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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: January to June 2020

Report completion date: August 14th, 2020

• 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

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

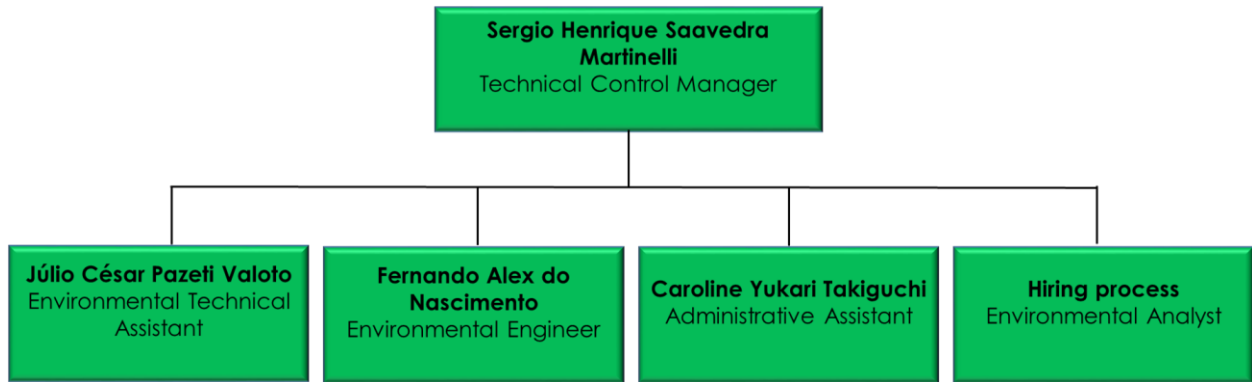
I certify that the data contained in this Environmental and Social Compliance Report completely and accurately represents Klabin operations during this reporting period. I further certify that analytical data summaries incorporated in Chapter 5 are based upon data collected and analysed in a manner consistent 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

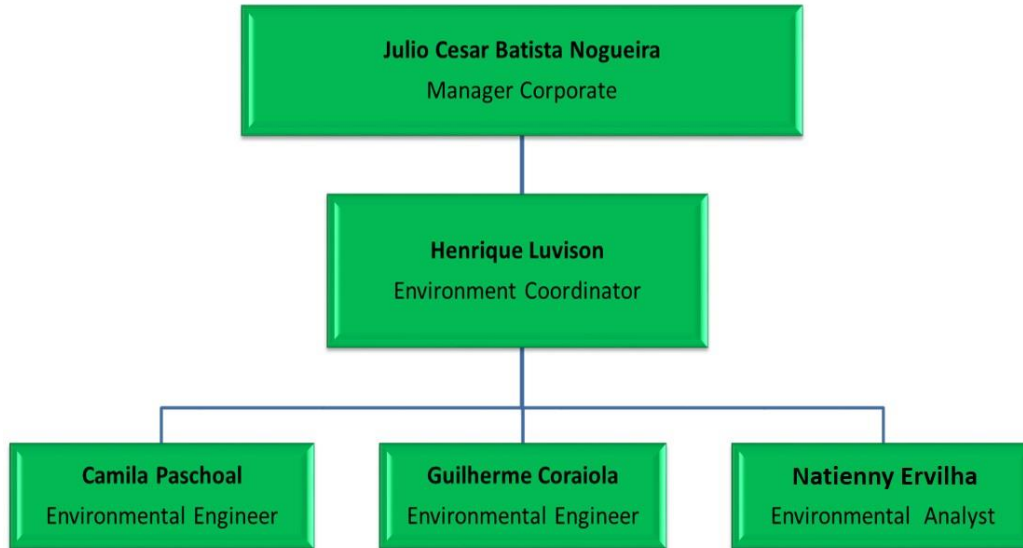
1.2 Environmental, Social and Health and Safety Responsibility Chart

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.



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 Technical Assistant 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
Administrative Assistant Caroline Yukari Takiguchi Address: Faz. Apucarana Grande s/n – Ortigueira - PR Telephone Number: (42) 99123-6904 E-mail Address: caroline.employer@fornecedores.klabin.com.br
Environmental Analyst Hiring process Address: Faz. Apucarana Grande s/n – Ortigueira - PR

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

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1.3 Summary of Current Status

The project progressed less than planned, with an overall progress of 42.60% against the planned 49.34%, representing a negative deviation of -6.74%, compared to a negative deviation of the previous month of -4.81%. This lower progress than planned is influenced by smaller, than necessary, numbers of workers in the month's average, in a large part of the areas, resulting from the ongoing remobilization process;

It is noted that the planned progress used as a reference is still that of the schedule prior to the pandemic and has a lag of approximately 8 weeks with the actual work. The schedule review is not yet complete;

There is a difficulty for most suppliers in the remobilization process, which, due to the new protocols, needs more time to put an active worker on the job. The histogram at the end of June / 20 reached the existing level at the time of the interruption of 3/23/20, with 5,625 registered workers;

The civil construction activities returned to a good pace and the assembly activities showed an increase, but, still below the necessary to recover delays;
Construction of the Containers Yard started;

Analysis and responses to claims related to the additional costs caused by the pandemic are underway with great intensity. It is important to give quick answers to suppliers in order to support them when assessing the financial flow of contracts;

The in-house team is still in the process of gradual remobilization in line with the increase in field activities, however, a significant part remains in home office or partial presence;

In the month, two positive cases were identified for Covid-19 for local workers (Telêmaco Borba, Imbaú and Ortigueira) of the project and two others identified by the isolation protocol before being released for work, from non-local workers.

