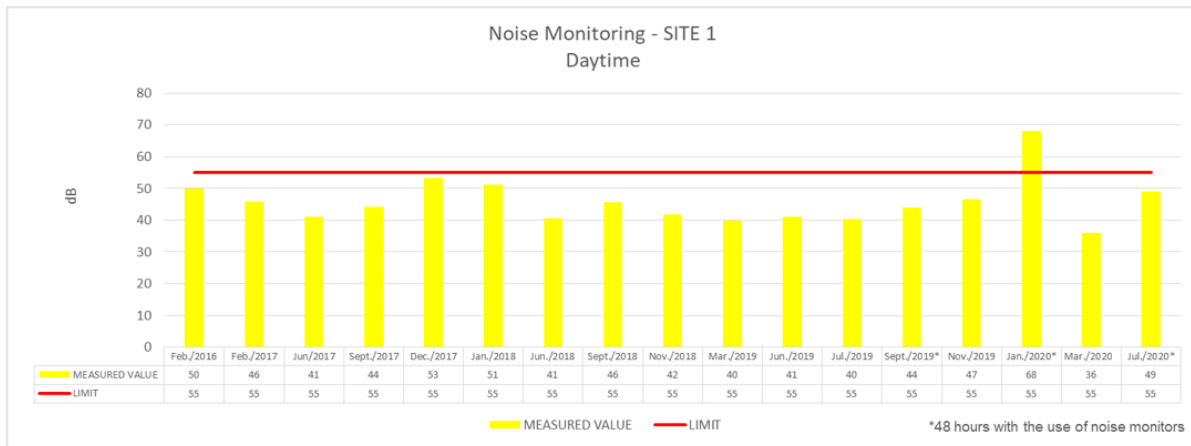
In according Corrective Actions M2-C1, Was implemented of a more stringent numerical standards, individually selected per sampling site based on a more conservative (precautionary) approach. The methodology 48 hours with the use of noise monitors has been in use since September 2019.

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Noise monitoring campaign conducted during the general stop (12/02/2020 through 12/12/2020) - Waiting for report.

In according Recommendation M2-R21, we conducted on community opinion survey (close to Puma) to identify possible noise complaints.

Noise monitoring - SITE 1: César Mouro Residence



The monitoring campaigns conducted in:

- Feb./2017 (nighttime);
- Sept./2017 (nighttime);
- Dec./2017 (nighttime);
- Jan./2018 (nighttime);

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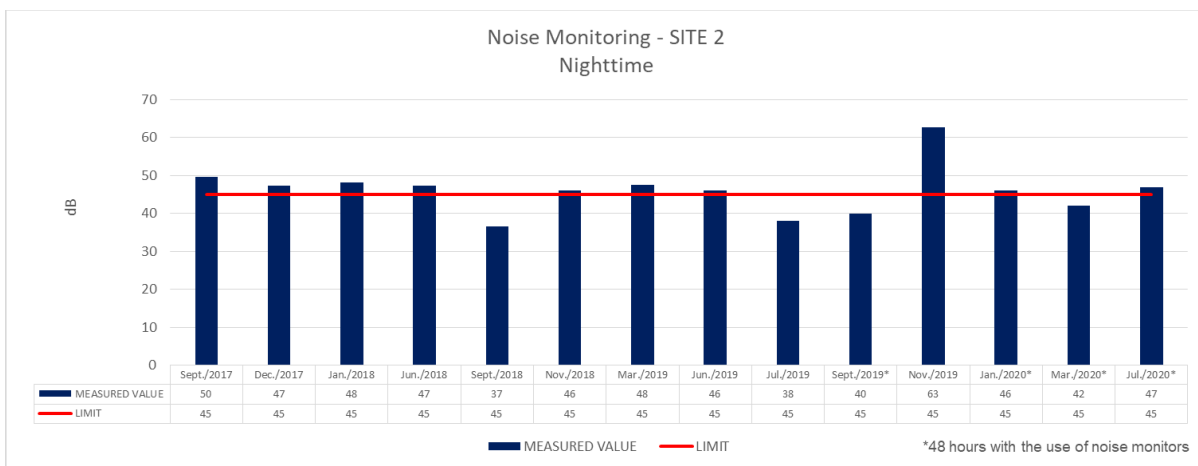
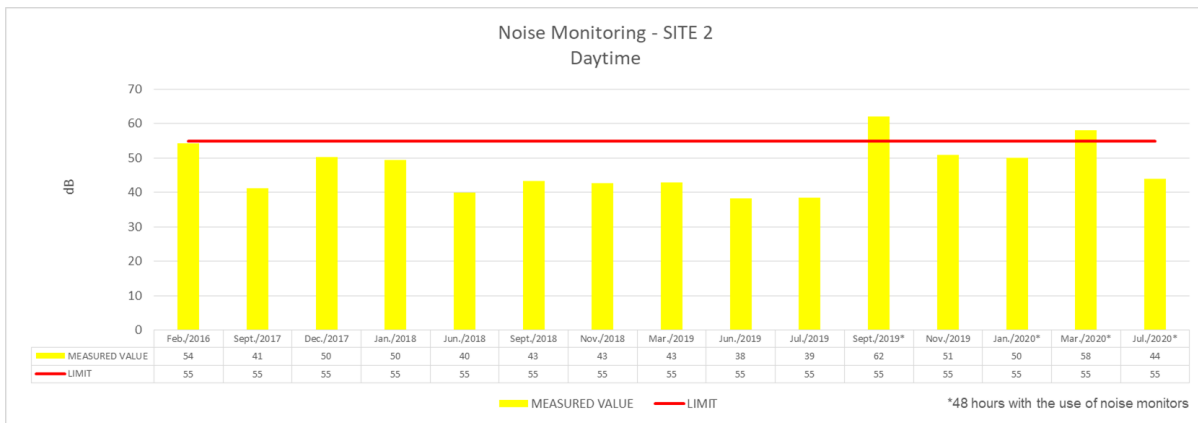
- Jun./2018 (nighttime);
- Mar./2019 (nighttime);
- Jan./2020 (daytime and nighttime);
- July 2020 (nighttime),

Showed values above the limit, these values can be attributed to the Local agricultural activity and sound pressure contribution of roads.

During nighttime monitoring, noise from domestic and wild animals was observed.

The monitoring campaign conducted in the march/2020 was obtained using a different methodology (5-minute sampling time) because the landowner did not provide extended access to the monitoring team due to preoccupation to be exposed to Covid-19.

Noise monitoring - SITE 2: José Zito Residence



The monitoring campaigns conducted in:

- Sept./2017 (nighttime);
- Dec./2017 (nighttime);
- Jan./2018 (nighttime);
- Jun./2018 (nighttime);

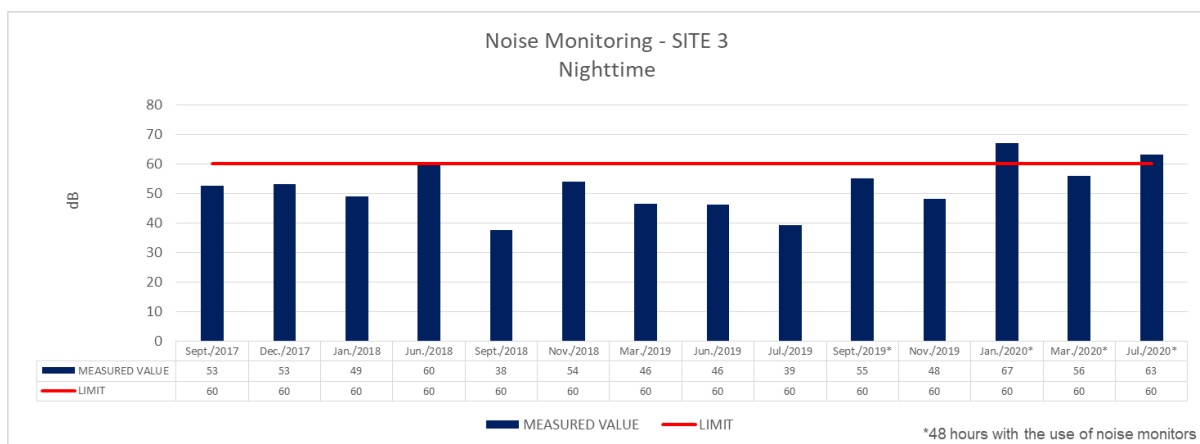
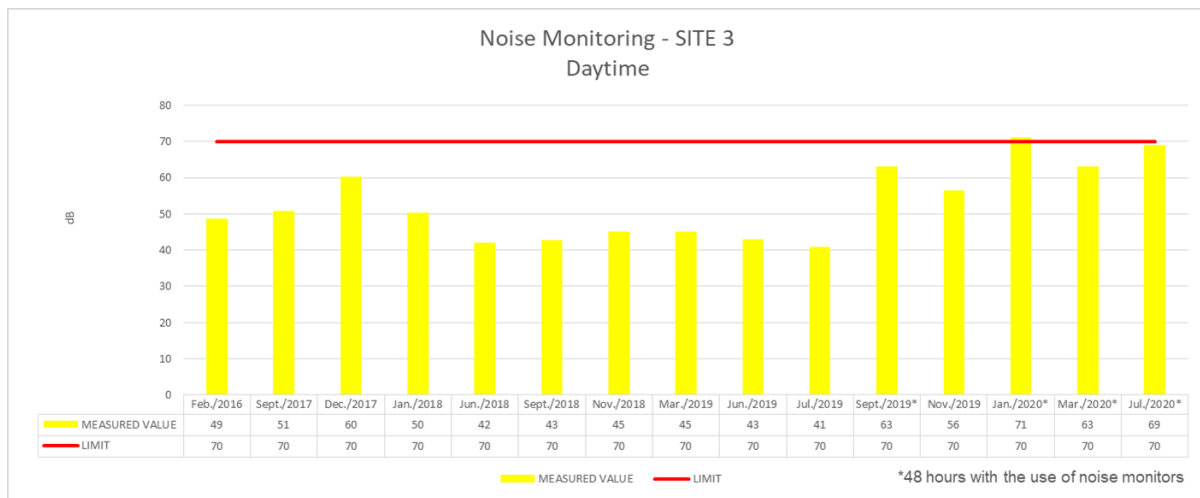
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- Nov./2018 (nighttime);
- Mar./2019 (nighttime);
- Jun./2019 (nighttime);
- Sep./2019 (daytime);
- Nov./2019 (nighttime);
- Jan./2020 (nighttime);
- Mar./2020 (daytime);
- July 2020 (nighttime),

Showed values above the limit, these values can be attributed to the Local agricultural activity and sound pressure contribution of roads.

During nighttime monitoring, noise from domestic and wild animals was observed.

Noise monitoring - SITE 3: Steakhouse



The monitoring campaigns conducted in:

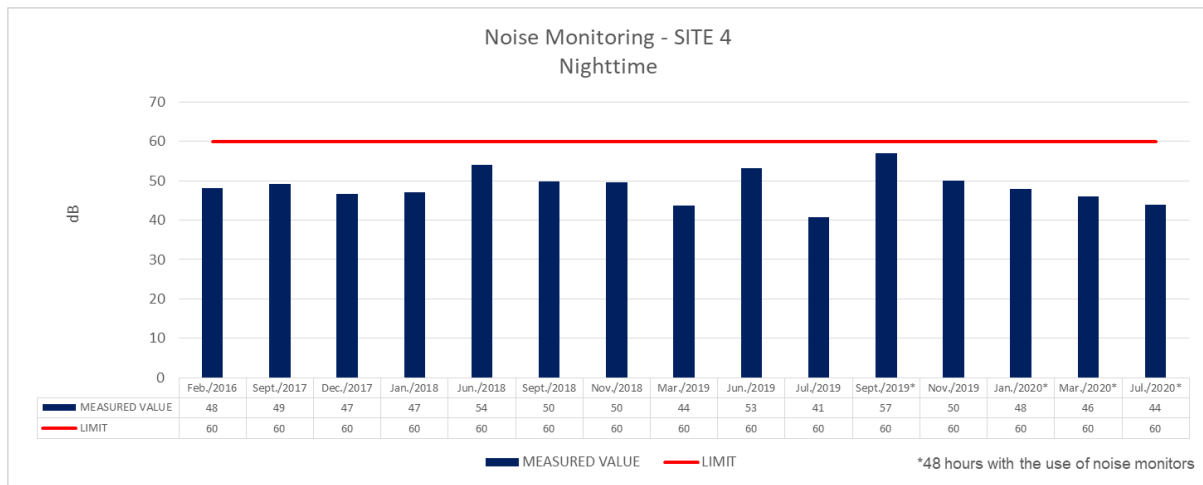
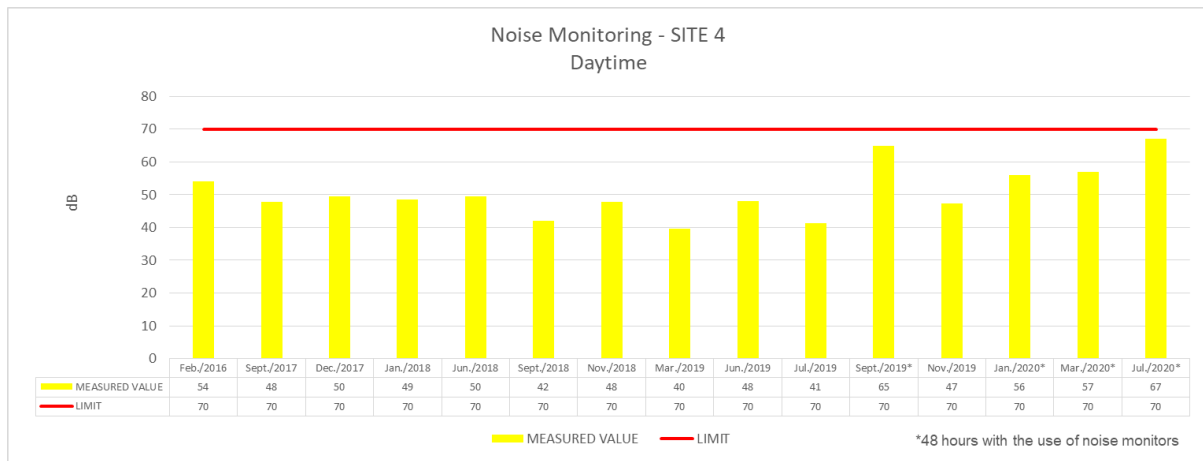
- Jan./2020 (daytime and nighttime);
- July 2020 (nighttime),

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Shown values above the limit, these values can be attributed to the sound pressure contribution of roads and steakhouse parking.

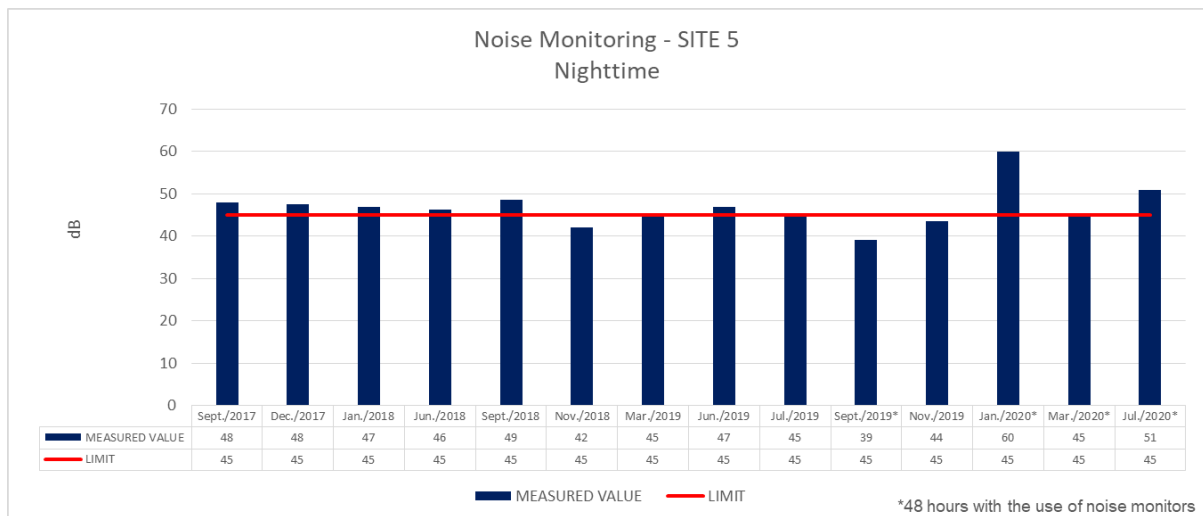
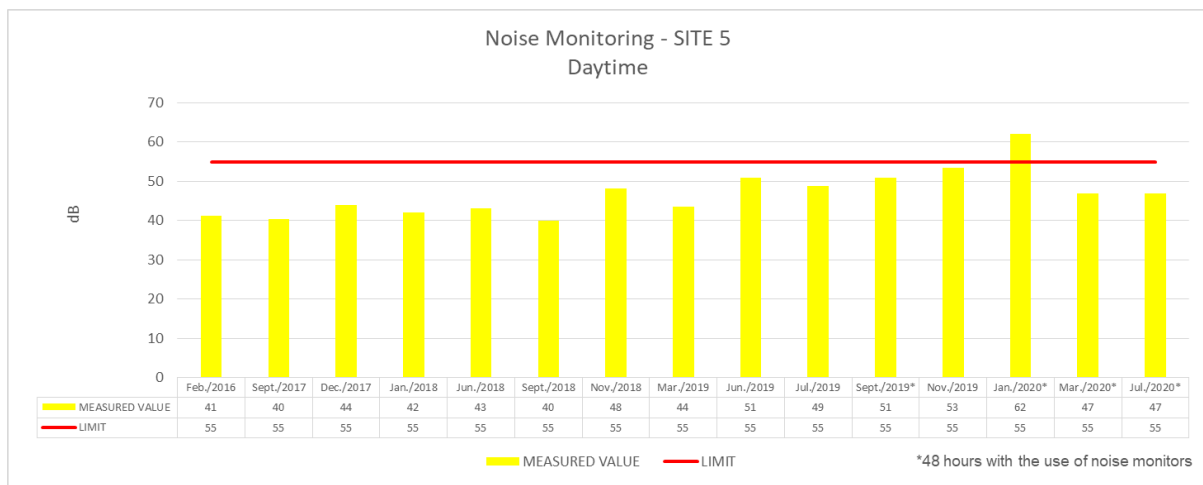
During nighttime monitoring, noise from domestic and wild animals was observed.