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, 5th Effect A - Evaporation I, Gasification, Gasification Feed System, Wood Yard, Fiber Line 1 - Capacity Increase, Fiber Line, Chlorine Dioxide Plant, Energy Distribution, Distributed Control System (DCS) and BOP;

Procurement: Procurement activities of suppliers are currently under development, below schedule, with emphasis in the areas of Upgrade MC25 and MC26, Recovery Boiler, Power Boiler, White Liquor Plant, Evaporation, Gasification, Gasification Feed System, Wood Yard, Fiber Line 1 - Capacity Increase, Fiber Line, Chlorine Dioxide Plant, ETE 1 - Complementary Tertiary Treatment, Energy Distribution, Dedicated Systems, Turbogenerator, BOP;

Manufacture / Transport: The Supplier's Manufacture / Transport activities are currently being developed, below schedule, with emphasis on the areas of Paper Machine 27, Recovery Boiler, Power Boiler, White Liquor Plant, Evaporation, Wood Yard, Fiber Line 1 - Capacity Increase, Fiber Line, Chlorine Dioxide Plant, ETA, ETAC, ETE, Turbogenerator, Pipe Rack Package and BOP;

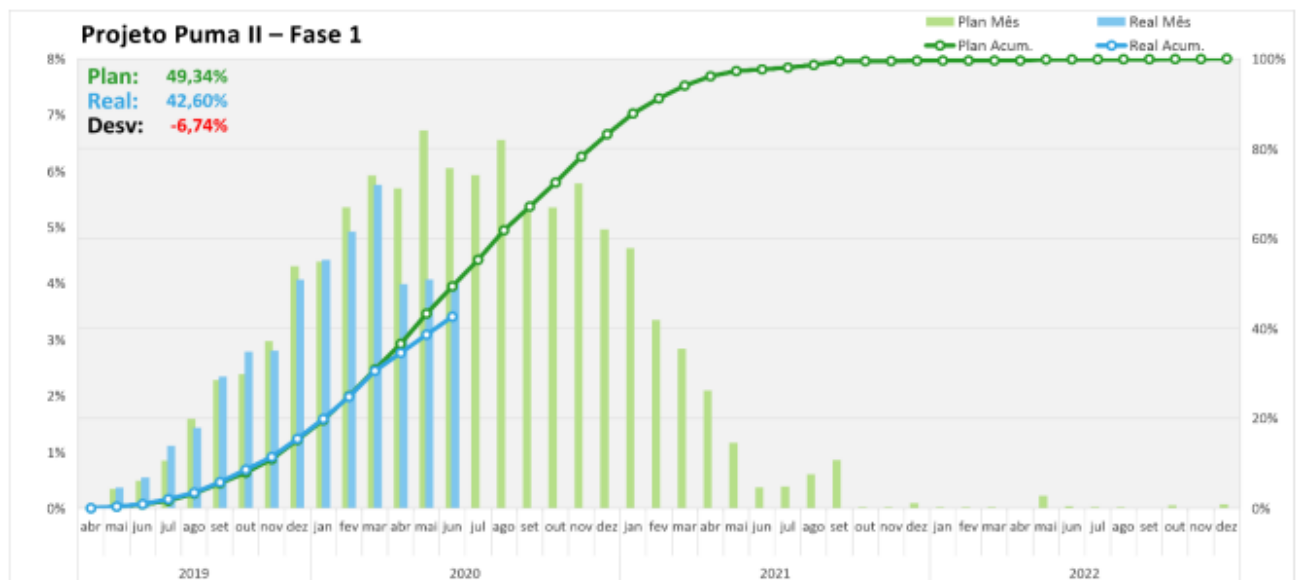
Civil Construction: The civil construction activities of suppliers are currently being developed, below the plan, especially in the areas of Paper Machine 27, Recovery Boiler, White Liquor Plant, Evaporation, Gasification, Gasification Feed System, Wood Yard, Fiber Line, Chlorine Dioxide Plant, ETA, ETAC,

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ETE, Complementary Tertiary Treatment, BOP, Industrial Restaurant, Roll Storage and Auxiliary Buildings and External Container Shipping Yard;

Electromechanical Assembly: Suppliers electromechanical assembly activities are currently being developed, below schedule, especially in the areas of Paper Machine 27, Recovery Boiler, Power Boiler, Evaporation, 5th Effect A - Evaporation I, Fiberline, Chlorine Dioxide Plant, ETA, ETAC, ETE, Complementary Tertiary Treatment, Energy Distribution, Distributed Control System (DCS), Pipe Rack, Turbogenerator and Earthworks, Log yard and street layout;

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

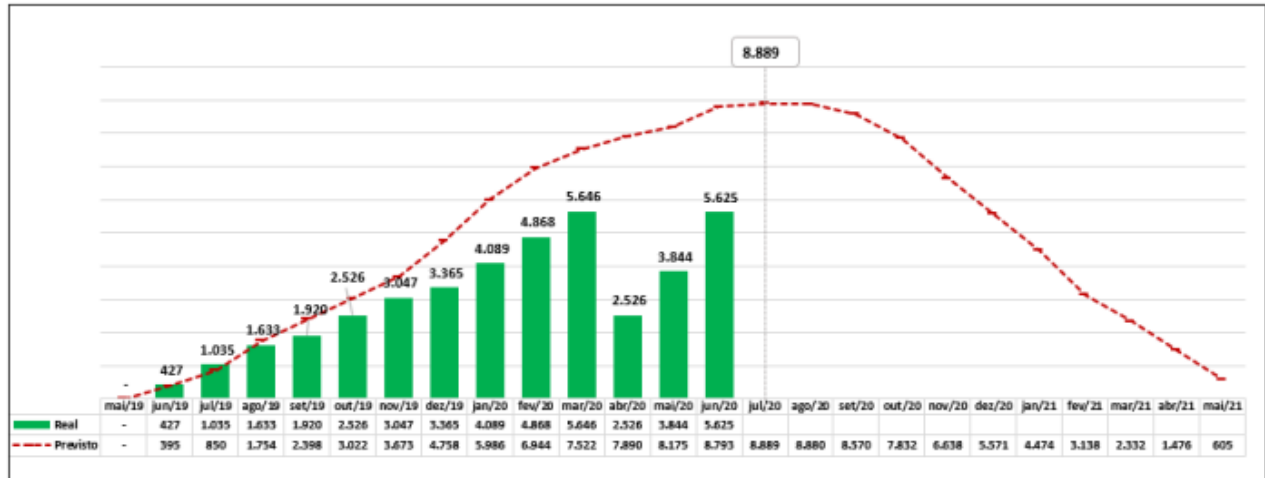


Area	Weight	Deviation	Weighted Deviation
Puma Project II – Phase 1	100,0%	-6,74%	-6,74%
Recovery Boiler	10,0%	-15,86%	-1,590%
BOP Klabin – Earthwork, Log Yard and Streets	1,6%	-64,78%	-1,034%