Noise monitoring - SITE 4: Waste Treatment Plant



These monitoring site doesn't have values above the limit.

Noise monitoring - SITE 5: Condominium



The monitoring campaigns conducted in:

- Sep./2017 (nighttime);
- Dec./2017 (nighttime);

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- Jan./2018 (nighttime);
- Jun./2018 (nighttime);
- Sep./2018 (nighttime);
- Jun./2019 (nighttime);
- Jan./2020 (daytime and nighttime);
- July 2020 (nighttime),

Showed values above the limit, these values can be attributed to the sound pressure contribution of roads. During nighttime monitoring, noise from domestic and wild animals was observed.

4.2 Point Source Air Emissions

PUMA/Klabin is required to monitor point source air emissions as specified in the relevant environmental permit. Monitoring should take place while the pulp mill is operating.

Please report valid limits from the Brazilian environmental permit and measurement results to the table below.

Point Source Air Emissions Monitoring² - Reporting Period July/2020 through December/2020						
<i>Sampling frequency (if not continuous, define sampling frequency below)</i>	<i>Pollutant</i>	<i>Unit</i>	<i>Numerical Standard Adopted by the Project</i>	<i>PUMA/Klabin's Performance, Average for the reporting period</i>	<i>Maximum</i>	<i>Minimum</i>
Recovery Boiler						
Semiannual	PM	mg/Nm ³	100	46,73	47,09	46,22
Semiannual	SO ₂	mg/Nm ³	100	2,63	2,68	2,59
Semiannual	NO _x	mg/Nm ³	470	155,57	141,51	160,69
Semiannual	TRS	mg/Nm ³	15	1,29	1,31	1,27
Semiannual	H ₂ S	mg/Nm ³	-	-	-	-
Biomass Boiler						
Semiannual	PM	mg/Nm ³	100	22,54	19,10	25,35
Semiannual	SO ₂	mg/Nm ³	-	1,72	1,69	1,77
Semiannual	NO _x	mg/Nm ³	500	152,10	140,38	175,23
Semiannual	TRS	mg/Nm ³	-	-	-	-
Semiannual	H ₂ S	mg/Nm ³	-	-	-	-
Lime Kiln I						
Semiannual	PM	mg/Nm ³	100	11,41	12,27	9,74
Semiannual	SO ₂	mg/Nm ³	-	31,11	32,29	28,83

² Provide a scaled facility map showing the precise location of all discharge points.

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Semiannual	NOx	mg/Nm3	470	398,58	428,58	308,55
Semiannual	TRS	mg/Nm3	30	10,26	10,91	9,01
Lime Kiln II						
Semiannual	PM	mg/Nm3	100	9,50	11,30	8,87
Semiannual	SO ₂	mg/Nm3	-	109,59	126,63	80,39
Semiannual	NOx	mg/Nm3	470	157,92	165,55	141,15
Semiannual	TRS	mg/Nm3	30	11,48	11,20	11,87

Please provide in the table below the amount of absolute emission during the reporting period of each given parameter divided by amount of pulp produced in same period of time.

Parameter	Unit	PUMA/Klabin Pulp Mill's performance ³	IFC guideline ⁴
Amount of produced pulp	ADt	741.672,23	
TSP	kg/ADt	0,29	0,5
SO ₂ as S	kg/ADt	0,08	0,4
NOx as NO ₂	kg/ADt	1,16	1,5
TRS as S	kg/ADt	0,00003	0,2

4.3. Ambient Air

Ambient Air refers to any unconfined portion of the atmosphere and is also termed open air or surrounding air. Ambient monitoring is carried out for a variety of reasons, including assessment of environmental problems and evaluation of interventions.

PUMA/Klabin is required to monitor ambient air at subsequent defined locations. Monitoring should take place while the pulp mill is operating.

Please fill in valid ambient air quality limits from the Brazilian environmental permit and measurement results to the table below. If there is more than one ambient air quality monitoring place, each monitoring place needs a table of its own.

MONITORING SITES	COORDINATES	
	UTM X (m)	UTM Y(m)

³ Report average figures for the reporting period.

⁴ IFC. 2007: Environmental, health and safety guidelines for pulp and paper mills. Page 30.

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P1	535.013,88	7.308.093,07
P2	523.760,76	7.296.052,88
P3	507.675,72	7.321.976,19



Location of ambient air quality monitoring points

Please report on fulfillment of the Brazilian ambient air quality limits taking into account environmental permit's conditions (e.g. permitted exceeding X times a year).

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Air Quality Monitoring Campaigns	
Seasons of the year	Monitoring Period
 <p>AUTUMN</p>	04/19/2018 through 05/30/2018 - Completed 05/24/2019 through 06/24/2019 - Completed 06/01/2021 through 06/18/2021 - Planned
 <p>WINTER</p>	09/06/2019 through 09/22/2019 - Completed
 <p>SPRING</p>	10/16/2018 through 11/17/2018 - Completed 12/01/2020 through 12/18/2020 – Conducted during the general stop – Waiting for report;
 <p>SUMMER</p>	03/11/2020 through 03/27/20 - Completed

The objective is attend seasonal variations that represent all typical weather conditions experienced in the region.

The air quality monitoring methodology, conduct the monitoring in each sampling location for a period of five days:

Site 1: Telêmaco Borba

Site 2: Imbaú

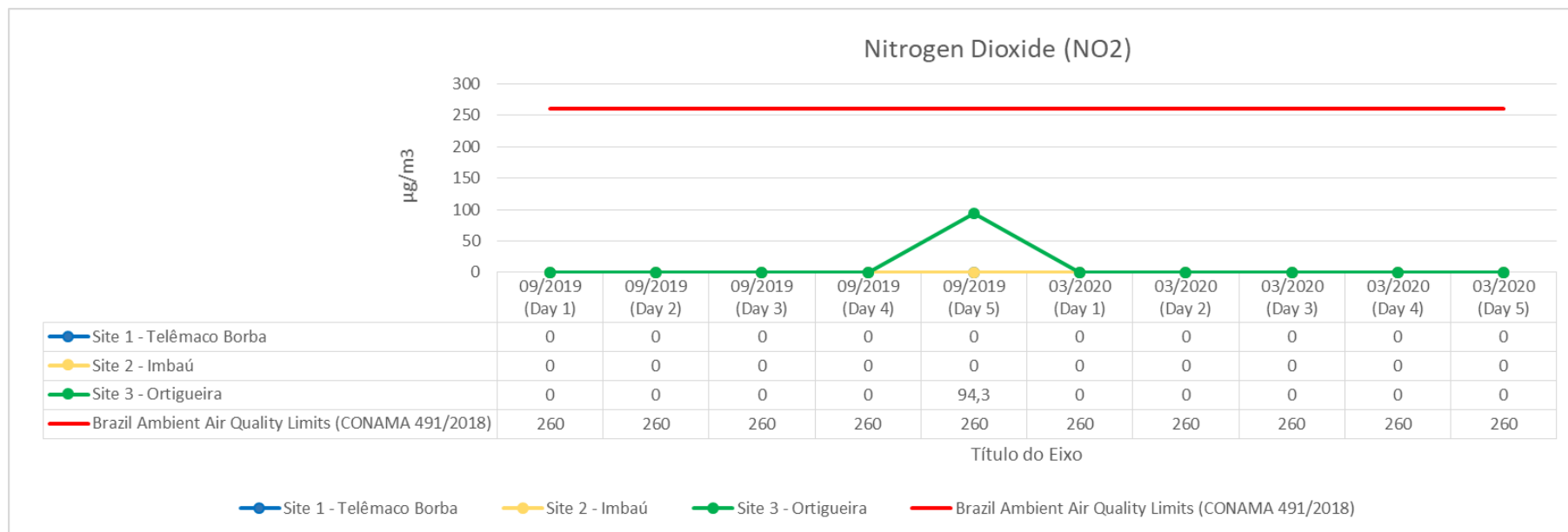
Site 3: Ortigueira

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The methodology and the location of the sampling points were presented to the Paraná Environmental Institute at the PCA. The report is sent after campaign.

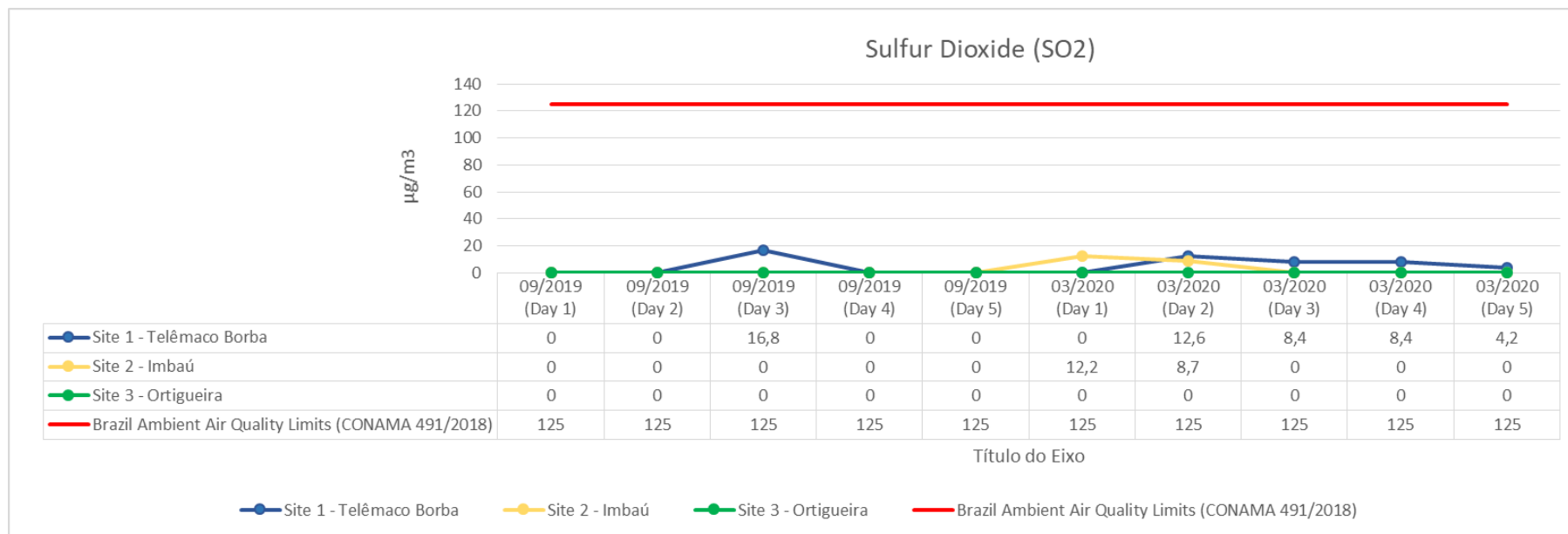
The results of the monitoring campaigns are shown in the graphs below:

Ambient air quality monitoring – NO2



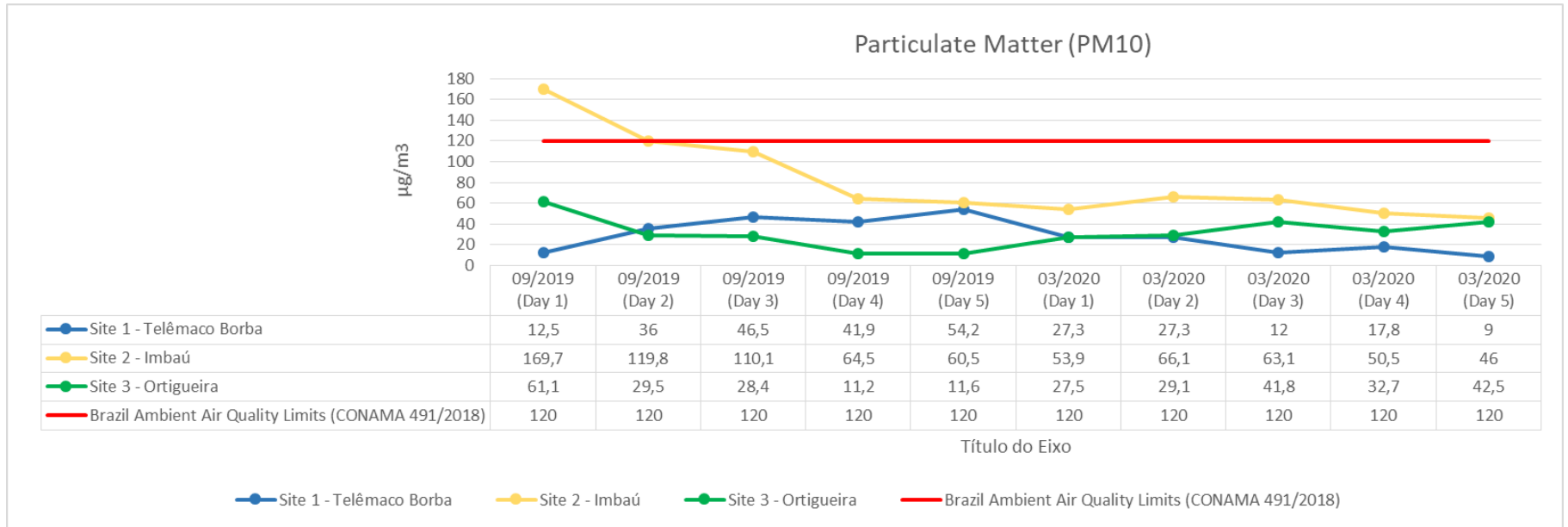
The results for the NO2 parameter demonstrate compliance in all campaigns.

Ambient air quality monitoring – SO2



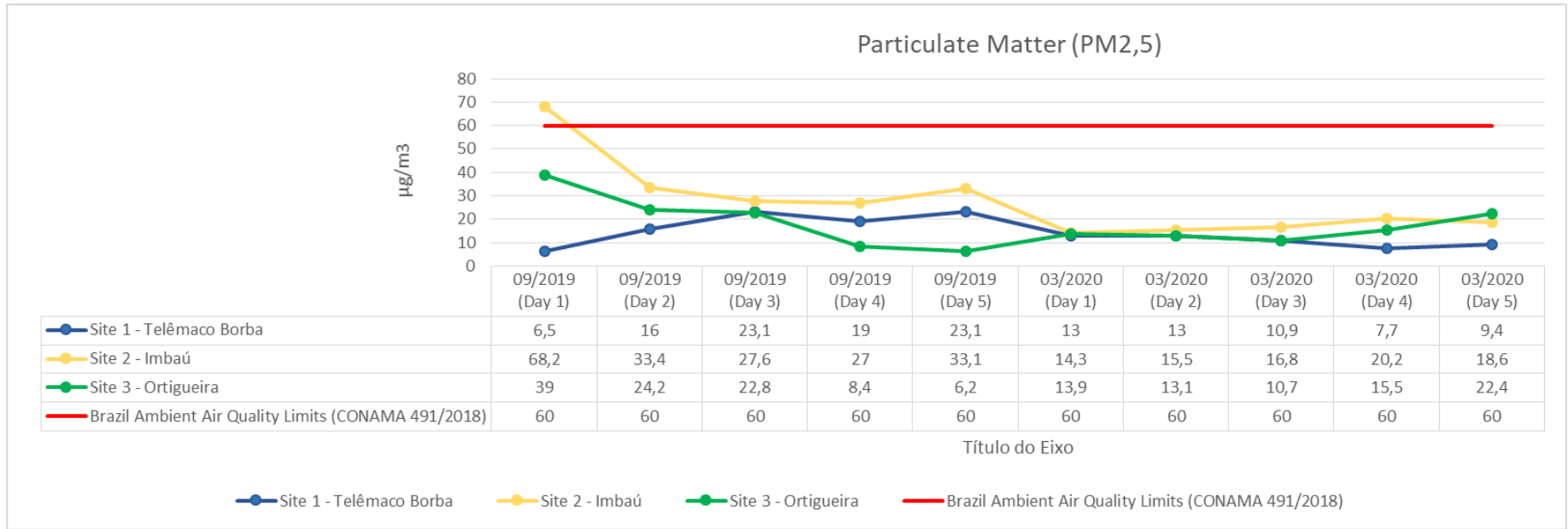
The results for the SO2 parameter demonstrate compliance in all campaigns.

Ambient air quality monitoring – PM10



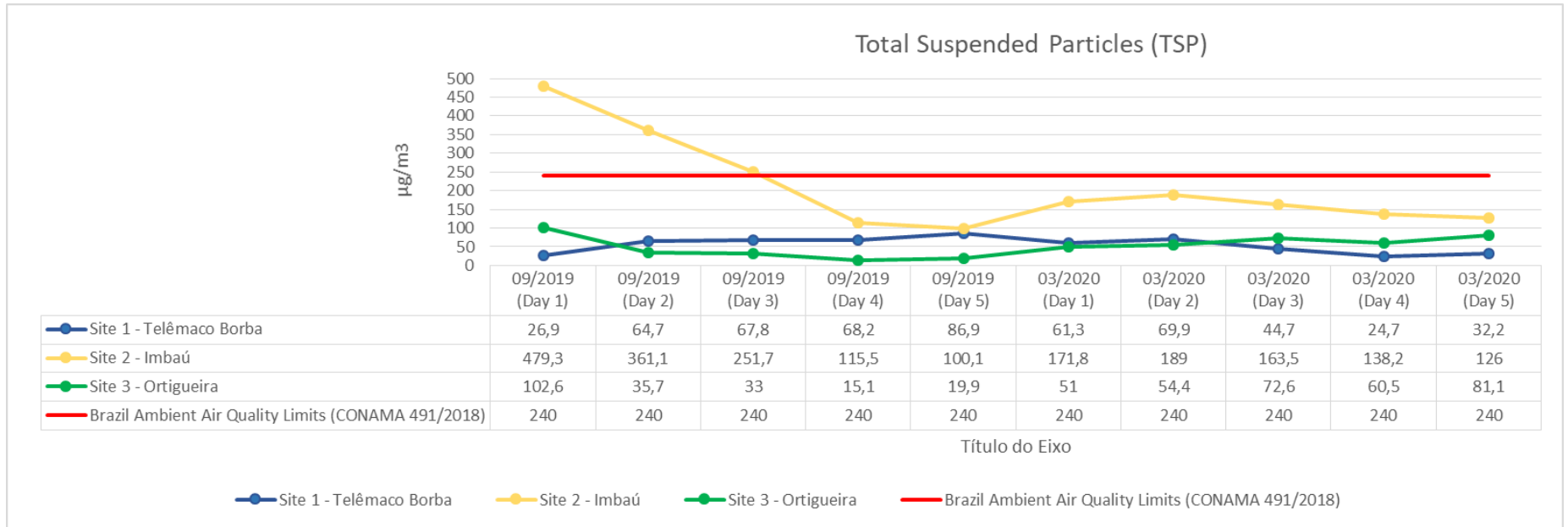
The Particulate Matter (PM10) parameter of Site 2 was present result above Brazilian Ambient Air Quality Limits in the September/2019 campaign. The Site 2 in Imbaú is the furthest from the Klabin Puma and it be less representative of the plant's possible impacts on air quality. Additionally, in the surroundings of Site 2 there are several sources of local emissions, which are the causes of the high concentrations recorded. In other monitoring campaigns, the results demonstrate compliance.