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Paper Machine 27	22,3%	-3,34%	-0,744%
Evaporation Plant	6,8%	-8,53%	-0,579%
BOP Klabin – Rolls Storage and Auxiliaries Buildings	2,4%	-19,30%	-0,469%
Power Boiler	4,8%	-8,92%	-0,430%
Wood Yard	5,0%	-7,82%	-0,388%
White Liquor Plant	5,5%	-6,68%	-0,370%
Balance of Plant	8,6%	-3,39%	-0,292%
Fiberline	7,5%	-3,88%	-0,289%
Effluent Treatment	3,0%	-8,72%	-0,262%
BOP – Pipe Rack	4,7%	-4,94%	-0,232%
Boiler Water Treatment Plant	1,4%	-8,00%	-0,111%
Gasification	2,0%	-4,74%	-0,095%
Gasification Feed System	0,5%	-15,79%	-0,080%
BOP- Turbogenerator	2,5%	-2,73%	-0,680%
Chlorine Dioxide Plant	0,4%	-12,00%	-0,046%
Water Treatment	0,4%	-11,51%	-0,043%
ETE 1 – Complementary Tertiary Treatment	0,3%	-10,84%	-0,034%
Fiberline 1 – Capacity Increase	1,5%	-2,28%	-0,034%
5º Effect A – Evaporation Plant I	0,5%	-3,42%	-0,015%
Turbogenerator	1,0%	-0,72%	-0,007%
BOP – Industrial Restaurant	0,2%	-3,16%	-0,006%
External Container Yard	3,3%	-0,01%	-%
Solids Residues Treatment Plant	0,5%	-%	-%
PIMS	0,1%	-%	-%
BOP – Package 1	0,1%	1,05%	0,001%
Dedicated Systems	0,1%	2,25%	0,003%
Power Distribution	1,2%	0,52%	0,006%
BOP – Package 2	0,8%	1,60%	0,013%
Distributed Control System	0,6%	2,43%	0,015%
Upgrade MC25 and MC26	1,5%	10,91%	0,159%

HISTOGRAM



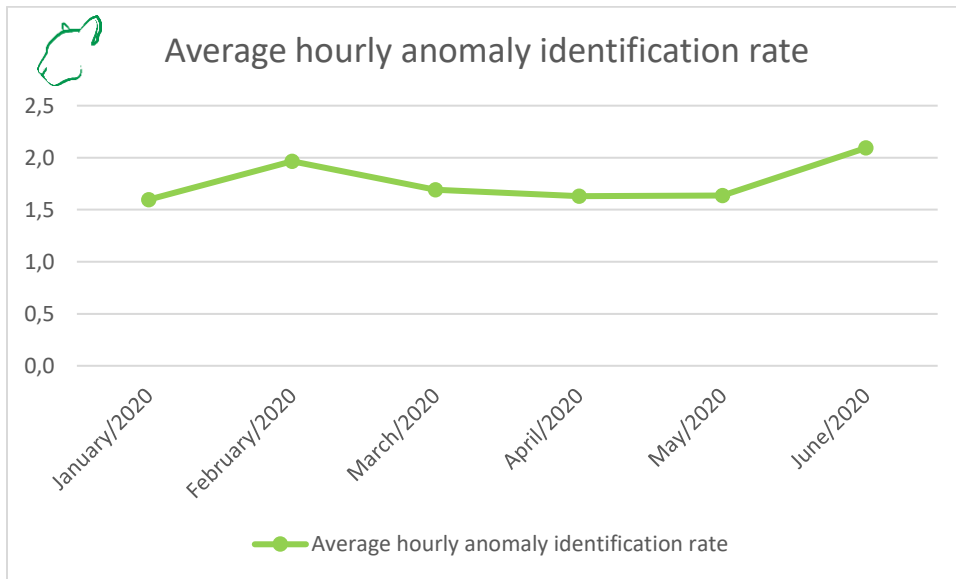
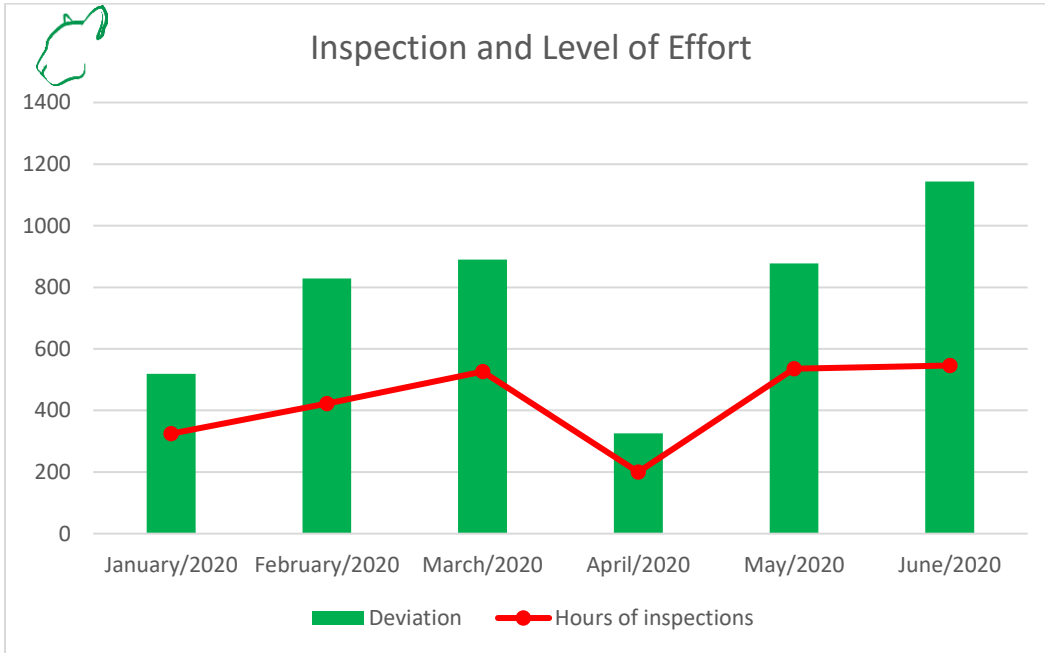
1.4 Status Of The Environmental, Social, Health & Safety Management System (ESH&S-MS)