Ambient air quality monitoring – PM2,5



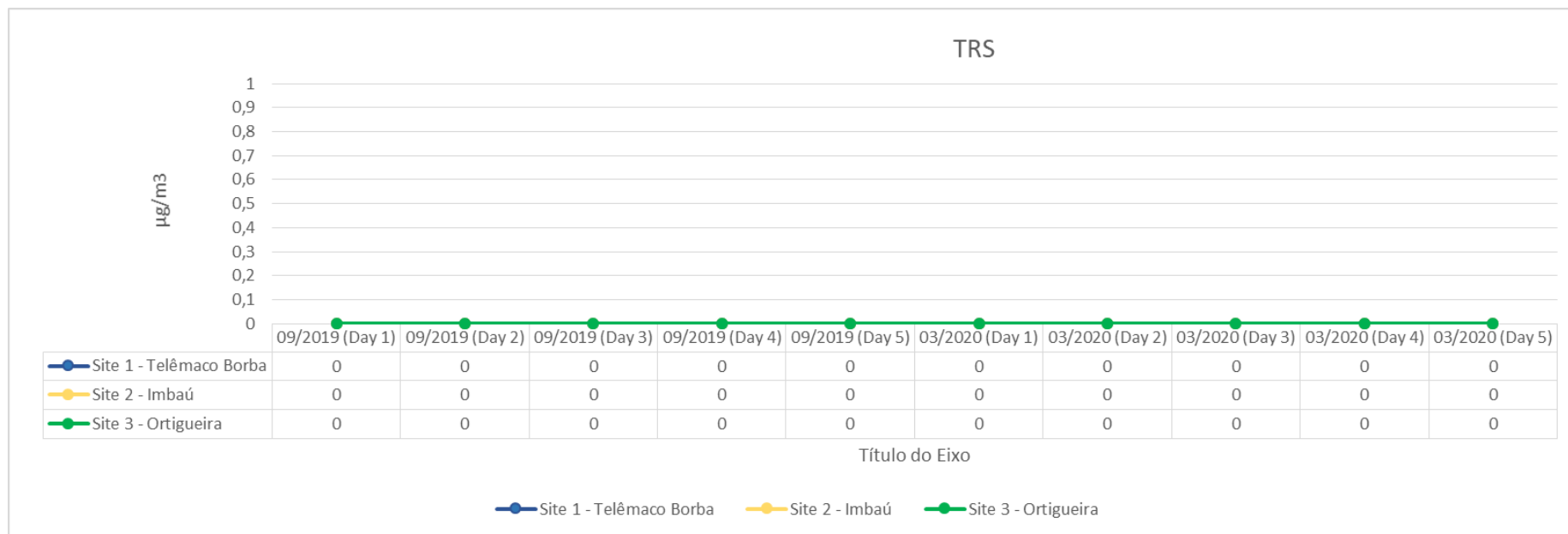
The Particulate Matter (PM2,5) parameter of Site 2 was present result above Brazilian Ambient Air Quality Limits in the September/2019 campaign. The Site 2 in Imbaú is the furthest from the Klabin Puma and it be less representative of the plant's possible impacts on air quality. Additionally, in the surroundings of Site 2 there are several sources of local emissions, which are the causes of the high concentrations recorded. In other monitoring campaigns, the results demonstrate compliance.

Ambient air quality monitoring – TSP



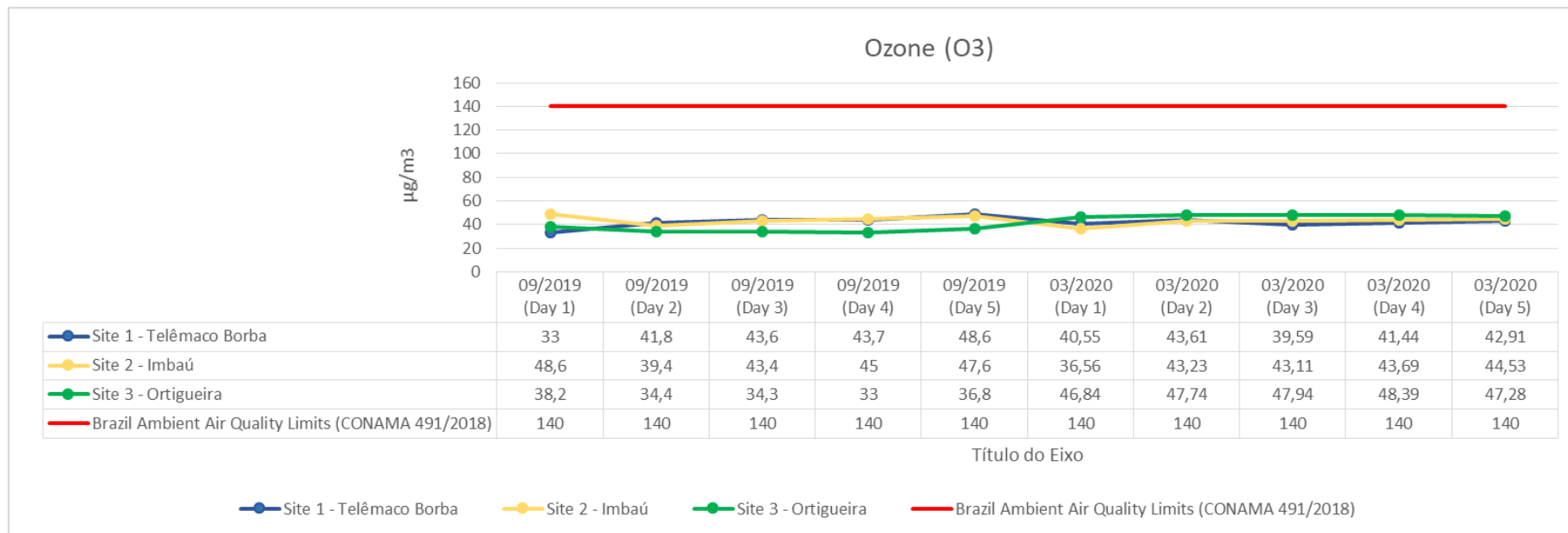
The Total Suspended Particles (TSP) parameter of Site 2 was present result above Brazilian Ambient Air Quality Limits in the September/2019 campaign. The Site 2 in Imbaú is the furthest from the Klabin Puma and it be less representative of the plant's possible impacts on air quality. Additionally, in the surroundings of Site 2 there are several sources of local emissions, which are the causes of the high concentrations recorded. In other monitoring campaigns, the results demonstrate compliance.

Ambient air quality monitoring – TRS



The results for the TRS parameter demonstrate compliance in all campaigns.

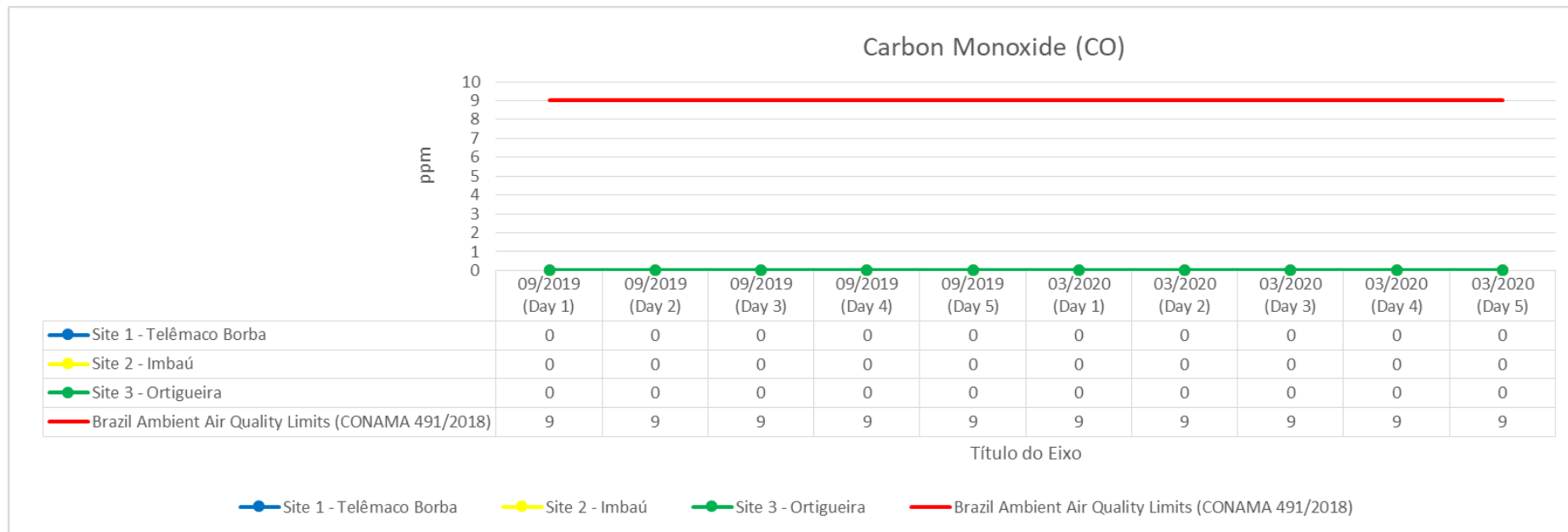
Ambient air quality monitoring – O3



The results for parameter O3 demonstrate compliance in all campaigns.

Ambient air quality monitoring – CO

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The results for parameter CO demonstrate compliance in all campaigns.

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4.4. Liquid Effluent

Liquid Effluent refers to all types of liquid waste which is discharged from the pulp mill site. Types of liquid effluent include process, sanitary, storm water, leachate and thermal discharges. PUMA/Klabin is required to monitor liquid effluent at agreed discharge points. Monitoring should take place when the facilities are both operating and under construction.

Please fill in valid limits from the Brazilian environmental permit and measurement results to the table below. Each discharge monitoring place needs a table of its own.⁵

<i>Sample Frequency (samples/year or continuous)</i>	<i>Parameter</i>	<i>Unit.</i>	<i>Numerical Standard Adopted by the Project (please indicate units)</i>	<i>PUMA/Klabin's Performance Average (please indicate units)</i>	<i>Maximum</i>	<i>Minimum</i>
Fortnightly	pH	-	6 -9	7,0	7,8	6,2
Fortnightly	Flow	m3/h	7400	4581	5339	2693
Fortnightly	Temperature increase	°C	Max. 40	24,0	25,9	20,1
Fortnightly	COD	mg/L	230	136,1	198	103
Fortnightly	BOD ₅	mg/L	30	8,5	21,8	3
Semiannual	AOX	mg/L	-	0	0	0
Fortnightly	Total Phosphorus	mg/L	0,30	0,182	0,398	0,080
Fortnightly	Total Nitrogen Ammoniacal	mg/L	20	0,30	0,75	0,10
Fortnightly	TSS	mg/L	100	26,1	42,0	5,0
Semiannual	Dioxins/furans	µg/L	-	<0,00001563	0	0

⁵ Please provide a scaled map showing the precise location of all monitoring points.

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Please provide in the table below the amount of absolute emission during the reporting period of each given parameter divided by amount of pulp produced in same period of time.

Parameter	Unit	PUMA/Klabin pulp mill's performance ⁶	IFC guideline (bleached pulp) ⁷
Amount of produced pulp (unbleached)	ADt	-	
Amount of produced pulp (bleached)	ADt	741.672,23	
Flow ⁸	m3/ADt	28,13	50
pH		7,0	6-9
TSS	kg/ADt	0,7341	1,5
COD	kg/ADt	3,8279	20
BOD5	kg/ADt	0,2391	1
AOX	kg/ADt	0,0	0,25
Total N ⁹	kg/ADt	0,0084	0,2
Total P	kg/ADt	0,0051	0,03

4.5. Ambient Surface Water Quality

PUMA/Klabin is required to collect representative samples of ambient surface water from Tibagi River and submit these samples for laboratory analysis. Representative samples of ambient surface water should be collected to establish upstream (unaffected) sampling points surface water quality and downstream (or affected sampling points) surface water quality. Do not make composite samples. Monitoring should take place both during construction and operation.

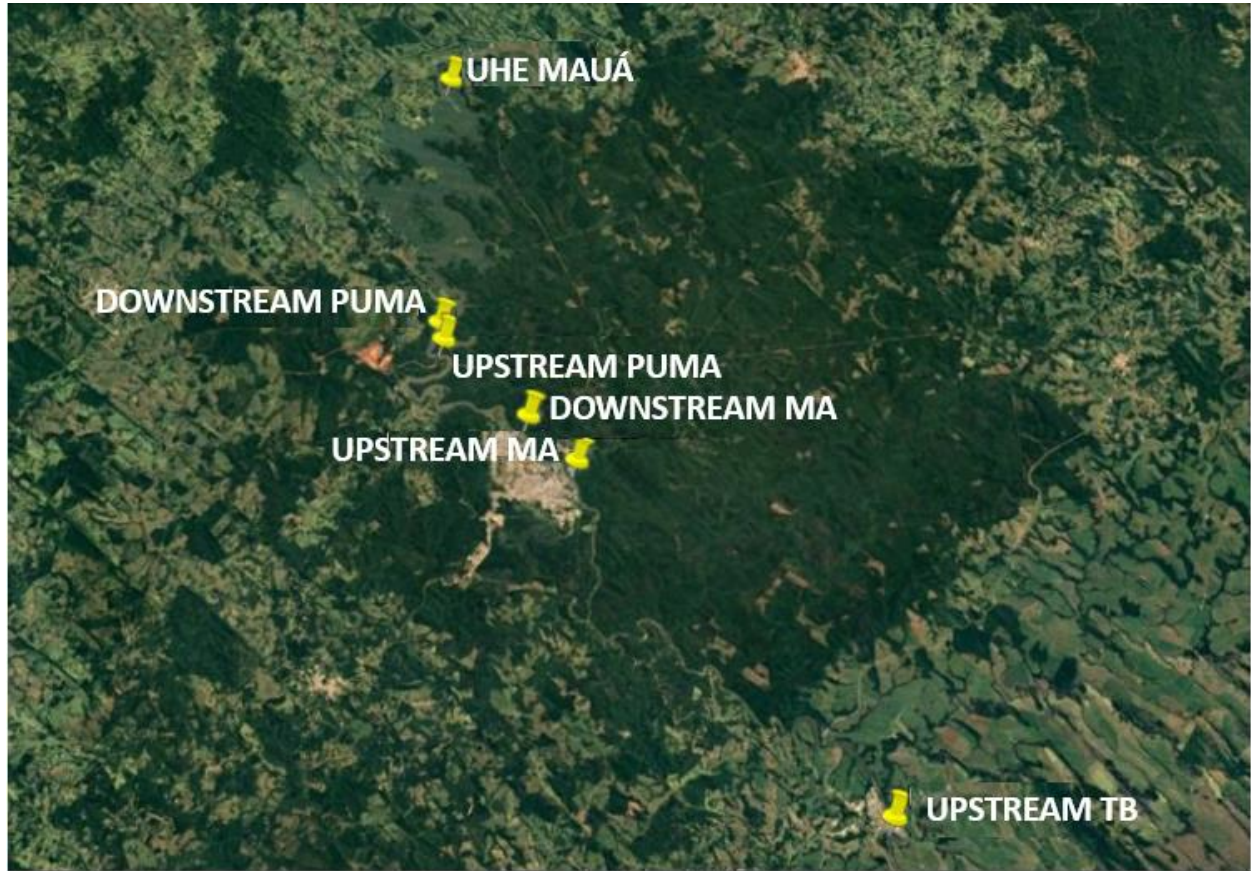
Please provide Brazilian maximum levels in Brazilian units in the table below. Individual tables are needed for each monitoring point.

⁶ Report average figures for the reporting period.

⁷ IFC. 2007: Environmental, health and safety guidelines for pulp and paper mills. Pages 26 and 29.

⁸ Cooling water and other clean water are discharged separately and are not included

⁹ Any nitrogen discharge associated with the use of complexing agents should be added to the figure of tot-N.



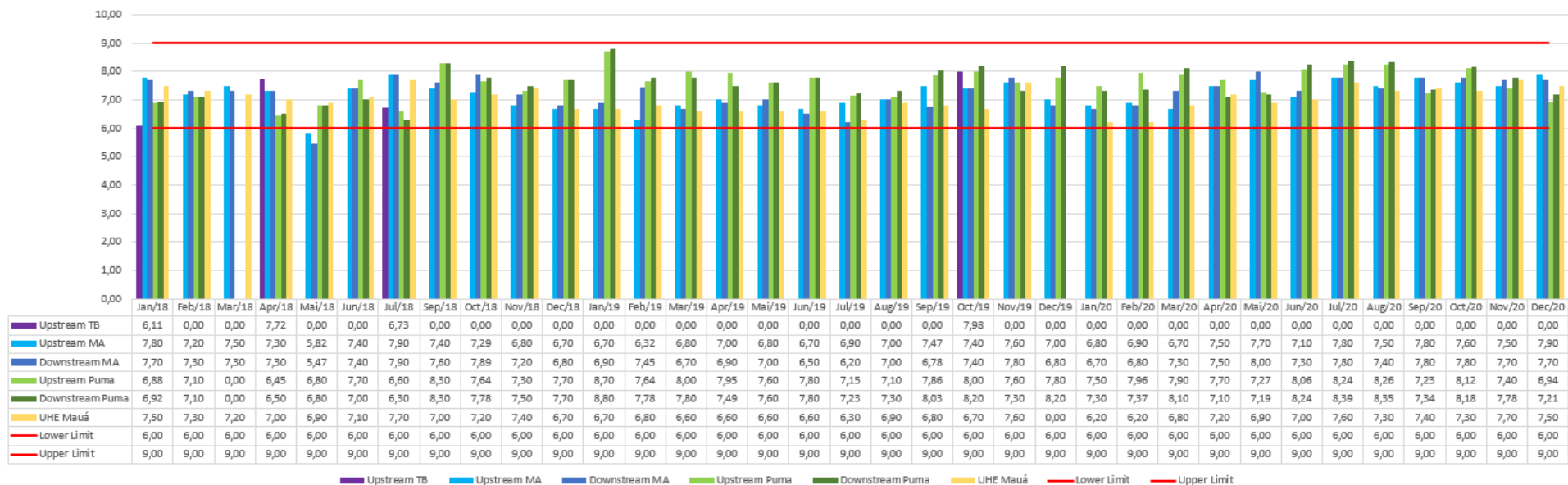
Location of ambient surface water monitoring points

In according ESAP – nº 24 NA 22: Adapted ambient water quality monitoring program to understand the cumulative impact of effluents from Klabin's operations in the Tibagi watershed.

The data of upstream Telêmaco Borba is provided by UHE Tibagi, we are waiting for the results of 2020. The 2019 data, we received only the September monitoring.

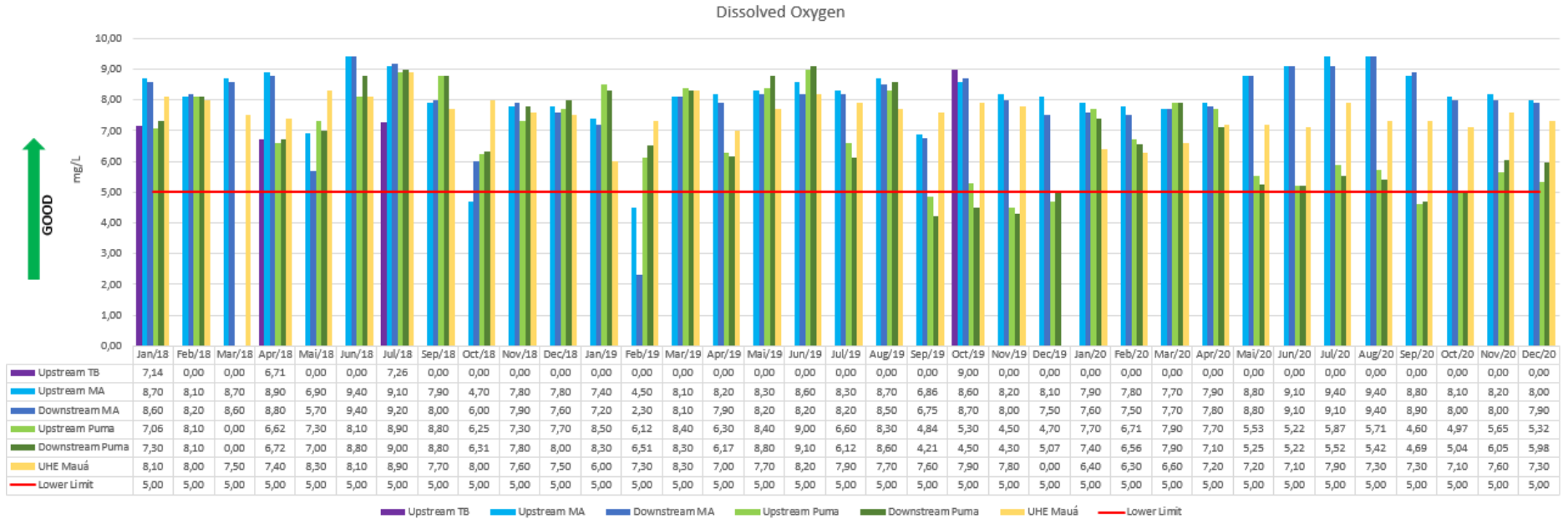
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pH



The result for the pH parameter was below the Brazilian regulatory limits for points upstream and downstream of Monte Alegre in the Mai 2018 campaign. Not impacted by Monte Alegre effluent contribution.

In other monitoring campaigns, the results demonstrate compliance.

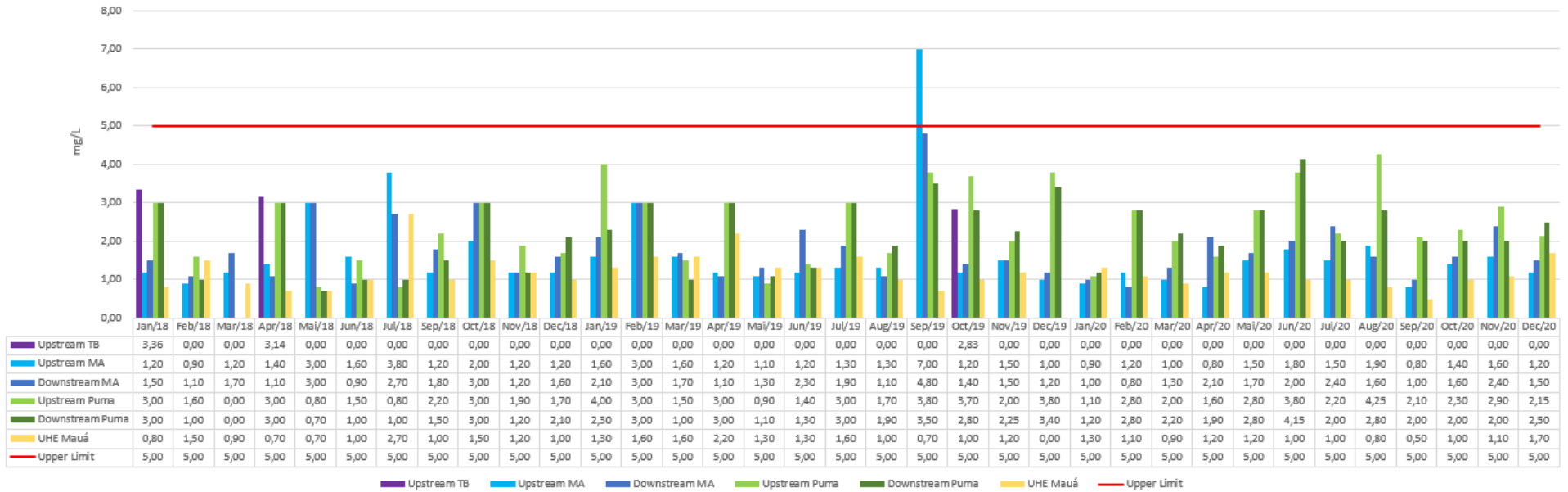


The result for the Dissolved Oxygen parameter shows values below the Brazilian regulatory limits for points upstream of Puma and downstream the values remain, and in some months they are even higher. This shows that there is a contribution from the municipality or rural area between Monte Alegre and Puma.

It is important to highlight that the lower limit of 5,00 mg/L has been maintained in the Tibagi River, meeting the classification of River, even considering the dry season that we are going through. Even with the conditions of the Dissolved Oxygen, the BOD presents values below the legal limits.

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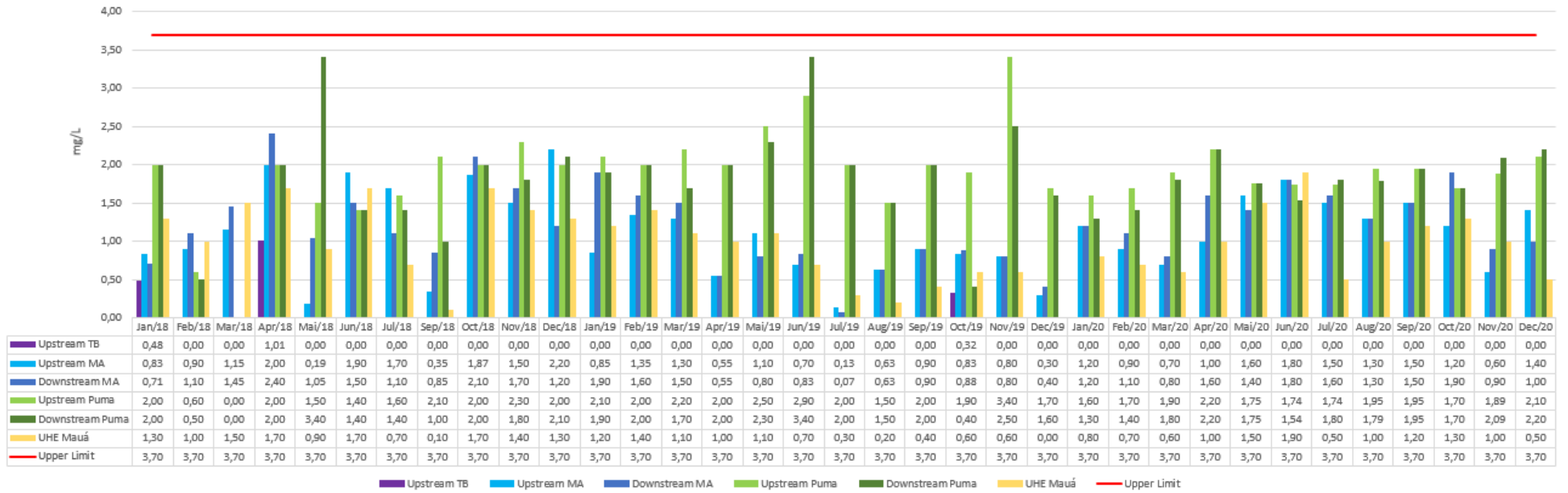
BOD



The result for the BOD parameter was above the Brazilian regulatory limits for points upstream of Monte Alegre in the September 2019 campaign. In other monitoring campaigns, the results demonstrate compliance.

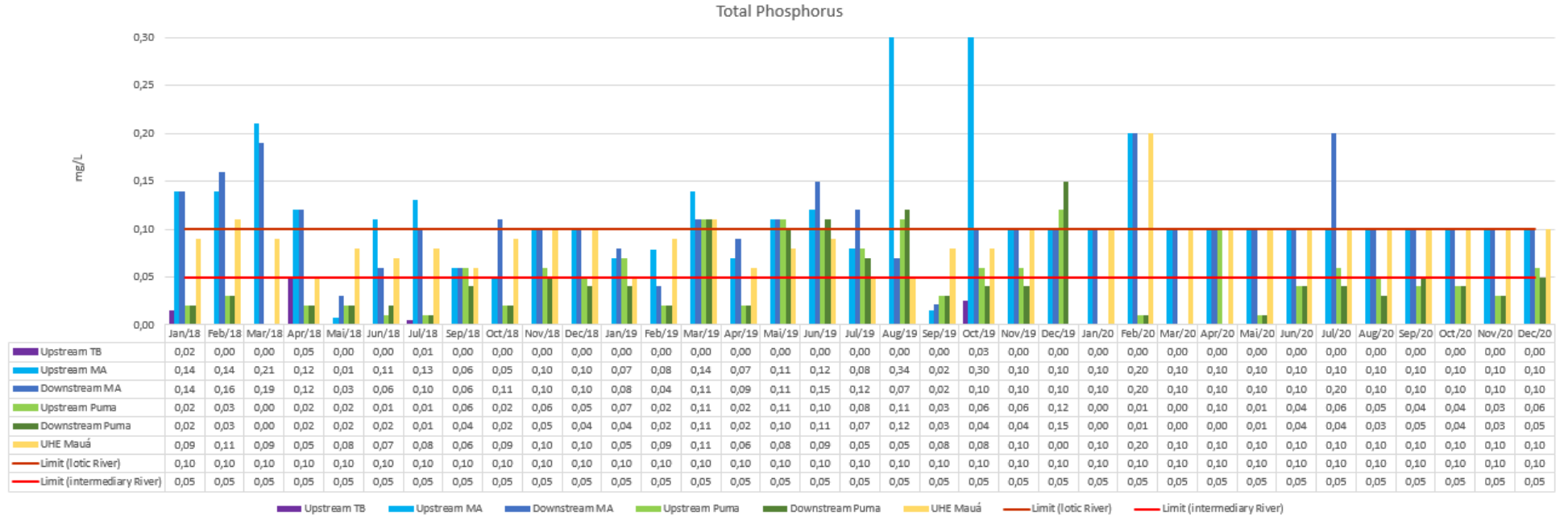
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Total Nitrogen



The results for the Total Nitrogen parameter demonstrate compliance in all campaigns.

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The result for parameter Total phosphorus was above the Brazilian regulatory limits for points upstream and downstream of Monte Alegre and Puma across multiple monitoring campaigns, not impacted by Monte Alegre and Puma effluent contribution. The limit of 0.10 mg/L is valid for Monte Alegre (lotic River) and 0.05 for Puma (intermediary River).

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Please provide summary of groundwater sampling results at the pulp mill site during the reporting period and compare them to Brazilian groundwater limits.¹⁰

Ground water monitoring

The parameters aluminum and iron are components found in the formation of the region's soil, where they are found in concentrations higher than the normative limit, where in the dry season when the water column in the groundwater is lower, these concentrations tend to higher

¹⁰ Please provide a map showing the precise location of all ground water monitoring points.

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Parameters	CONAMA 420	Units	P1	P2	P3	P4	P5	P6	P7	P8	P9
			Upstream of Product Area	Near to Chemical Plant	East Pluvial Lagoon	Near to Causticizing	Near to Biomass Boiler	Upstream of Wastewater Treatment Plant	Near to Emergency Lagoons	Near to Secondary Decantador	Near to Waste Segregation Plant
Alumínio	3500	µg/L	4503,4	8670,6	2554,9	Dry	1504,4	2189,2	Dry	4377	1704,5
Antimônio	5	µg/L	< 5,0	< 5,0	< 5,0	Dry	< 5,0	< 5,0	Dry	< 5,0	< 5,0
Arsênio	10	µg/L	< 8,0	< 8,0	< 8,0	Dry	< 8,0	< 8,0	Dry	< 8,0	< 8,0
Bário	700	µg/L	8,5	37,3	114,7	Dry	42,5	13,2	Dry	17,3	72,7
Boro	500	µg/L	5,8	14,7	16,1	Dry	12,8	13,9	Dry	24,6	14,3
Cádmio	5	µg/L	< 1,0	< 1,0	< 1,0	Dry	< 1,0	< 1,0	Dry	< 1,0	< 1,0
Chumbo	10	µg/L	< 10,0	< 10,0	< 10,0	Dry	< 10,0	< 10,0	Dry	< 10,0	< 10,0
Cobalto	70	µg/L	< 5,0	< 5,0	< 5,0	Dry	< 5,0	< 5,0	Dry	< 5,0	< 5,0
Cobre	2000	µg/L	7,9	9,2	< 5,0	Dry	< 5,0	< 5,0	Dry	< 5,0	< 5,0
Cromo	50	µg/L	6,2	5,6	< 5,0	Dry	17,5	< 5,0	Dry	< 5,0	< 5,0
Ferro	2450	µg/L	9166,6	12711,5	1549,5	Dry	955	1462,2	Dry	2700,5	2310,4
Manganês	400	µg/L	33,7	66,4	147,4	Dry	189,1	29,7	Dry	42,3	39,4
Mercurio	1	µg/L	< 0,20	< 0,20	< 0,20	Dry	< 0,20	< 0,20	Dry	< 0,20	< 0,20
Molibdênio	70	µg/L	< 5,0	< 5,0	< 5,0	Dry	< 5,0	< 5,0	Dry	< 5,0	< 5,0
Níquel	20	µg/L	< 6,0	< 6,0	8,3	Dry	20	< 6,0	Dry	< 6,0	< 6,0
Nitrato (como N)	10000	µg/L	80	462	< 50,000	Dry	148	144	Dry	220	1086
Prata	50	µg/L	< 5,0	< 5,0	< 5,0	Dry	< 5,0	< 5,0	Dry	< 5,0	< 5,0
Selênio	10	µg/L	< 7,0	< 7,0	< 7,0	Dry	< 7,0	< 7,0	Dry	< 7,0	< 7,0
Zinco	1050	µg/L	10,3	17,1	45	Dry	18,6	17,2	Dry	30,7	44,7
Benzeno	5	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
Estireno	20	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
Etilbenzeno	300	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
Tolueno	700	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
Xilenos	500	µg/L	< 1,5	< 1,5	< 1,5	Dry	< 1,5	< 1,5	Dry	< 1,5	< 1,5
Benzo(a)antraceno	1,75	µg/L	< 0,00500	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500
Benzo(a)pireno	0,7	µg/L	< 0,00500	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500
Dibenzo(a,h)antraceno	0,18	µg/L	< 0,00500	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500
Fenantreno	140	µg/L	< 0,00500	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500
Indeno(1,2,3,cd)pireno	0,17	µg/L	< 0,00500	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500
Naftaleno	140	µg/L	< 0,00500	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500	Dry	< 0,00500	< 0,00500
MonoClorobenzeno	700	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
1,2-Diclorobenzeno	1000	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
1,4-Diclorobenzeno	300	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
Triclorobenzeno	20	µg/L	< 1,0	< 1,0	< 1,0	Dry	< 1,0	< 1,0	Dry	< 1,0	< 1,0
Hexaclorobenzeno	1	µg/L	< 0,00100	< 0,00100	< 0,00100	Dry	< 0,00100	< 0,00100	Dry	< 0,00100	< 0,00100
1,1-Dicloroetano	280	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
1,2-Dicloroetano	10	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
1,1,1-Tricloroetano	280	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
Cloreto de Vinila	5	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
1,1-Dicloroetano	30	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
1,2-Dicloroetano (cis+trans)	50	µg/L	< 1,0	< 1,0	< 1,0	Dry	< 1,0	< 1,0	Dry	< 1,0	< 1,0
Tricloroetano	70	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
Tetracloroetano	40	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
Diclorometano	20	µg/L	< 5,0	< 5,0	< 5,0	Dry	< 5,0	< 5,0	Dry	< 5,0	< 5,0
Clorofórmio	200	µg/L	< 1,0	< 1,0	< 1,0	Dry	< 1,0	< 1,0	Dry	< 1,0	< 1,0
Tetracloro de Carbono	2	µg/L	< 0,5	< 0,5	< 0,5	Dry	< 0,5	< 0,5	Dry	< 0,5	< 0,5
2-Clorofenol	10,5	µg/L	< 0,100	< 0,100	< 0,100	Dry	< 0,100	< 0,100	Dry	< 0,100	< 0,100
2,4-Diclorofenol	10,5	µg/L	< 0,100	< 0,100	< 0,100	Dry	< 0,100	< 0,100	Dry	< 0,100	< 0,100
3,4-Diclorofenol	10,5	µg/L	< 0,100	< 0,100	< 0,100	Dry	< 0,100	< 0,100	Dry	< 0,100	< 0,100
2,4,5-Triclorofenol	10,5	µg/L	< 0,100	< 0,100	< 0,100	Dry	< 0,100	< 0,100	Dry	< 0,100	< 0,100
2,4,6-Triclorofenol	200	µg/L	< 0,100	< 0,100	< 0,100	Dry	< 0,100	< 0,100	Dry	< 0,100	< 0,100
2,3,4,5-Tetraclorofenol	10,5	µg/L	< 0,100	< 0,100	< 0,100	Dry	< 0,100	< 0,100	Dry	< 0,100	< 0,100
2,3,4,6-Tetraclorofenol	10,5	µg/L	< 0,100	< 0,100	< 0,100	Dry	< 0,100	< 0,100	Dry	< 0,100	< 0,100
Pentaclorofenol	9	µg/L	< 0,200	< 0,200	< 0,200	Dry	< 0,200	< 0,200	Dry	< 0,200	< 0,200
Cresóis Totais	175	µg/L	< 0,300	< 0,300	< 0,300	Dry	< 0,300	< 0,300	Dry	< 0,300	< 0,300
Fenol	140	µg/L	< 0,100	< 0,100	< 0,100	Dry	< 0,100	< 0,100	Dry	< 0,100	< 0,100
Di(2-etilhexil)ftalato	8	µg/L	< 0,200	< 0,200	< 0,200	Dry	< 0,200	< 0,200	Dry	< 0,200	< 0,200
Dimetil Ftalato	14	µg/L	< 0,200	< 0,200	< 0,200	Dry	< 0,200	< 0,200	Dry	< 0,200	< 0,200
Aldrin + Dieldrin	0,03	µg/L	< 0,00200	< 0,00200	< 0,00200	Dry	< 0,00200	< 0,00200	Dry	< 0,00200	< 0,00200
Endrin	0,6	µg/L	< 0,00100	< 0,00100	< 0,00100	Dry	< 0,00100	< 0,00100	Dry	< 0,00100	< 0,00100
p,p'-DDT + p,p'-DDD + p,p'-DDE	2	µg/L	< 0,00300	< 0,00300	< 0,00300	Dry	< 0,00300	< 0,00300	Dry	< 0,00300	< 0,00300
HCH Beta	0,07	µg/L	< 0,00100	< 0,00100	< 0,00100	Dry	< 0,00100	< 0,00100	Dry	< 0,00100	< 0,00100
Lindano (g-BHC)	2	µg/L	< 0,00100	< 0,00100	< 0,00100	Dry	< 0,00100	< 0,00100	Dry	< 0,00100	< 0,00100
PCB's (soma 7/lista holandesa)	3,5	µg/L	< 0,00700	< 0,00700	< 0,00700	Dry	< 0,00700	< 0,00700	Dry	< 0,00700	< 0,00700