- 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

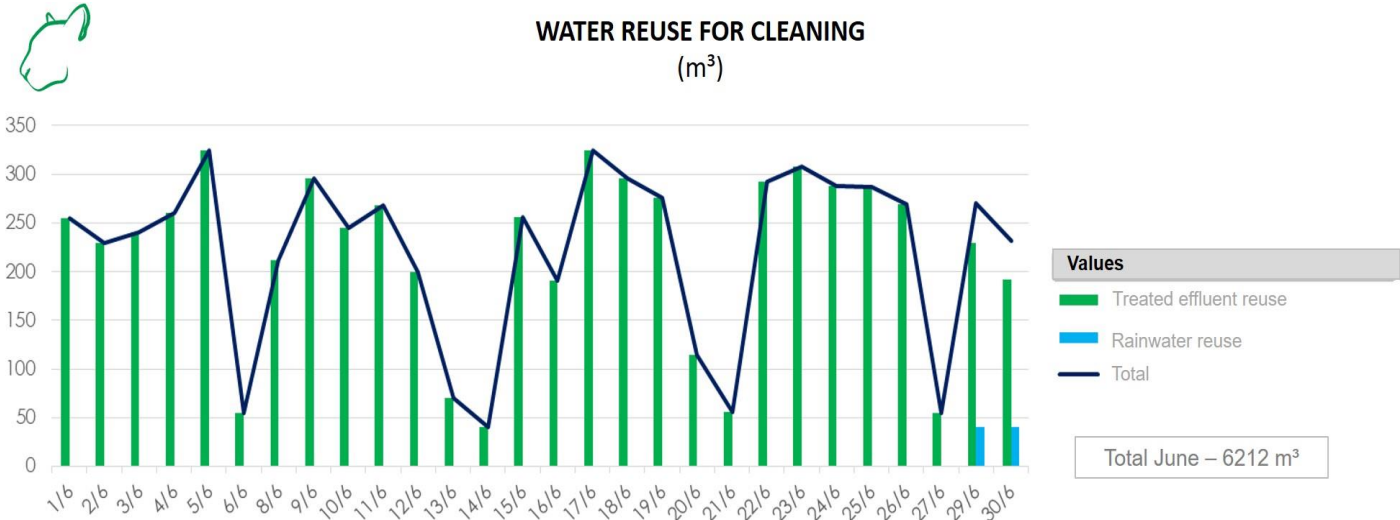
Inspection and Level of Effort – Puma II Project

2555 hours of inspections with an average hourly anomaly identification rate of 1.8.

Monthly	Deviation	Hours of inspections	Average hourly anomaly identification rate
January/2020	519	325	1,6
February/2020	829	422	2,0
March/2020	890	526	1,7
April/2020	326	200	1,6
May/2020	877	536	1,6
June/2020	1143	546	2,1



Water Resources Economics – Puma II Project



Cleaning with treated effluents

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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	Pulp Mill	RLO 148369	Paraná Environmental Institute	03/05/2020	30/09/2020
4	Environmental License Operation	Transmission Line 230kV	LO 34265	Paraná Environmental Institute	25/05/2016	25/05/2022
5	Environmental License Operation	Railway Branch	LO 34882	Paraná Environmental Institute	14/03/2017	14/03/2021
6	Environmental License Operation	Paranaguá Port Terminal	LO 112499	Paraná Environmental Institute	14/06/2016	14/06/2020
7	Environmental License Operation Renewal	Paranaguá Port Terminal	renewal protocol 16.406.942-7	Paraná Environmental Institute	17/02/2020	-
8	Environmental License Operation	Campina's Highway	LO 34266	Paraná Environmental Institute	25/05/2016	25/05/2022
9	Environmental License Operation	Fuel station	LO 34695	Paraná Environmental Institute	08/11/2016	08/11/2020
10	Preliminary Permit	Puma II	LP 148370	Paraná Environmental Institute	30/09/2018	19/09/2020
11	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 events 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.

So far, there were no significant social events.

PUMA II Project – Klabin S/A

• **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.
2. In detail, describe interactions with non-governmental organizations (NGOs) or public scrutiny of Reporting scope of companies.
3. Describe Reporting scope of companies' public relations efforts.

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 17 press releases divulgated to local press. In majority, notes consisted on demand of labor force in the construction and Klabin's efforts for hiring local workforce, eventual Puma II and adjacent constructions' interferences on the region's day-by-day (such as roads repairs), and information about partnerships with the public sector (Campaign Hospital and donations) and actions implemented in the Project regarding Covid-19.

RELEASES	DATA
“76% da mão de obra do Projeto Puma II é do Paraná”	22/01

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“Projeto Puma II quer aumentar ainda mais o número de trabalhadores da região”	03/02
“Comunicado Klabin Paraná – Medidas preventivas em relação ao Covid-19”	19/03
“Comunicado Klabin / Projeto Puma II – Medidas de Prevenção ao Covid-19”	22/03
“Operação pare e siga ocorrerá neste final de semana, na rotatória entre as rodovias PR-160 e PR-340”	01/04
“Klabin recebe peça de 78 toneladas para o Projeto Puma II”	08/04
“Klabin inicia obras para abertura de Hospital de Campanha em Telêmaco Borba”	13/04
“Klabin, Governo do Estado do Paraná e Prefeitura de Telêmaco Borba assinam convênio para abertura do Hospital de Campanha”	14/04
“Klabin adota nova tecnologia em suas fábricas para auxiliar no combate à Covid-19”	17/04
"Klabin inicia obras do último trecho urbano da terceira faixa da PR-160”	20/04
“Doações na Klabin para combater a Covid-19 no Paraná somam R\$ 2 milhões”	13/05
“Klabin entrega as obras do Hospital de Campanha de Telêmaco Borba”	25/05
“Klabin exige testes de Covid-19 na cidade de origem dos trabalhadores do Puma II”	29/05
“Klabin doa 8 mil máscaras cirúrgicas descartáveis para os municípios de Rio Branco do Ivaí e Grandes Rios”	29/05
"Klabin conclui obras da terceira faixa em trecho urbano na PR-160”	04/06
“Klabin apoia prefeituras paranaenses na desinfecção de vias públicas com Hipoclorito de Sódio”	16/06
"Klabin adota medidas de prevenção ao meio ambiente no Projeto Puma II”	18/06

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.

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In the period between January and June of 2020, it was a highlight in press the demand of labor force in the Project Puma II. Social Responsibility and Community Affairs Manager Uilson Paiva and Human Resources consultant Miguel Castilho went to radio programs to explain the prioritization of local labor force and job vacancies advertised via Agência do Trabalhador (Paraná State Worker Agency). Uilson Paiva and Industrial Director Arthur Canhisares also spoke about Klabin's efforts in the fight against Covid-19 and the inauguration of the Campaign Hospital in Telêmaco Borba:

ENTREVISTAS	DATA
Rádio T – Entrevista Uilson Paiva e Miguel Castilho sobre priorização da mão de obra local e oferta de vagas via Agência do Trabalhador	11/fev
Rádio Nova Mensagem – Entrevista Uilson Paiva e Miguel Castilho sobre priorização da mão de obra local e oferta de vagas via Agência do Trabalhador	11/fev
Rádio Vale do Tibagi – Entrevista Uilson Paiva e Miguel Castilho sobre priorização da mão de obra local e oferta de vagas via Agência do Trabalhador	11/fev
Rádio Massa – Entrevista Arthur Canhisares sobre as reformas realizadas no Hospital Regional de Telêmaco Borba para auxílio no combate do Covid-19	20/abr
Rádio T – Entrevista Uilson Paiva sobre a conscientização sobre a prevenção ao Covid-19	21/maio
Rádio Placar – Entrevista Arthur Canhisares sobre as reformas realizadas no Hospital Regional de Telêmaco Borba para auxílio no combate do Covid-19	10/jun

Media Monitoring (clipping)

Everything that is divulged on the media is monitored daily – news classification by themes: the ones that mention Project Puma II directly, the ones that 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 January to June in annex.

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 designated R\$ 2 million to the fight against Covid-19 in Paraná State. The actions focus on the health and social assistance areas, in

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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). More information about the Campaign Hospital and general donations 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: <https://klabin.com.br/sala-de-noticias/press-release/doacoes-da-klabin-para-combater-a-covid-19-no-parana-somam-r-2-milhoes/>

Project Puma II and the pandemic

During the first semester of 2020, especially in the period between March and June, 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.

The Project Puma II constructions were interrupted by March 23, at the beginning of the pandemic scenario, when the workers stayed on paid leave in reason of the absence of clear guidelines in National and State level. However, after the protocol implementation by the State and Municipal Governments, there was a gradual recapture of the Project Puma II by April 16 – only remobilized workers from Ortigueira, Telêmaco Borba and Imbaú were allowed at first. Klabin started the remobilization of the other workers inchmeal and aligned with the Covid-19 Inter Sectorial Committee and Ortigueira City Hall. The recapture of Puma II was based on the State and Municipal decrees that stablish the industrial sector and civil constructions as essential.

For the work continuity and workers remobilization, 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 are examples of the protocol actions. A detailed and illustrated report of the protocol and communication actions are available in annex.

The protocol is applied in the workers' residential, restaurants and transportation (buses and vans). In addition, there is a communication campaign in course to orientate about Covid-19 prevention, including exclusive radio and WhatsApp messages. These measures are available in the report in annex as well. More information about the actions in the following link: <https://klabin.com.br/sala-de-noticias/press-release/klabin-exige-testes-de-covid-19-na-cidade-de-origem-dos-trabalhadores-do-puma-ii/>

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.

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.

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

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MONITORING SITES	RECEPTOR	UNITS	LIMITS NBR 10151		LIMITS IFC Guidelines		LIMITS Adopted by the Project		MEASURED VALUE			
			DAYTIME	NIGHTTIME	DAYTIME	NIGHTTIME	DAYTIME	NIGHTTIME	January/2020		March/2020	
									DAYTIME	NIGHTTIME	DAYTIME	NIGHTTIME
P1	Residential	dB	55	50	55	45	55	45	68	62	36	47
P2	Residential	dB	55	50	55	45	55	45	50	46	58	42
P3	Industrial	dB	70	60	70	70	70	60	71	67	63	56
P4	Industrial	dB	70	60	70	70	70	60	56	48	57	46
P5	Residential	dB	55	50	55	45	55	45	62	60	47	45

Values above the limit	
P1	Local agricultural activitie/ Sound pressure contribution of roads
P2	Local agricultural activitie/ Sound pressure contribution of roads
P3	Sound pressure contribution of roads
P4	Not applicable
P5	Sound pressure contribution of roads

The Brazilian limits were revised of sites 3 (area classified as industrial) and 5 (mixed area predominantly residential), according to the predominant land use.

The Attach 1 presents results of noise monitoring

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.