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4.6. Solid Waste Management

PUMA/Klabin is required to monitor methods of collection, storage, handling, recycling, reuse and/or disposal of solid waste, and report these methods and measured quantities here during both construction and operational phases. Please complete the information below with information i) from the pulp mill and associated operations and ii) from the mill's port terminal.

GENERATION OF SOLID WASTE – PUMA I															
Solid Waste Type	Month Quantity (tonne)													Method of Storage, Handling and/or Treatment	Method of Recycling, Reuse or Disposal ²⁵
	Jan	Feb	Mar	Apr	Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total		
Sand	241	316,9	302,1	358,1	338	248,5	244	270	210	215	170	316	3229,6	Dumpster	Recycling
Biomass	0	193,7	143,9	1415,8	472,5	117,8	10	480	203	29	1	13	3079,7	Dumpster	Composting
Sweep Biomass Wood Stock	664,3	756,8	962,5	1233,5	1230,1	806,2	1.314	436	1.100	942	743	1.331	11519,4	Dumpster	Composting
Lime Gray	380,3	206,5	115,3	369,6	558,6	1412,7	693	437	199	372	359	40	5143	Dumpster	Agricultural and forestry use
Sulphate Ashes	169,8	315,4	0	0	0	0	-	7	-	-	-	24	516,2	Dumpster	Agricultural and forestry use
Biomass ash	1563,1	1670,4	1384,5	1251,8	1295,4	1676,3	2.990	3.037	2.557	1.862	2.029	1.511	22827,5	Dumpster	Agricultural and forestry use
Burnt Lime	129	133,8	28,2	82	118,9	62	57	131	53	46	145	225	1210,9	Dumpster	Agricultural and forestry use
Dregs	1071,1	1064,2	1031,9	1108,4	1122,4	1253,6	2.213	2.004	2.212	2.283	2.189	1.426	18978,6	Dumpster	Agricultural and forestry use
Grits	98	97,4	73	71,1	62,5	108,4	114	164	103	93	39	98	1121,4	Dumpster	Agricultural and forestry use

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Caustic Mud	336,5	207,9	258,1	81,9	133,7	242,9	1.475	188	1.360	203	1.199	2.518	8204	Dumpster	Agricultural and forestry use
Sand Sludge - PMAD	92,8	103,2	78,3	78	97,9	97,5	81	91	64	85	92	39	999,7	Dumpster	Recycling
Primary Sludge (Fiber Disposal)	1194,2	777,8	1355,3	831,5	1091,7	1609,7	2.379	2.050	1.604	1.778	942	781	16394,3	Dumpster	Recycling
Secondary Sludge (Biological)	6225,3	4951,1	3565,7	5468,6	5051,1	4870,4	6.262	4.850	5.978	6.548	7.320	2.218	63308,2	Dumpster	Composting
Tertiary Sludge (Chemical)	2265,1	2739,5	1915,1	2736,1	2204,6	1975,4	1.828	2.797	2.264	2.656	2.582	967	26929,8	Dumpster	Agricultural and forestry use
Pinus Reject - Stick	39,4	56,9	77,8	86	178,5	80,2	101	123	118	128	183	109	1280,8	Dumpster	Energy use
Pinus Reject - Knot	15,4	15,2	2,1	11	10,1	18,1	12	24	16	17	26	10	176,9	Dumpster	Energy use
Eucalyptus Reject - Toothpick	24,9	57,5	142,5	60,3	87,5	117,5	102	127	98	59	59	42	977,2	Dumpster	Energy use
Eucalyptus Tailings - Knot	42,9	25,9	21,2	22	43,6	25,5	28	47	28	7	16	14	321,1	Dumpster	Energy use
Wood	8,4	9,5	8	8,4	9,5	5,3	16	10	7	10	20	15	127,1	Dumpster	Reuse and Energy use
Metal	14,5	14,7	7,4	14,5	14,7	13,8	17	15	15	22	13	30	191,6	Dumpster	Recycling
Organic waste	0,4	0,4	0,7	0,4	0,4	7,1	170	173	124	120	157	130	883,4	Dumpster	Recycling
Paper	16,4	14,2	12,5	16,4	14,2	13,5	23	16	17	15	17	20	195,2	Dumpster	Recycling
Plastic	6,9	6	9	6,9	6	9,1	20	17	9	24	11	17	141,9	Dumpster	Recycling
Junk Waste	36,7	24,4	11,8	36,7	24,4	24,2	30	76	9	30	20	62	385,2	Dumpster	Landfill
Ground	3,8	0	57	3,8	0	0	38	-	36		27	1	166,6	Dumpster	Reuse
Inert / Concrete / Rubble	0	4,5	7,9	0	4,5	0	7	4	12	9	15	-	63,9	Dumpster	Reuse
Total per Month	14640,2	13763,8	11571,8	15352,8	14170,8	14795,7	10224	17574	18396	17553	18374	11957	188373,1	-	-

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GENERATION OF SOLID WASTE – PARANAGUÁ PORTS															
Solid Waste Type	Month Quantity (tonne)													Method of Storage, Handling and/or Treatment	Method of Recycling, Reuse or Disposal ²⁵
	Jan	Feb	Mar	Apr	Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec.	Total		
Non-recyclable	0,43	0,21	0,43	0,21	0,21	0,21	0,21	0,43	0,43	0,43	0,43	0,64	4,27	Dumpster	Private landfill
Recyclable	0,83	0,41	0,83	0,41	0,41	0,41	0,83	0,41	0,83	0,83	0,83	1,24	8,27	Dumpster	Recycling
Total per Month	1,26	0,62	1,26	0,62	0,62	0,62	1,04	0,84	1,26	1,26	1,26	1,88	12,54	-	-

GENERATION OF NON-HAZARDOUS SOLID WASTE – PUMA II PROJECT															
Solid Waste Type	Month Quantity (tonne) Solid Waste Type														
	Jan	Feb	Mar	Apr	Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Method of Storage	Method of Treatment
Organic	42,90	46,50	55,02	16,56	24,45	76,54	79,8	98,91	71,25	67,55	82,35	107,12	768,95	Dumpster	Composting
Non-recyclable	12,60	11,30	16,45	4,44	8,70	15,45	30,81	35,64	45,83	46,93	44,12	23,58	295,85	Dumpster	Private landfill
Paper	12,10	24,40	24,95	8,02	14,17	18,70	23,47	31,39	38,56	41,77	49,86	57,14	344,53	Dumpster	Recycling
Plastic	14,40	15,80	21,87	7,18	14,39	19,16	19,42	40,86	35,81	39,75	43,52	34,90	307,06	Dumpster	Recycling
Metal	5,00	17,00	5,50	3,31	10,92	9,38	3,90	6,58	15,73	29,75	44,32	35,08	186,47	Dumpster	Recycling
Wood	68,70	83,70	110,32	25,66	67,71	97,27	79,17	50,47	164,91	216,62	156,97	214,07	1335,57	Dumpster	Biomass
Glass	0,10	0,00	0,00	0,00	0,00	0,12	0,00	0,02	0,87	0,00	0,003	0,002	1,115	Steel Drum	Recycling
Concrete	1200,30	1848,70	1460,52	1128,80	1596,71	602,60	489,1	649,91	1268,88	1271,93	1076,50	823,29	13417,24	Dumpster	Reuse
Concrete with styrofoam	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	29,92	0,00	0,00	0,00	29,92	Dumpster	Industrial Solid Waste Landfill
Total per Month	1356,1	2047,4	1694,63	1193,97	1737,05	839,22	725,67	913,78	1671,76	1714,3	1497,64	1295,18	16686,71	-	-

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4.7. Hazardous Materials Management

Hazardous materials are those materials that represent an excessive risk to property, the environment or human health because of their physical and/or chemical characteristics. Examples include explosives, toxic or flammable gases, flammable liquids and solids, oxidizing substances, radioactive materials and corrosive substances.

PUMA/Klabin is required to monitor methods of collection, storage and disposal of hazardous materials¹¹, and report these methods and measured quantities here. Please refer to the IFC General Environmental, Health and Safety Guidelines / Hazardous Materials Management for additional information. Please complete the information below with information from the pulp mill and associated operations. and ii) from the mill's Paranaguá port terminal.

Hazardous Materials Management Summary – Puma I			
<i>Hazardous Material (Name and Number UN/CAS)</i>	<i>Class or division¹²</i>	<i>Generation July-December 2020 (tonne)</i>	<i>Maximum Quantity Stored on Site (tonne)</i>
Hazardous Waste Produced			
Chemical Product Packaging (Paints, Solvents And Resins) – IBAMA n° 15 02 02	9	8,840	50,00
PPE's IBAMA n° 15 02 02	9	0,554	
Fluorescent lamps IBAMA n° 20 01 21	2	0,013	
Flammable Liquids (Paints, Solvents, Glues and Fuel) IBAMA n° 20 01 13	3	0,050	
Stacks IBAMA n° 16 06 04	6	0,000	
Various Contaminated Solids (Tows, Cloths, Filters And Etc) IBAMA n° 15 02 02	9	2,757	
Soil Contaminated with Oil and Grease IBAMA n° 19 13 01	9	0,000	
Electronic Scrap IBAMA n° 16 02 16	6	0,000	

¹¹ Hazardous materials include ignitable, reactive, flammable, radioactive, corrosive and toxic substances.

¹² UN classification (1. Explosives; 2. Gases; 3. Flammable liquids; 4. Flammable solids; 5. Oxidizing substances; 6. Toxic and infectious substances; 7. Radioactive material; 8. Corrosive substances; 9. Miscellaneous hazardous materials.)

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<i>Parameters (Same Parameters as Above)</i>	<i>PUMA/Klabin's Method of Storage, Handling and/or Treatment¹³</i>	<i>PUMA/Klabin's Method of Disposal¹⁴</i>
Hazardous Waste Produced		
Chemical Product Packaging (Paints, Solvents And Resins) – IBAMA n° 15 02 02	Steel Drum	Private Solid Waste Landfill
PPE's IBAMA n° 15 02 02	Steel Drum	Private Solid Waste Landfill
Fluorescent lamps IBAMA n° 20 01 21	Steel Drum	Decontamination
Flammable Liquids (Paints, Solvents, Glues and Fuel) IBAMA n° 20 01 13	Steel Drum	Private Solid Waste Landfill
Stacks IBAMA n° 16 06 04	Steel Drum	Private Solid Waste Landfill
Various Contaminated Solids (Tows, Cloths, Filters And Etc) IBAMA n° 15 02 02	Steel Drum	Private Solid Waste Landfill
Soil Contaminated with Oil and Grease IBAMA n° 19 13 01	Steel Drum	Private Solid Waste Landfill
Electronic Scrap IBAMA n° 16 02 16	Steel Drum	Private Solid Waste Landfill

Hazardous Materials Management Summary – Paranaguá Ports			
<i>Hazardous Material (Name and Number UN/CAS)</i>	<i>Class or division¹⁵</i>	<i>Generation July-December 2020 (tonne)</i>	<i>Maximum Quantity Stored on Site (tonne)</i>
Hazardous Waste Produced			
Miscellaneous hazardous materials (IBAMA n° 17 09 03)	9	1,61	5

<i>Parameters (Same Parameters as Above)</i>	<i>PUMA/Klabin's Method of Storage, Handling and/or Treatment¹⁶</i>	<i>PUMA/Klabin's Method of Disposal¹⁷</i>
Hazardous Waste Produced		
Miscellaneous hazardous materials (IBAMA n° 17 09 03)	Steel Drum	Industrial Solid Waste Landfill

¹³ State how hazardous materials / waste is stored on site (e.g. drums, bins, and other containers) and handled (including transported). Provide additional sheets as needed to fully describe disposal, organizations involved in management, locations of facilities, facility permits and agency authorizations.

¹⁴ Report on method of disposal for hazardous waste used only.

¹⁵ UN classification (1. Explosives; 2. Gases; 3. Flammable liquids; 4. Flammable solids; 5. Oxidizing substances; 6. Toxic and infectious substances; 7. Radioactive material; 8. Corrosive substances; 9. Miscellaneous hazardous materials.)

¹⁶ State how hazardous materials / waste is stored on site (e.g. drums, bins, and other containers) and handled (including transported). Provide additional sheets as needed to fully describe disposal, organizations involved in management, locations of facilities, facility permits and agency authorizations.

¹⁷ Report on method of disposal for hazardous waste used only.

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Hazardous Materials Management Summary – Puma II (tonne)															
<i>Hazardous Material (Name and Number UN/CAS)</i>	<i>Class or division 18</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>Mai</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Total</i>	<i>Maximum Quantity Stored on Site</i>
Hazardous Waste - Generation															
Miscellaneous hazardous materials (IBAMA n° 17 09 03)	9	6,8	9,6	13,09	2,24	4,75	8,32	6,85	8,67	17,64	19,13	17,75	17,22	132,06	50,00
Hazardous Waste – Disposal for Industrial Solid Waste Landfill															
Miscellaneous hazardous materials (IBAMA n° 17 09 03)	9	8,10	13,40	2,10	0,00	14,80	4,30	13,75	4,05	0,00	0,00	9,93	14,24	84,67	-
Hazardous Waste – Disposal for Co-processing															
Miscellaneous hazardous materials (IBAMA n° 17 09 03)	9	0,00	0,00	0,00	0,00	0,00	0,00	0,00	4,88	14,71	18,41	6,09	3,98	48,07	-
Hazardous Waste – Storage															
Miscellaneous hazardous materials (IBAMA n° 17 09 03)	9	3,8	0,0	10,99	13,23	3,18	7,2	0,3	0,04	2,97	3,69	5,42	4,42	4,42	50,00

Storage 2019 - balance of 5,1 tonne for disposal in 2020
 Storage 2020 - balance of 4,42 tonne for disposal in 2021
 The method of Storage for hazardous waste is Steel Drum.

As shown in the table above, the disposal is periodically carried out, avoiding hazardous waste accumulation.
 We haven't come close to the 50 tonne storage limit in any month.

¹⁸ UN classification (1. Explosives; 2. Gases; 3. Flammable liquids; 4. Flammable solids; 5. Oxidizing substances; 6. Toxic and infectious substances; 7. Radioactive material; 8. Corrosive substances; 9. Miscellaneous hazardous materials.)