* *Period from January to June*

		Point Source Air Emissions Monitoring¹:		
<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>
Recovery Boiler				
Continuous monitoring - On Line	PM	mg/Nm ³	100	51,8
Continuous monitoring - On Line	SO ₂	mg/Nm ³	100	1,1
Continuous monitoring - On Line	NO _x	mg/Nm ³	470	118,6
Continuous monitoring - On Line	TRS	mg/Nm ³	15	0,5
Continuous monitoring - On Line	H ₂ S	mg/Nm ³	-	-
Biomass Boiler				
Continuous monitoring - On Line	PM	mg/Nm ³	130	22,1
Continuous monitoring - On Line	SO ₂	mg/Nm ³	-	24,3
Continuous monitoring - On Line	NO _x	mg/Nm ³	650	165,6
Continuous monitoring - On Line	TRS	mg/Nm ³	-	3,05
Continuous monitoring - On Line	H ₂ S	mg/Nm ³	-	-
Lime Kiln I				
Continuous monitoring - On Line	PM	mg/Nm ³	100	10,1
Continuous monitoring - On Line	SO ₂	mg/Nm ³	-	149,3
Continuous monitoring - On Line	NO _x	mg/Nm ³	470	282,2
Continuous monitoring - On Line	TRS	mg/Nm ³	30	10,7
Lime Kiln II				
Continuous monitoring - On Line	PM	mg/Nm ³	100	9,8
Continuous monitoring - On Line	SO ₂	mg/Nm ³	-	75,5
Continuous monitoring - On Line	NO _x	mg/Nm ³	470	142,5
Continuous monitoring - On Line	TRS	mg/Nm ³	30	9,6

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.

¹ Provide a scaled facility map showing the precise location of all discharge points.

Parameter	Unit	PUMA/Klabin Pulp Mill's performance ²	IFC guideline ³
Amount of produced pulp	ADt	808.959,7	
TSP	kg/ADt	0,2	0,5
SO ₂ as S	kg/ADt	0,1	0,4
NO _x as NO ₂	kg/ADt	0,8	1,5
TRS as S	kg/ADt	0,01	0,2

4.3. Ambient Air

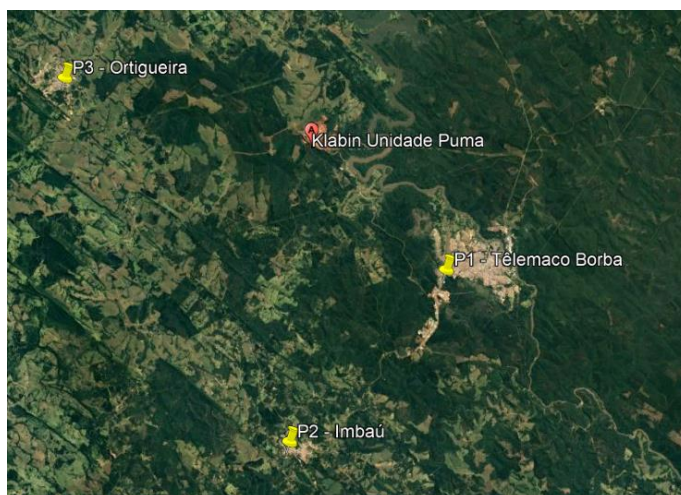
Ambient Air refers to any unconfined portion of the atmosphere and is also termed open air or surrounding air. Ambient monitoring is carried out for a variety of reasons, including assessment of environmental problems and evaluation of interventions.

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)
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



² Report average figures for the reporting period.

³ IFC. 2007: Environmental, health and safety guidelines for pulp and paper mills. Page 30.

Ambient Air Parameters	Averaging Period	Brazil Ambient Air Quality Limits (CONAMA 491/2018)	Measured value during the reporting period (Brazilian Units) (P1 - TB)	Measured value during the reporting period (Brazilian Units) (P2 - Imbaú)	Measured value during the reporting period (Brazilian Units) (P3 - Ortigueira)
			Date of monitoring 03/16 to 03/22/2020	Date of monitoring 03/23 to 03/28/2020	Date of monitoring 03/10 to 03/15/2020
Nitrogen Dioxide (NO ₂)	1-hour	260 µg/m ³	<LOD	<LOD	<LOD
Sulfur Dioxide (SO ₂)	24-hour	125 µg/m ³	6,72 µg/m ³	4,18 µg/m ³	<LOD
Particulate Matter (PM ₁₀)	24-hour	120 µg/m ³	18,68 µg/m ³	55,92 µg/m ³	34,72 µg/m ³
Particulate Matter (PM _{2.5})	24-hour	60 µg/m ³	10,8 µg/m ³	17,08 µg/m ³	15,12 µg/m ³
Total Suspended Particles (TSP)	24-hour	240 µg/m ³	46,56 µg/m ³	157,7 µg/m ³	63,92 µg/m ³
TRS	1-hour	Not applicable	<LOD	<LOD	<LOD
Ozone (O ₃)	8-hour	140 µg/m ³	41,62 µg/m ³	42.22 µg/m ³	47,64 µg/m ³
Carbon Monoxide (CO)	8-hour	9 ppm	0	0	0
Is odor acceptable? Y/N	Not applicable	Not applicable	Y	Y	Y

The Attach 2 presents results of ambient air quality monitoring

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).

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.⁴

⁴ Please provide a scaled map showing the precise location of all monitoring points.

* *Period from January to June*

<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 (please indicate units)</i>
Fortnightly	pH	-	6-9	6,36
Fortnightly	Flow	m ³ /h	7400	4915
Fortnightly	Temperature increase	°C	Max. 40	32,1
Fortnightly	COD	mg/L	230	142,17
Fortnightly	BOD ₅	mg/L	30	22,48
Fortnightly	AOX	mg/L	-	0,0405
Fortnightly	Total Phosphorus	mg/L	0,30	0,20
Fortnightly	Total Nitrogen Ammoniacal	mg/L	20	1,53
Fortnightly	TSS	mg/L	100	37,98
Semiannual	Dioxins/furans	µg/L	-	0,00000023

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 performance⁵	IFC guideline (bleached pulp)⁶	IFC guideline (unbleached pulp)⁷
Amount of produced pulp (unbleached)	ADt			
Amount of produced pulp (bleached)	ADt	808.959,7		
Flow ⁸	m ³ /ADt	26,10	50	25
pH	-	6,36	6-9	6-9
TSS	kg/ADt	0,99	1,5	1
COD	kg/ADt	3,71	20	10
BOD ₅	kg/ADt	0,59	1	0.7
AOX	kg/ADt	0,011	0,25	-
Total N ⁹	kg/ADt	0,04	0,2	0.2
Total P	kg/ADt	0,01	0,03	0.02

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

⁵ Report average figures for the reporting period.

⁶ IFC. 2007: Environmental, health and safety guidelines for pulp and paper mills. Pages 26 and 29.