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4.8. Forest Plantation Management

Provide summarized information on forestry activities (e.g. harvesting volumes/species, new hectares planted/reformed) for the reporting period.

		Area acquired/secured during the reporting period	Total land area	% of area under forest plantation	% of area under forest plantation that is certified	Type of FSC and any other relevant certificate(s)
		(No. hectares)				
Plantation under proprietary management	Klabin	2.972	322.024	54,11%	41,34%	FM and CoC FSC and Cerflor/PEFC
	Vale do Corisco	0	43.523	56,62%	55,19%	FM and CoC FSC and Cerflor/PEFC
	Sapopema*	1.719	35.018	48,25%	34,71%	FM and CoC FSC and Cerflor/PEFC
Plantation under Third Party management	Figueira*	0	15.578	73,11%	70,18%	FM and CoC
	Forest Fostering Program	1.120**	39.160	62,27%	1,27%	FM and CoC
Total		5.811	455.303			

*Sapopema and Figueira is the agreements for the association with a Timber Investment Management Organization ("TIMO") to constitute a Specific Purpose Vehicle Company ("SPV"), whose main objective shall be the exploitation of the forestry activity in the State of Paraná.

**Note: 1,120 hectares is the number of areas acquired in the second half of 2020 that are in the internal registration system. However, another 502.62 hectares were acquired in this period, but it will not be added in the indicator at this moment because it is still in process of land demarcation by the GIS team.

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Amount of wood raw material processed in Puma industrial complex during the reporting period:

	Quantity	Unit
From plantations managed by Klabin – FSC certified	1.095.136	Ton
From plantations managed by Klabin – not FSC certified	522	Ton
From third parties – FSC certified	453.895	Ton
From third parties – not FSC certified	373.541	Ton
Number of third parties	53	

Please report any significant fires that have occurred.

A total of 780 hectares of forests were impacted by fires between July and December 2020. It is important to mention that 2020 was a very dry year and that Klabin invests in fire prevention through the construction of fire breaks and through training of specialized team in property protection.

Please provide copies of post-certification audits.

Attached are the public reports of FSC audits (info.fsc.org)

• 5 SOCIAL AND ECONOMIC IMPACT MANAGEMENT / COMMUNITY DEVELOPMENT

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5.1 Labor Relations and workforce development

Please report separately i) the pulp mill and associated facilities, ii) pulp mill's Paranaguá port, iii) eucalyptus and pine plantation operations and iv) transport operations in the chapters "Workforce", "Worker's organization" and "Workers' grievance mechanism".

Workforce – Projeto Puma II

<i>Type of employee</i>	<i>Total Number for Reporting Period</i>	<i>Category of employee Total Number for Reporting Period</i>	
<u>Direct employees</u>	181	Men: 128 Female: 53	Management level: 33 (director, managers, coordinators and consultants/specialists) Workers: 148
<u>Contracted employees¹⁹</u>	10	Men: 10 Female: 0	Management level: 10 Workers: 0
<u>Supply Chain employees²⁰</u>	N/A	Men: Female:	Management level: Workers:

Worker's organization - Projeto Puma II

<i>Workers organization</i>	<i>Description</i>
<u>Trade unions or worker organizations/committee in workplace</u>	SINTRAPAV – Represents workers of the industry of Heavy Construction sector SINTRACON – Represents workers of the Civil Construction sector
<u>Meetings with workers' organization representatives in workplace</u>	<ul style="list-style-type: none">• Number of meetings: 02• Name of Trade union or worker organization: 02• Frequency of meetings: Whenever required by any of the parts
<u>Collective bargaining agreements</u>	<ul style="list-style-type: none">• Agreement signed on: 20/01/20 (salary adjustment date) e 13/11/20 (paid time-off during holiday)• Parties signing agreement: Both labor unions above mentioned and the main contractors in the site.• Number of employees covered under collective bargaining agreement: Around 7,000.

¹⁹ Contracted directly by the Klabin

²⁰ Employees hired through sub-contractors and/or intermediaries, including plantation, transport and shipping operations.

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Workers’ grievances - Projeto Puma II

TYPE OF GRIEVANCE	RECEIVED		INVESTIGATED		RESOLVED	
	Direct employees	Contracted employees	Direct employees	Contracted employees	Direct employees	Contracted employees
Paid time off during holidays	0	229	0	229	0	229
Food	0	166	0	166	0	166
Benefits	0	151	0	151	0	151
Internet Connection	0	117	0	117	0	117
Other (covid & covid protocol)	0	113	0	113	0	113
<i>Leadership</i>	0	56	0	56	0	56
Transportation	0	55	0	55	0	55
Infrastructure (repair in general)	0	54	0	54	0	54
Payment	0	39	0	39	0	39

- Has there been a state inspection on labor or occupational health and safety matters during the period now reported? Please describe. What corrective action has been taken/will be taken by the Company if any is required?
No.
- Have there been court cases brought by employees or trade unions based on alleged labor law violations during the period now reported? Please describe. What corrective action has been taken/will be taken by the Company if any is required?
No.
- In relationship with the whistle-blower policy, has any kind of information or activity that is deemed illegal, unethical, or not correct within the organization has been denounced/exposed? Please describe. What corrective action has been/will be taken by the Company if any is required
No.
- Has there been labor unrest, strikes or other industrial disputes during the period now reported? What corrective action has been taken/will be taken by the Company if any is required? Please describe in the following table.

On October 30, the civil construction workers unions organized a “surprise” assembly at Klabin’s gate to demand the end of year paid time off (which was defined as a possibility and not an obligation in the Collective Agreement). The situation was pacifically solved in less than two hours resulting in no negative impact to Puma I operations nor Puma II construction.

Due to the Covid-19 pandemic, several workers preferred to work during the periodic leaves as it was not safe to travel home and because of that were eager to take the paid time-off during the holidays to spend time with their loved ones. Klabin was already aware of this desire as many grievances were being registered, but the assembly was not informed in advance and required a rapid response.

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A week later an agreement was reached, after being approved in a planned assembly authorized by the Public Prosecutor, by the majority of workers. According to Klabin, the financial implications of the paid time off are not significant nor will it impact the construction schedule.

<i>Date of event</i>	<i>Event description</i>	<i>Affected people/environment</i>	<i>Reports sent to local regulatory agencies</i>	<i>Corrective actions (including cost and time schedule for implementation)</i>
Oct. 30 th 2020	Please, see above.			

Local workforce development - Projeto Puma II

Summarize actions to strengthen participation of local labor and report the following statistics:

- Permanent and Temporary (part-time jobs) provided (#) from local region or state of Parana.

LOCAL WORKFORCE EMPLOYMENT	
<i>PLACE OF ORIGIN</i>	<i>TOTAL</i>
Telêmaco Borba	2184
Ortigueira	552
Imbaú	283
Demais cidades do Paraná	1584
Outros Estados	3720
Estrangeiros	19
TOTAL ON SITE	8342

WORKFORCE PER GENDER		
Men	7642	91,61%
Women	700	8,39%

- Indirect Permanent and Temporary (part-time jobs) provided by Contractors (#)
Not Applicable.
- Community member enrolled/trained (#)
No activities were carried out in terms of professional qualification due to the restrictions imposed by the protocol for covid-19 prevention and combat, as recommended by the State authorities.
- Scholarships awarded (#)
 - 30 students from Ortigueira enrolled in the Technical Mechanical Course received R\$400.00 along the course, besides having no cost with both the school and transportation.
 - 30 students from Telêmaco Borba enrolled in the Pulp and Paper Technical Course received R\$400.00 along the course, besides having no cost with both the school and transportation.

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5.2 Community Relations

Please describe specific activities undertaken by the Company to address any such potential negative impact of the project on the local community, that are not covered by the Chapter 8 Progress on implementing the environmental and social action plan (ESAP) – i.e. activities and/or resolutions of the Anthropoc Monitoring Committee, etc.

Anthropic Monitoring Program and Committee

The Anthropoc Monitoring Program’s main objective is to monitor the socioenvironmental and economic impacts in the cities of Ortigueira Telêmaco Borba and Imbaú, Project Puma II’s Direct Influence Area (AID).

In order to assist the monitoring and support the implementation of preventive and mitigation measures, at the end of 2013, during Project Puma I, the Anthropoc Monitoring Committee was created. The Committee is composed of Klabin members and municipal representatives of the Secretariats of Social Assistance, Health, Education and Finance of the three municipalities of AID, State Regional of Health, State Regional Nucleus of Education and Secretariat of Public Security, Public Prosecutor, as well as other institutional representatives, such as members of the City Council and local trade associations.

The Anthropoc Monitoring Committee’s goal is to analyze and act on identified impacts that may occur related to the possible population growth in the municipalities, due to migration of labors or people seeking for job opportunities.

In Project Puma I, the Anthropoc Monitoring Committee meetings occurred monthly until October of 2016. After this, its members defined to change the frequency – once every four months. This situation kept until May of 2019, when the monthly meetings started to occur again, after the announcement of Project Puma II. The members of the Committee decided, in a workshop in 06/19/2019, the indicators to be monitored monthly that may indicate impact due to workers’ temporary migration. From July to December of 2020, there were 5 Anthropoc Monitoring Committee meetings, as described below:

<i>Date</i>	<i>Description</i>	<i>Public (Including Klabin’s staff)</i>	<i>Location</i>
07/23/20	Anthropic Monitoring Committee Meeting	26	Remote Meeting (via Microsoft Teams)
08/27/20	Anthropic Monitoring Committee Meeting	24	Remote Meeting (via Microsoft Teams)
09/24/20	Anthropic Monitoring Committee Meeting	13	Remote Meeting (via Microsoft Teams)
10/29/20	Anthropic Monitoring Committee Meeting	16	Remote Meeting (via Microsoft Teams)

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11/26/20	Anthropic Monitoring Committee Meeting	12	Remote Meeting (via Microsoft Teams)
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As informed previously in the last ESCR, the first meetings of 2020 have occurred in the Puma Mill in order to maximize participation, considering its location (right in between the three Municipalities). Between March and May of 2020, due to the pandemic scenario and the World Health Organization's (WHO) recommendations, there were no face-to-face meetings. In spite of this, data and information continued to be monitored and shared by e-mail (PDF presentations in annex). As soon as the members adapted to the remote work conditions, the Committee decided to have its first remote meeting in June – the formula continued until the end of 2020 and initial meetings of 2021 will be remote as well.

07/23/2020 Meeting – Remote (Microsoft Teams):

In the second remote meeting, about 26 people logged in, such as municipal secretariats and officials of Ortigueira, Telêmaco Borba and Imbaú City Halls, Health and Educational Regional Nucleolus and the Civil and Military Police Forces.

The meeting consisted on data presentation and evaluation in the 5 macro themes of each Municipality (health, security, education, finances and social assistance). No significant changes or impacts observed, only the ones caused by the pandemic scenario – such as a high demand at the Social Assistance Secretariat for baskets of staples (a “basic-needs grocery package”).

Meeting report in annex.

08/27/2020 Meeting – Remote (Microsoft Teams):

In the third remote meeting, about 24 people logged in, such as municipal secretariats and officials of Ortigueira, Telêmaco Borba and Imbaú City Halls, Health and Educational Regional Nucleolus and the Civil and Military Police Forces. Also, 2 members of Arcadis participated as listeners.

The meeting consisted on data presentation and evaluation in the 5 macro themes of each Municipality (health, security, education, finances and social assistance). No significant changes or impacts observed.

Meeting report in annex.

09/24/2020 Meeting – Remote (Microsoft Teams):

In the fourth remote meeting, about 13 people logged in, such as municipal secretariats and officials of Ortigueira and Telêmaco Borba City Halls.

The meeting consisted on data presentation and evaluation in the 5 macro themes of each Municipality (health, security, education, finances and social assistance). No significant changes or impacts observed.

Meeting report in annex.

10/29/2020 Meeting – Remote (Microsoft Teams):

In the fifth remote meeting, about 16 people logged in, such as municipal secretariats and officials of Ortigueira, Telêmaco Borba and Imbaú City Hall and Educational Regional Nucleolus.

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The meeting consisted on data presentation and evaluation in the 5 macro themes of each Municipality (health, security, education, finances and social assistance). No significant changes or impacts observed. Klabin Communications, Social Responsibility and Community Relations Staff presented a communication plan for integrated campaigns and actions for violence prevention against women, children, teenagers and elderly people among the Project Puma II and the three Municipalities.

Meeting report in annex.

11/26/2020 Meeting – Remote (Microsoft Teams):

The sixth remote and last meeting in 2020. About 12 people were present at the meeting, such as municipal secretariats and officials of Ortigueira and Telêmaco Borba City Halls, Civil and Military Police Forces, and Educational Regional Nucleolus.

There was no data presentation because of the low assistance. There was a data evaluation before the meeting – no significant changes or impacts were observed. The meeting consisted on Klabin's actions presentation during November and a brief talk about the Committee meetings during the year.

Due to the Holidays and changes in municipal administration that occurred by the end of the year, the members of the Committee decided not to have the last meeting in December (data and information were monitored and shared by e-mail).

Meeting report in annex.

Have there been any grievances lodged by members of the community or local authorities against the Company? Please describe. What corrective action has been/will be taken by the Company if any is required.

Besides the ones received through Klabin Ombudsman, there were no formal grievances by member of the community or local authorities against the Company.

Provide a summary of grievances lodged by members of the community – including its method such as phone calls, notification to personnel, written complain - directly to Klabin and how the issues were managed.

Klabin Ombudsman and summary of grievances

The ombudsman consists in a group of communication tools in which the objective is to develop the company's dialogue and relation with the population of its area of influence – considering the Puma and Monte Alegre mills, Forestry and the projects (such as Puma II).

The requests received by e-mail (faleklabinpr@klabin.com.br), phone calls (0800 728 0607) or Social Media (Facebook and WhatsApp) are monitored periodically in order to provide quick response and avoid conflicts of information.

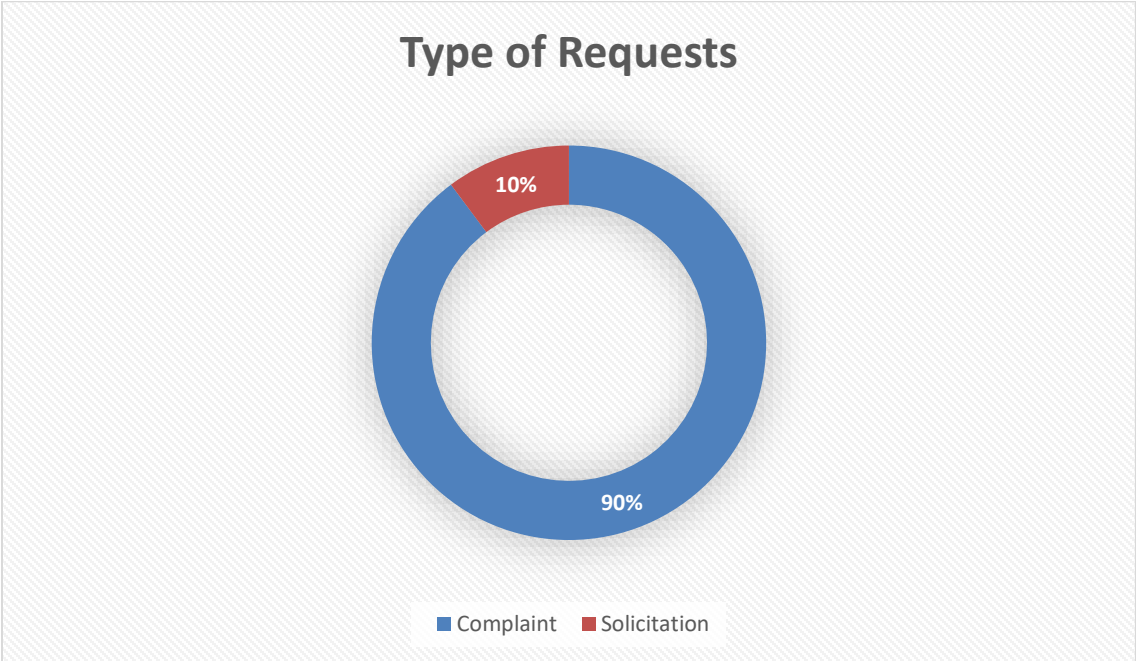
Complaints related to Project Puma II received from the community from July 1 to December 31, 2020:

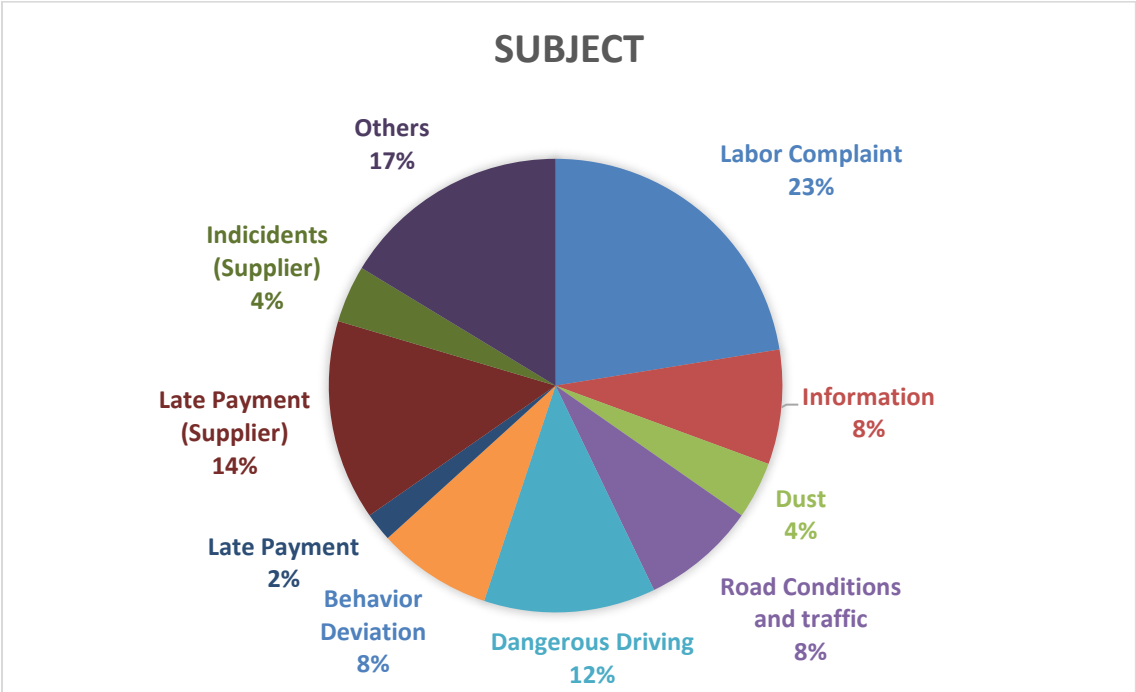
<i>Channel</i>	<i>Total</i>
Phone Call – 0800 (toll-free)	45

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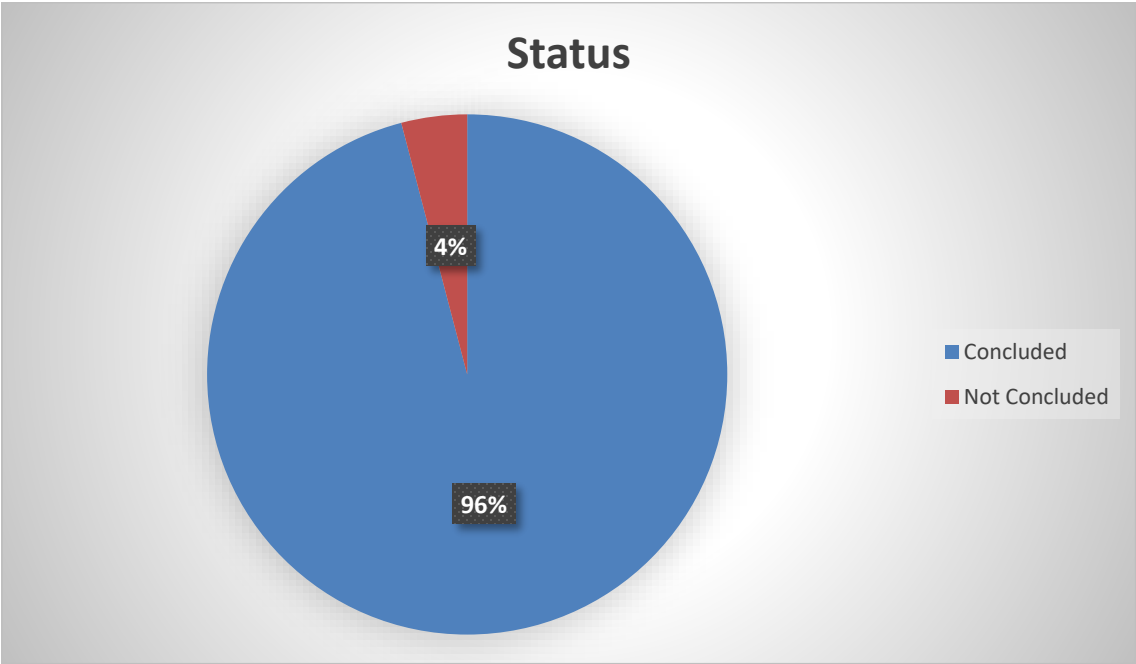
E-mail	3
Social Media (WhatsApp Message)	1

The description and subjects related to the requests received through the ombudsman are described as below:





All demands related to Puma Project and Klabin were answered to claimants, as long as it was possible to identify the contacts. Additionally, all demands were forwarded to the responsible sectors for the appropriate measures – such as notifications for the dangerous drivers, for example. Evidences are archived with the Social Responsibility and Community Relations team and their effectiveness evaluated.



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There are two demands not concluded, related to a labor complaint and a road maintenance situation. Regarding the first one, Klabin's Human Resources team and is handling the situation along with the contractor company involved (ENESA) and the Union. In the other situation, Klabin's Civil, Road Maintenance and Social Responsibility and Community Relations teams are working along to solve the demand. A Klabin Ombudsman report is available in annex.

How is information about the operations and/or environmental performance of the mill disseminated among the local community? Please describe.

The information about the operations and/or environmental performance of the mill is disseminated among the local community in different ways such as:

Meetings with the Communities

Trimestral meetings with the neighboring rural communities (Campina dos Pupos, Volta Grande, Colônia Augusto Vitória, Lageado Bonito) and urban areas of Ortigueira, Telêmaco Borba and Imbaú (members of associations, Municipal Councils, religious leaders, etc.). The reunions objective is to present the Project Puma II, clarify questions and identify community demands.

The meetings would occur during the year, but due to the pandemic scenario and the World Health Organization's (WHO) recommendations, they had to be postponed. Klabin Staff maintain direct contact with stakeholders via telephone, WhatsApp and other communication channels. Remote meetings were not an option due to unstable internet connection, especially in the rural area. In addition, there are the Anthropic Monitoring Committee meetings – which contains members of the City Halls and Municipal Councils. Two of the public sector's responsibilities in the Committee are to bring demands and repass information to their citizens.

Klabin na Comunidade and presence in events

Event organization (Klabin na Comunidade) and presence in municipal events. The two relationship actions have the objective to bring information about Klabin's activities (including Project Puma II), as well as clarify questions about any kind of issue/theme – that include presenting the projects and actions in the social, environmental and local development areas.

Events were supposed to start in March, but all of the predicted ones during the year were canceled due to the pandemic scenario and the World Health Organization's (WHO) recommendations.

Klabin na Comunidade Magazine

Summary of all programs, projects and actions developed in the Campos Gerais region, in the State of Paraná – one edition per year. In December 2020, 34.000 editions were issue and distributed in 9 municipalities in Klabin's operational area – including Ortigueira, Telêmaco Borba and Imbaú. The majority was through random mail distribution, and the other part of the edition handled personally during the last month of the year – taking all the precautions regarding Covid-19.

In this last edition, there is a summary of all the Project Puma II's actions during the year of 2020. As soon as the Project is the largest private investment in Paraná's history and it has a big repercussion, Klabin has provided information about its development and operations, especially after the issues regarding the pandemic situation. In addition, there is information about many of the Project Puma II's social programs and actions such as Matas Sociais, SPI (Social Progress Index), Public Management Support, Semeando Educação, GBV Prevention Plan and others.

PDF Version in annex.

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Minuto Klabin (Radio) and Puma Radio

Minuto Klabin is a radio program once every two weeks in 10 local radios and a website in the Campos Gerais area, especially in Ortigueira, Telêmaco Borba and Imbaú, Klabin's biggest area of influence. The program is 1 minute long with information about economic, environmental and social company activities. The frequency and time of its propagation is determined by contract between Klabin and each one of the radio companies.

Puma Radio is a customized and exclusive platform for Project Puma II workers. It is an effective communication channel with the workers involved in the construction, and the Communications, Social Responsibility and Community Relations team develop its content, in a partnership with Agência Radioweb, experienced company in the segment of internal radios. Its content is divided in the following format: notes about public security, environment, public utility, forestry, etc., newsletters about Project Puma II and musical requests.

The Puma Radio is available in the Social Center, Project's refectories, and in the Capital do Papel and Jardim Bandeirantes residential areas (in the refectory and leisure areas).

5.3 Community Development

Please provide details of such initiatives supported by the Klabin Community Development Plan or other institutions related to the PUMA Klabin project, that are not covered by the Chapter 8 Progress on implementing the environmental and social action plan (ESAP).

Matas Sociais

Since 2015, the program helped more than 500 properties in Telêmaco Borba, Ortigueira, Imbaú and Reserva. It supports the familiar agriculture and helps small rural producers in all the production steps, since environmental adequacy to products commercialization in local markets. Also offers capacitation actions involving agricultural management, organic production and environmental education, among others.

After an interview with the participants, more than 70% of them affirmed that their income raised after the participation in Matas Sociais – 45% of those noticed an increment of 20 to 60% in their properties' income. In addition, half of them affirmed their network is now bigger and show better sales performance and production raise – registered in 57% of the consulted properties. Nowadays, their production is found in schools, Klabin Mills restaurants, and in local markets. There is a highlight in environmental issues as well: the utilization of pesticides reduced for 66% of the producers that now seek for new alternatives with the help of Matas Sociais' consultants.

In 2019, the program started in the Municipalities of Sapopema, Curiúva, São Jerônimo da Serra, Tibagi e Cândido de Abreu. There were several planning meetings, institutional articulations and engagement actions in the new Municipalities to define communities, associations or cooperatives to participate in the program. After the diagnosis, planning and field actions started – at least 100 new properties will be participating.

Because of the pandemic scenario and social distancing matters, Matas Sociais had to adapt its actions. Locals were the agricultures sold their products closed or reduced its number of clients. The solution was to invest in technology: face-to-face meetings turned into remote meetings and a successful product delivery system was developed. In addition, a Podcast called "A Voz do Matas" was created and information is shared in the Matas Sociais agricultures' virtual group.

In 2020, Matas Sociais expanded to Santa Catarina State as well. Program actions will continue aiming local and communities' development in 2021, including the expansion to other municipalities of Paraná and Santa Catarina. Program's results in 2020 are available in annex.

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Semeando Educação

The program offers consultant services to public schools directors and teachers, sharing methods and tools to improve the scholar management indicators, including formations about leadership and school community participation. Created in 2017, the program includes 31 public State schools in the Municipalities of Ortigueira, Telêmaco Borba and Imbaú, that registered a 23% improvement in the Basic Education Development Index (IDEB) after its implementation. Since 2019, the focus is on the Municipal public schools. In total, 11 thousand students, 65 schools and a thousand teachers impacted by Semeando Educação.

In March of 2020, after the Covid-19 pandemic, municipal schools of Paraná and other Brazilian States had their activities suspended. In this reason, the work's scope in face-to-face activities had to be reformulated. In April, while the teachers were still on recess, Klabin had meetings with the Municipal Secretariats of Education in Ortigueira, Imbaú and Telêmaco Borba to think of emergency actions facing the new scenario. There was the development of a new scope of action, with synchronous and asynchronous activities for the teachers – such as home study and online meetings – to eliminate questions regarding the use of digital tools and proposal formats to use with the students in the e-learning modal, sharing good actions and examples as a way to inspire them. Resources such as e-books, website tips, videos, and other activities presented to the teachers, as well as examples on how to assist the students' parents to organize home study. There was the intense participation of the school assistants and coordinators as well, in order to synchronize and optimize all actions regarding the difficulties of the period. Program reports in the three municipalities in annex.

Public Management Support

Support to the Municipalities of Ortigueira, Telêmaco Borba and Imbaú in the elaboration of their Plurennial Plan (Article 165 of the Federal Constitution) in the 2018-2021 period, in partnership with specialized consultant company. Its actions are monitored periodically through meetings with all the Government Secretariats and its results presented to the Mayor for decision-making.

The support was extended to Sapopema, Curiúva, Reserva and Tibagi in 2019 and its goal is to find the balance in the public accounts and capacitate municipal management teams.

In 2020, two new ways of supporting the Municipalities were implemented. A new Mobility Plan was developed in Ortigueira in order to improve transportation planning and the citizens' quality of life. It will be integrated to the Director Plan and other sectorial plans of Sanitizing and Social Interest Habitation. Final report of the Mobility Plan of Ortigueira is available in annex.

In addition, an emergency support for all seven Municipalities was developed, aiming the crisis management caused by the pandemic scenario – it monitors risks and impacts of the situation and proposes actions based on the epidemiologic situation, stakeholders engagement, and maturity levels (regarding governance, communication, assistance and economic impacts) of each Municipality. Its summary is available in annex.

Território Empreendedor

In partnership with SEBRAE, Klabin offers opportunity of qualification for a total of 128 new entrepreneurs and business, as well as existing ones, in the municipalities of Ortigueira, Telêmaco Borba and Imbaú.

Território Empreendedor's actions focus in three pillars (Qualification, Entrepreneurship and Management) that provide to its public activities and experiences that contribute to organization and improvement of micro and small businesses, from their conception to new markets opening and innovation. All of programs orientations and solutions are based on the UN's SDG (Sustainable Development Goals). Program partial report available in annex.

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Support to Qualification in Forestry Operations

Klabin announced in 2019 a partnership with Paraná State Government and the Municipality of Ortigueira in the creation of the Forestry and Agricultural Professional Educational State Center in Ortigueira, the first technical school focused in the formation of forestry operators and heavy-machines mechanics in Brazil. Based on school models in Finland and Sweden, the new institution will have capacity for 800 alumni.

The project is located in the facilities that previously were designated to Project Puma I workers, but now exclusive for the community use. The company also supported their partners in the technical area and its specialized instructors will support the initial activities and in the contact with the main forestry equipment producers and other industries in the sector seeking future partnerships.

Paraná State Governor Carlos Roberto Massa “Ratinho” Júnior, Klabin’s CEO Cristiano Teixeira and Lourdes Banach, Mayor of Ortigueira inaugurated the Forestry and Agricultural Professional Educational State Center on January 31, 2020.

As well as the majority of the educational institutions, the Forestry and Agricultural Professional Educational State Center and its professors and students had to adapt the educational method motivated by the pandemic situation. Although the dropout rate was 25%, it was lower than in other professional education centers.

Currently, there are 121 active students in three technical courses (Agribusiness, Forestry Operations and Maintenance of Heavy Machinery). For the year of 2021, there are 157 registered. Courses start in February in a hybrid model – part of the students in the classroom and part online.

Project MuDança

Since 2015 Klabin supports Project MuDança, at Casa da Criança Padre Lívio Donati, in Ortigueira. MuDança helps in physical, cultural and emotional development of 70 children and teenagers from 10 to 15 years-old, besides contributing to their social inclusion.

Artistic Gymnastics Project in Telêmaco Borba

Partnership with Municipality of Telêmaco Borba that guarantees sports development, contributing in the physical and cultural formation of young people in the region. There are 100 girls from 5 to 14 years-old training for free.

Klabin supports the Project in the gym’s infrastructure management, such as bars, carpets, fans and other resources. Besides this, hires the coach, Juliano Fulas, and collaborates in external events by paying hotel, transport, Food and Beverages expenses.

Social Educative Project Encantos do Imbaú

The Project is hold by the Serviço, Convivência e Fortalecimento de Vínculos in the Centro de Convivência do Idoso of the Municipal Secretariat of Social Assistance of Imbaú. Klabin’s supports it by hiring the professional musicians that conduce the elderly coral and the guitar, flute, percussion and keyboard lessons for 200 participants. Even though in times of social distancing measures, the project is still going, the professors and students are in touch through online lessons and classes, contributing to sociocultural interaction, creativity, motor coordination and musical language development.

Bacia Escola Ribeirão Três Bocas – Jaguariaíva

The public supply of the municipality of Jaguariaíva is carried out through water abstraction from three sources, one of which is the Três Bocas watershed, owned by Klabin. The watershed area covers 489 ha, of which 287 ha are for planted forests and 119 ha for conservation.

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The location and characteristics of the Três Bocas watershed are ideal for carrying out the hydrological monitoring of PROMAB/IPEF, while bringing together exceptional conditions for the implementation of the Bacia Escola project, taking into account the proximity to the city and the presence of institutions education, in addition to the performance of the municipality's sanitation company (SAMAE).

The Bacia Escola project, inspired by the work developed in the Brazilian Geological Service in Rio Catu, State of Bahia, has been an opportunity to generate and share knowledge as a study and experience area for different audiences especially for elementary school students (material elaboration and interpretive trails), as well as technical schools and universities. It is a contribution to the democratization of knowledge combined with the generation of shared value, which is one of the goals of companies in the search for sustainability.

The Indigenous Basic Environmental Plan (PBAI)

The Indigenous Basic Environmental Plan (PBAI) of the Indigenous Component Study (ECI) of the Indigenous Lands (TI) of Queimadas and Tibagy-Mococa of Klabin S.A.'s Industrial Complex in Ortigueira, State of Paraná, was elaborated attending FUNAI's recommendations after the ECIs and is composed by four programs:

1. Program of Impact Monitoring in the Physical and Anthropic Environment;
2. Program of Revitalization of the Kaingang Education and Culture;
3. Program of Kaingang Ecological Corridors;
4. Program of Revitalization of the Kaingang Production Activities.

It is in course since 2017 Scholarship Management actions in University, Technical and Qualification Studies. Currently, there are 24 students, 14 from TI Queimadas and 10 from TI Tibagy-Mococa. The majority of students is female (15). By the beginning of 2020 there were meetings with the students contemplated by the scholarships and the TI leaderships.

In 2019, 5 students from TI Tibagy-Mococa were the first ones graduated: Renato concluded his Bachelor's Degree in Dentistry at Ponta Grossa State University – UEPG, being the first indigenous person to finish this major at this university. Janaína, Zaqueu, Adriele and Adriana concluded their Degree in Education. Four of the five are currently working at their communities (Renato is also working at TI Queimadas as a dentist). In 2020, due to the pandemic situation, there were no graduations, although Elizeu Koku is close to finish his Technical Course in Nursery – he will probably be the first student from TI Queimadas to do so.

In addition, in 2019 there was the inauguration of the infrastructure work in both Indigenous Lands (TI): one sports court, 2 computer rooms and 2 multimedia rooms, 1 playground and an artesian well in each community school. Besides this, an outdoor gym in each TI. In December of 2020 there was a new installation of the electrical facilities at the computer and multimedia rooms at TI Tibagy-Mococa.

Since March, according to World Health Organization (WHO) and FUNAI's recommendations, the visits to Indigenous Lands (TI) are suspended. Only essential services are allowed, according to official document number 419 (article third, paragraph 5th) – available in annex.

Klabin has developed some actions at the location regarding Covid-19 prevention: PCR testing at the communities in September and December, mask and food supplies donations. A summary of all PBAI's actions during the year of 2020 is also attached to the ESCR.

Please report the status/progress related with the road safety program. Please list and describe the measures/actions that Klabin has and/or will be implementing to upgrade safety measures in its own and contractor truck fleet. If applicable, please also list/describe the improvements achieved during the reporting period.