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.

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.

MONITORING SITES	COORDINATES	
	UTM X (m)	UTM Y (m)
P1 – Upstream	530.328	7.318.535
P2 - Downstream	529.759	7.319.120



Ambient Surface Water Monitoring Points ¹⁰ :								
Sample Frequency		Units	Numerical Standard Adopted by the Project	CONAMA 357/2005 (Classe 2)	PUMA/Klabin's Performance			
					February/2020		May/2020	
					Upstream	Downstream	Upstream	Downstream
Fortnightly	pH	-	6-9	6-9	7,96	7,37	7,27	7,19
Fortnightly	COD	mg/L	not applicable	not applicable	<50	<50	<50	<50
Fortnightly	Dissolved Oxygen	mg/L	≥ 5	≥ 5	6,71	6,56	5,53	5,25
Fortnightly	BOD	mg/L	5	5	<2,79	<2,79	<2,79	<2,79
Fortnightly	Total Phosphorus	mg/L	0,05	0,05	<0,013	<0,013	<0,013	<0,013
Fortnightly	TDS	mg/L	500	500	52	54	106	98
Fortnightly	Temperature	°C	not applicable	not applicable	27,02	26,83	20,83	20,43

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

Please provide summary of groundwater sampling results at the pulp mill site during the reporting period and compare them to Brazilian groundwater limits.¹¹

Period from January to June

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	805	577	29500	213	2380	1480	Dry	1530	517
Antimônio	5	µg/L	<5	< 5,00	< 5,00	<5	<5	<5	Dry	<5	<5
Arsênio	10	µg/L	<8	< 8,00	< 8,00	<8	<8	<8	Dry	<8	<8
Bário	700	µg/L	<1	31,7	648	61,2	51,1	22,9	Dry	18,3	74,1
Boro	500	µg/L	183	<5	24,4	<5	<5	<5	Dry	<5	<5
Cádmio	5	µg/L	<1	<1	<1	<1	<1	<1	Dry	<1	<1
Chumbo	10	µg/L	<10	<10	<10	<10	<10	<10	Dry	<10	<10
Cobalto	70	µg/L	<5	<5	<5	<5	<5	<5	Dry	<5	<5
Cobre	2000	µg/L	<5	<5	43,7	<5	<5	<5	Dry	<5	<5
Cromo	50	µg/L	<5	<5	28,7	<5	<5	<5	Dry	<5	<5
Ferro	2450	µg/L	2080	863	421	221	1640	3590	Dry	2360	938
Manganês	400	µg/L	15,1	28,3	163	13,8	231	104	Dry	68,2	34,2
Mercurio	1	µg/L	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	Dry	<0,2	<0,2
Molibdênio	70	µg/L	<5	<5	<5	<5	<5	<5	Dry	<5	<5
Níquel	20	µg/L	<6	< 6,00	17,8	<6	<6	<6	Dry	<6	<6
Nitrato (como N)	10000	µg/L	110	665	84	<50	<50	167	Dry	136	1010
Prata	50	µg/L	<5	<5	<5	<5	<5	<5	Dry	<5	<5
Selênio	10	µg/L	<7	<7	<7	<7	<7	<7	Dry	<7	<7
Zinco	1050	µg/L	26	8,74	155	7,96	28,5	12	Dry	8,02	15
Benzeno	5	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
Estireno	20	µg/L	<0,6	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
Etilbenzeno	300	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
Tolueno	700	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
Xilenos	500	µg/L	<1,5	<1,5	<1,5	<1,5	<1,5	<1,5	Dry	<1,5	<1,5
Benzo(a)antraceno	1,75	µg/L	<0,005	< 0,005	< 0,005	<0,005	<0,005	<0,005	Dry	<0,005	<0,005
Benzo(a)pireno	0,7	µg/L	<0,005	< 0,005	< 0,005	<0,005	<0,005	<0,005	Dry	<0,005	<0,005
Dibenzo(a,h)antraceno	0,18	µg/L	<0,005	< 0,005	< 0,005	<0,005	<0,005	<0,005	Dry	<0,005	<0,005
Fenantreno	140	µg/L	<0,005	< 0,005	< 0,005	<0,005	<0,005	<0,005	Dry	<0,005	<0,005
Indeno(1,2,3,cd)pireno	0,17	µg/L	<0,005	< 0,005	< 0,005	<0,005	<0,005	<0,005	Dry	<0,005	<0,005
Naftaleno	140	µg/L	<0,005	< 0,005	< 0,005	<0,005	<0,005	<0,005	Dry	<0,005	<0,005
MonoClorobenzeno	700	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
1,2-Diclorobenzeno	1000	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
1,4-Diclorobenzeno	300	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
Triclorobenzeno	20	µg/L	<1,5	<1,5	<1,5	<1,5	<1,5	<1,5	Dry	<1,5	<1,5
Hexaclorobenzeno	1	µg/L	<0,001	< 0,001	< 0,001	<0,001	<0,001	<0,001	Dry	<0,001	<0,001
1,1-Dicloroetano	280	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
1,2-Dicloroetano	10	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
1,1,1-Tricloroetano	280	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
Cloreto de Vinila	5	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
1,1-Dicloroetano	30	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
1,2-Dicloroetano (cis+trans)	50	µg/L	<1,0	<1,0	<1,0	<1,0	<1,0	<1,0	Dry	<1,0	<1,0
Tricloroetano	70	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
Tetracloroetano	40	µg/L	<5,0	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
Diclorometano	20	µg/L	<5,0	<5,0	<5,0	<5,0	<5,0	<5,0	Dry	<5,0	<5,0
Clorofórmio	200	µg/L	<1,0	<1,0	<1,0	<1,0	<1,0	<1,0	Dry	<1,0	<1,0
Tetracloro de Carbono	2	µg/L	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	Dry	<0,5	<0,5
2-Clorofenol	10,5	µg/L	<0,1	< 0,1	< 0,1	<0,1	<0,1	<0,1	Dry	<0,1	<0,1
2,4-Diclorofenol	10,5	µg/L	<0,1	< 0,1	< 0,1	<0,1	<0,1	<0,1	Dry	<0,1	<0,1
3,4-Diclorofenol	10,5	µg/L	<0,1	< 0,1	< 0,1	<0,1	<0,1	<0,1	Dry	<0,1	<0,1
2,4,5-Triclorofenol	10,5	µg/L	<0,1	< 0,1	< 0,1	<0,1	<0,1	<0,1	Dry	<0,1	<0,1
2,4,6-Triclorofenol	200	µg/L	<0,1	< 0,1	< 0,1	<0,1	<0,1	<0,1	Dry	<0,1	<0,1
2,3,4,5-Tetraclorofenol	10,5	µg/L	<0,1	< 0,1	< 0,1	<0,1	<0,1	<0,1	Dry	<0,1	<0,1
2,3,4,6-Tetraclorofenol	10,5	µg/L	<0,1	< 0,1	< 0,1	<0,1	<0,1	<0,1	Dry	<0,1	<0,1
Pentaclorofenol	9	µg/L	<0,2	< 0,2	< 0,2	<0,2	<0,2	<0,2	Dry	<0,2	<0,2
Cresóis Totais	175	µg/L	<0,3	< 0,3	< 0,3	<0,3	<0,3	<0,3	Dry	<0,3	<0,3
Fenol	140	µg/L	<0,1	< 0,1	< 0,1	0,22	<0,1	131	Dry	<0,1	0,65
Di(2-etilhexil)ftalato	8	µg/L	<0,2	< 0,2	< 0,2	<0,2	<0,2	<0,2	Dry	<0,2	<0,2
Dimetil Ftalato	14	µg/L	<0,2	< 0,2	< 0,2	<0,2	<0,2	<0,2	Dry	<0,2	<0,2
Aldrin + Dieldrin	0,03	µg/L	<0,002	< 0,002	< 0,002	<0,002	<0,002	<0,002	Dry	<0,002	<0,002
Endrin	0,6	µg/L	<0,001	< 0,001	< 0,001	<0,001	<0,001	<0,001	Dry	<0,001	<0,001
p,p'-DDT + p,p'-DDD + p,p'-DDE	2	µg/L	<0,003	< 0,003	< 0,003	<0,003	<0,003	<0,003	Dry	<0,003	<0,003
HCH Beta	0,07	µg/L	<0,001	< 0,003	< 0,001	<0,001	<0,001	<0,001	Dry	<0,001	<0,001
Lindano (g-BHC)	2	µg/L	<0,001	< 0,001	< 0,001	<0,001	<0,001	<0,001	Dry	<0,001	<0,001
PCB's (soma 7/lista holandesa)	3,5	µg/L	<0,007	< 0,007	< 0,007	<0,007	<0,007	<0,007	Dry	<0,007	<0,007