PUMA I and PUMA II

1. IDENTIFICATION OF NEW ROUTES AND COMMUNITIES

We have a team of workers that choose the best option for transportation, and one of the items is if we will pass through communities and when we have opportunity we diverting the route, reducing all our impact.

Communities Identification;



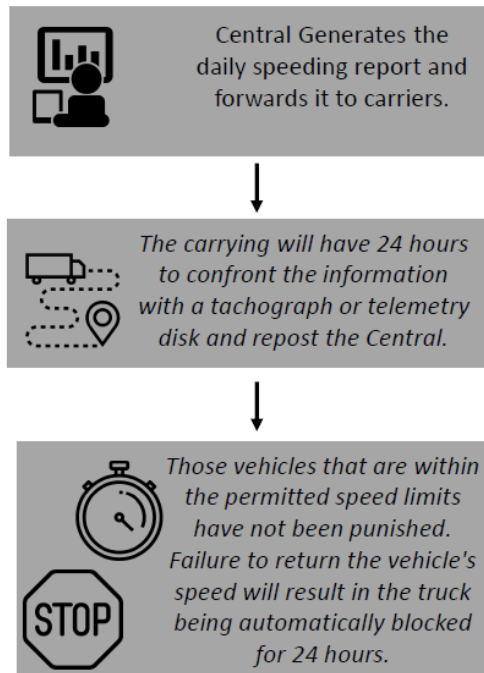
2. RISK ANALYSIS OF THESE COMMUNITIES AND ACTION PLANS

- a.** Speed controlling communities using Embedded Technology; **OBJETIVE** - Install on-board monitoring technology on 100% of the truck fleet, increasing management control and ensuring safety in our operations. 24 hours monitoring center for the embedded technology that consists in cameras, fatigue sensor, telemetry and journey control.

What can we do with this results? Create Heat maps, with our own data. Based on the information generated, it has been possible to take the following preventive actions: Blitz at hot spots; Request passage in the INTEGRATED ROOM AGAINST SLEEPINESS; Mandatory stimulation stops; Awareness campaigns; Restorative and disciplinary actions with the drivers;

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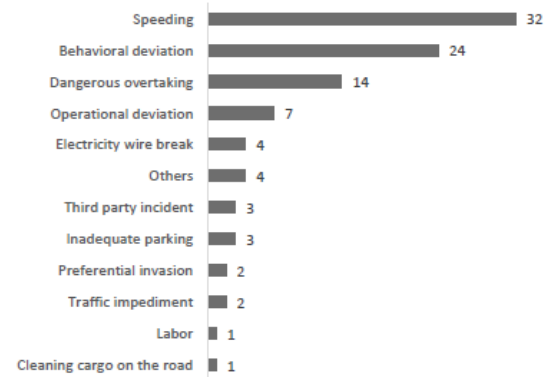
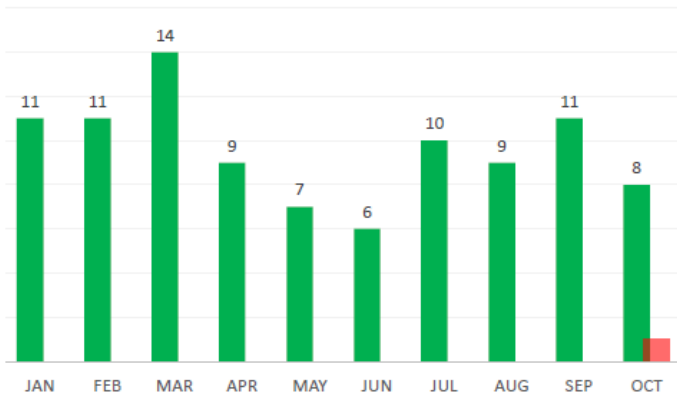
b. Political application of consequences;



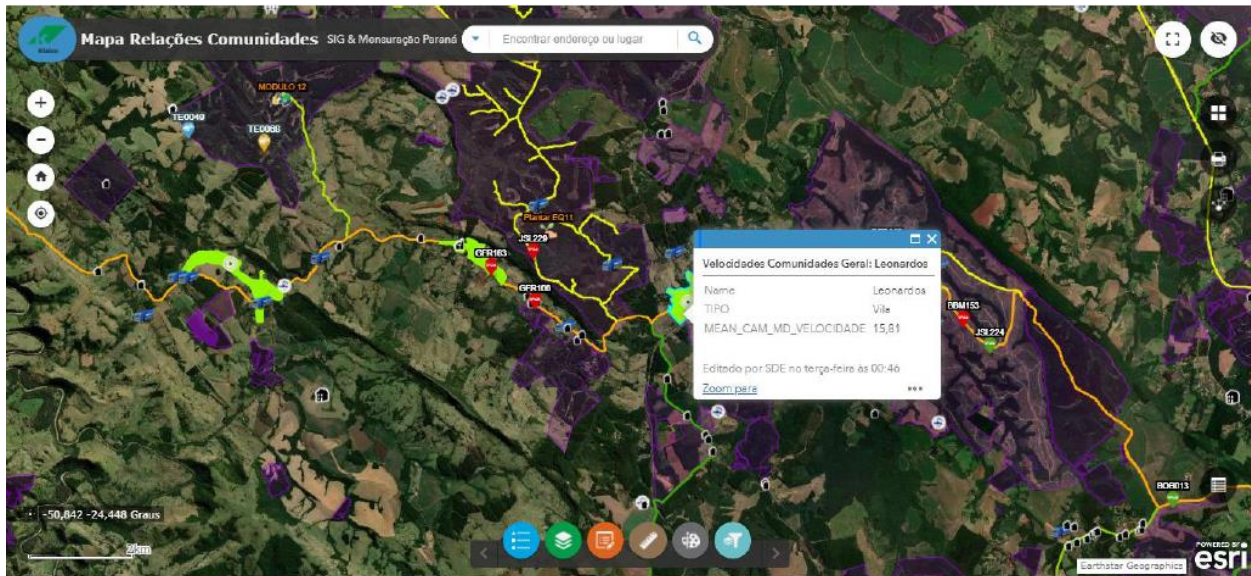
c. KPI's control; A maximum speed limits of 20 Km/Hr is applied, signaling in all communities, and electronic fences are also integrated with the trucks, that inform when a driver pass this limit and the fleet company have to answer about this deviation. The truck are blocked for 24 hours;

d. 0800 analysis flow;

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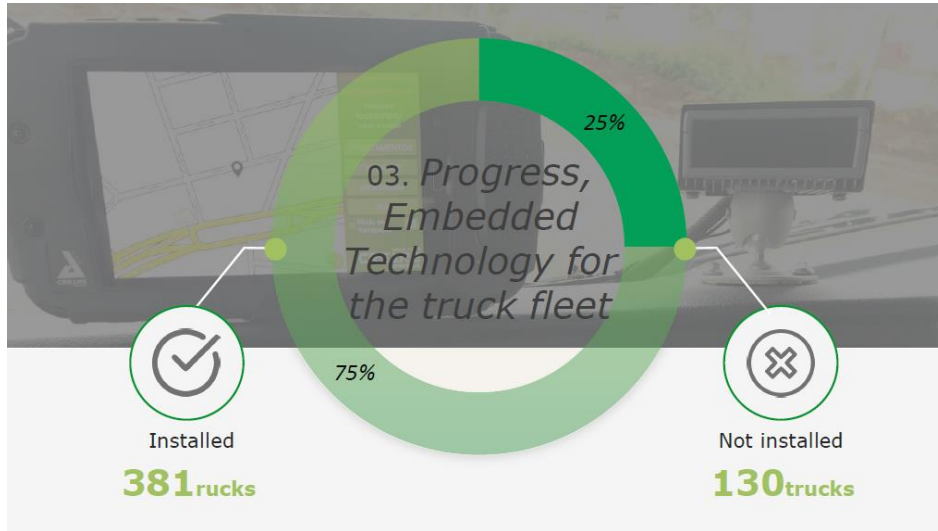


- e. Weekly meetings;
- f. High light from last week with Klabin team;
- g. High light from last week with carriers managers;
- h. Mapping of electrical networks in communities;



- i. Monthly speed cameras in communities;
- j. Supplier assessment with item related to community care.

3. PROGRESS, EMBEDDED TECHNOLOGY FOR THE TRUCK FLEET



4. UPDATE: ALERTS OCCURRENCES (2020)

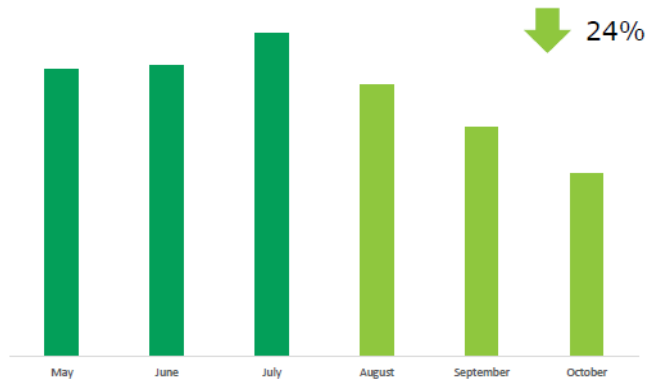
Behavior in recent months, with information management support

154thousand

May – June – July

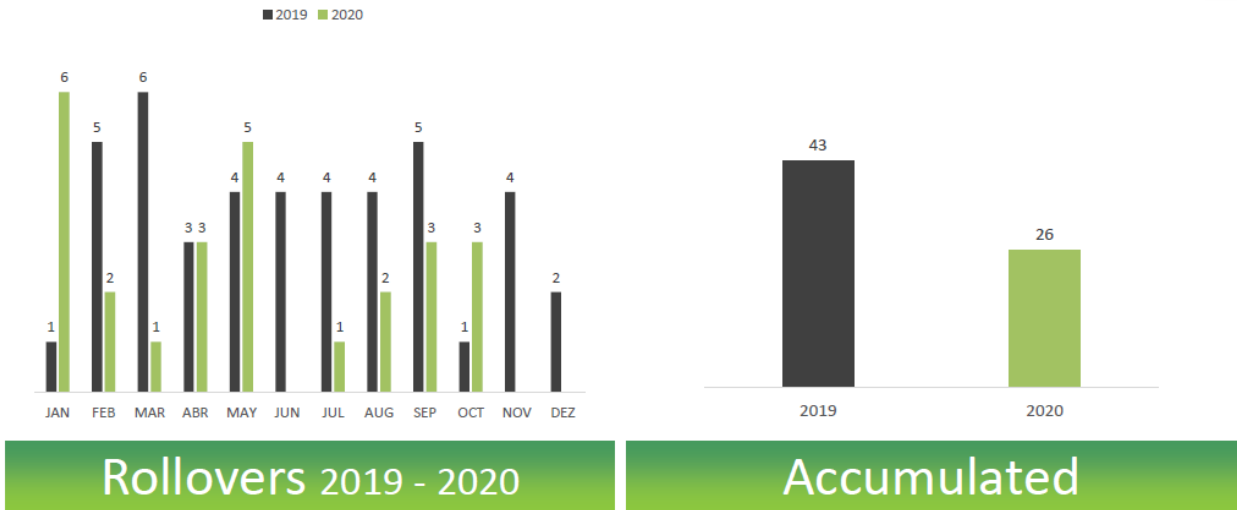
116thousand

August – September – October

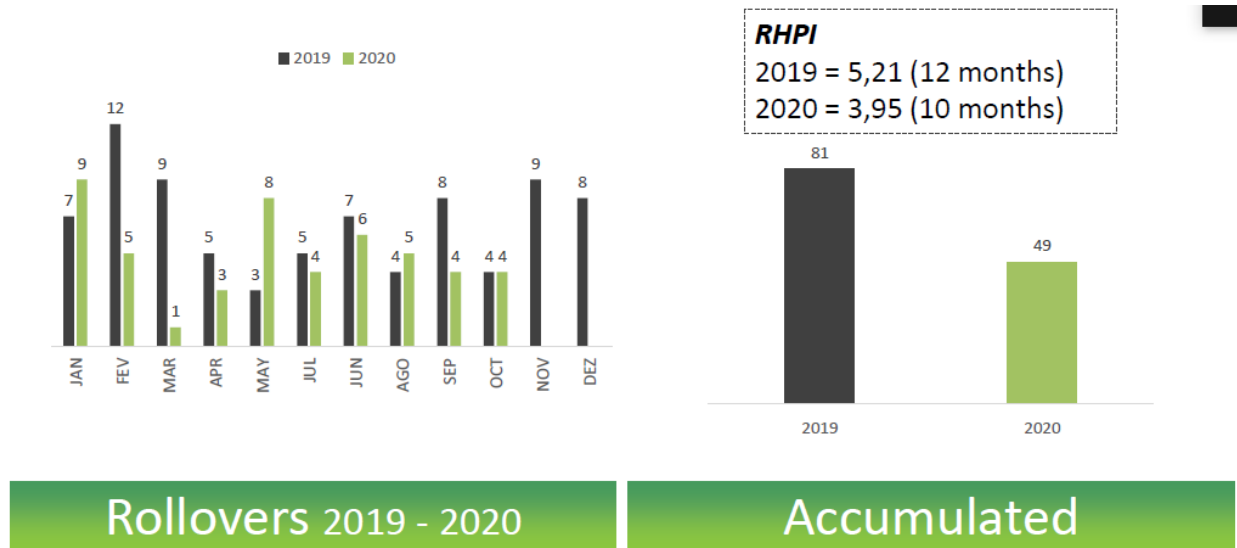


5. UPDATE: TRUCK ROLLOVERS

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6. UPDATE: HIGH POTENTIAL INCIDENTS



7. LESSONS LEARNED AND ACTIONS TAKEN

Consequences policy;
 Control center;
 Access to factories by biometrics.

8. KLAZEROTAS



Rotogram optimizer, works like a waze app.
Deadline for conclusion 2021.

9. ACCIDENT CASE

Accident Description

The truck was traveling loaded towards Telêmaco Borba along highway PR 092, made a slight turn and found a row of cars and a truck traveling in the opposite direction, the truck was high light on and invading the opposite lane, in order to pass safely the driver moved to the right, and in that came to leave the lane to the shoulder, between the lane and the shoulder there is an unevenness of approximately 26,5 cm, where when passing it the driver lost control of the steering and the tractor horse and implements fell to the left side of the highway.

Medium damage mounts on the truck (Horse).

The driver had minor injuries such as: Cut on the right eyebrow, left hand and abrasion on the left arm.

Conclusion of the analysis

After surveys carried out at the scene, analysis of the mechanical integrity of the truck / implements, collected reports, analysis of video monitoring, it is defined:

The main factor for the occurrence of the occurrence was the fact that the runway was followed by a "step" and holes in the shoulder, numerous runway recaps and the narrow width of the lane which greatly increased the probability of the truck tipping over.

Actions / Recommendations

- Develop and disseminate safety alert, contemplating the warning in relation to the dangers of the edge of the track.
- Check the possibility of safe driving training.
- Ask highway regulator for on-site maintenance.
- Review the transport schedule, insert in the same point of attention in relation to the security risks in KM 200 of PR-092.
- Apply scoring consequence policy.
- Apply disciplinary measures to the driver.
- Safety alert (speeding and confidence in driving).
- Create electronic fence on the road.

• 6 DATA INTERPRETATION AND CORRECTIVE MEASURES

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Provide the following information for monitoring data which exceed Brazilian or IFC maximum levels. This refers to data presented in Chapter 5. Provide the information in the table for each parameter exceeded.

<i>Monitoring parameter that exceeds Brazilian or IFC guidelines</i>	<i>Cause for monitoring parameter exceeding</i>	<i>Corrective action plan and responsibility</i>	<i>Completion date</i>	<i>Cost/USD</i>	<i>%Complete/ Status</i>
Noise	Local agricultural activity and Sound pressure contribution of roads	The monitoring will be done during the annual shutdown	October 2020	2100	Completed

• 7 PROGRESS ON IMPLEMENTING THE ENVIRONMENTAL AND SOCIAL ACTION PLAN (ESAP)

Please report on progress to implement the actions specified in the ESAP attached as Schedule III in the Loan Agreement. Report on actions which are of on-going character and actions that have not been completed before the reporting period of this Environmental and Social Compliance Report.

The ESAP update is available at the link with the documents.

SOCIAL

Recommendations – Integrity Channel

A group of directors will evaluate and give their contributions in the Consequence Policy draft – its approval shall be right after. The Integrity Commission debated about a (survey) in the last meeting of 2020, some alternatives about its development are under evaluation. In addition, the Commission discussed about an internal divulgation of the Integrity Channel’s indicators. Meetings in 2021 will find resolutions on these three themes.

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• 8 GHG EMISSIONS

In case (and subject to any more stringent obligations that are imposed by any Brazilian law or regulation) the Project has emitted over 25,000 tonnes of carbon dioxide (CO2) equivalents during its operation on the Reporting Period, please report greenhouse gases (GHG) emission amounts (Scope 1 and Scope 2 emissions separately)²¹ applying the GHG Protocol methodology. Please report fossil and wood based emissions separately

The table below shows summary of total Puma I operation GHG emissions
Inventory year: 2019

The 2020 emissions inventory is in progress.

GEE (t)	Emissões em toneladas métricas, por tipo de GEE				Emissões em toneladas métricas de CO ₂ equivalente (tCO ₂ e)			
	Escopo 1	Escopo 2 (abordagem por "localização")	Escopo 2 (abordagem por "escolha de compra")	Escopo 3	Escopo 1	Escopo 2 (abordagem por "localização")	Escopo 2 (abordagem por "escolha de compra")	Escopo 3
CO ₂	235.067,918	4.607,473	1.285,696	59.452,229	235.067,918	4.607,473	1.285,696	59.452,229
CH ₄	207,196	-	-	4,433	5.179,900	-	-	110,825
N ₂ O	64,394	-	-	2,826	19.189,412	-	-	842,148
HFCs	1,875			-	2.889,945			-
PFCs	-			-	-			-
SF ₆	-			-	-			-
NF ₃	-			-	-			-
Total					262.327,175	4.607,473	1.285,696	60.405,202

²¹ Quantification of GHG emissions will be conducted by the client in accordance with internationally recognized methodologies and good practice, for example, the GHG Protocol.