¹¹ Please provide a map showing the precise location of all ground water monitoring points.

Concentration of aluminium was attributed to volcanic lithologies of the region. The concentration of iron above the references in the witness well explain the deviation in PM 06. The deviations of lead was not attributed to mill process contribution.

Semi-annual monitoring, carried out in February 2020

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
	January	February	March	April	May	June		
Sand	241,0	316,9	302,1	358,1	338,0	248,5	Dumpster	Recycling
Biomass	0,0	193,7	143,9	1415,8	472,5	117,8	Dumpster	Composting
Sweep Biomass Wood Stock	664,3	756,8	962,5	1233,5	1230,1	806,2	Dumpster	Composting
Lime Gray	380,3	206,5	115,3	369,6	558,6	1412,7	Dumpster	Agricultural and forestry use
Sulphate Ashes	169,8	315,4	0,0	0,0	0,0	0,0	Dumpster	Agricultural and forestry use
Biomass ash	1563,1	1670,4	1384,5	1251,8	1295,4	1676,3	Dumpster	Agricultural and forestry use
Burnt Lime	129,0	133,8	28,2	82,0	118,9	62,0	Dumpster	Agricultural and forestry use
Dregs	1071,1	1064,2	1031,9	1108,4	1122,4	1253,6	Dumpster	Agricultural and forestry use
Grits	98,0	97,4	73,0	71,1	62,5	108,4	Dumpster	Agricultural and forestry use
Caustic Mud	336,5	207,9	258,1	81,9	133,7	242,9	Dumpster	Agricultural and forestry use
Sand Sludge - PMAD	92,8	103,2	78,3	78,0	97,9	97,5	Dumpster	Recycling
Primary Sludge (Fiber Disposal)	1194,2	777,8	1355,3	831,5	1091,7	1609,7	Dumpster	Recycling
Secondary Sludge (Biological)	6225,3	4951,1	3565,7	5468,6	5051,1	4870,4	Dumpster	Composting
Tertiary Sludge (Chemical)	2265,1	2739,5	1915,1	2736,1	2204,6	1975,4	Dumpster	Agricultural and forestry use
Pinus Reject - Stick	39,4	56,9	77,8	86,0	178,5	80,2	Dumpster	Energy use
Pinus Reject - Knot	15,4	15,2	2,1	11,0	10,1	18,1	Dumpster	Energy use
Eucalyptus Reject - Toothpick	24,9	57,5	142,5	60,3	87,5	117,5	Dumpster	Energy use
Eucalyptus Tailings - Knot	42,9	25,9	21,2	22,0	43,6	25,5	Dumpster	Energy use
Wood	8,4	9,5	8,0	8,4	9,5	5,3	Dumpster	Reuse and Energy use
Metal	14,5	14,7	7,4	14,5	14,7	13,8	Dumpster	Recycling
Organic waste	0,4	0,4	0,7	0,4	0,4	7,1	Dumpster	Recycling
Paper	16,4	14,2	12,5	16,4	14,2	13,5	Dumpster	Recycling

Plastic	6,9	6,0	9,0	6,9	6,0	9,1	Dumpster	Recycling
Junk Waste	36,7	24,4	11,8	36,7	24,4	24,2	Dumpster	Landfill
Ground	3,8	0,0	57,0	3,8	0,0	0,0	Dumpster	Reuse
Inert / Concrete / Rubble	0,0	4,5	7,9	0,0	4,5	0,0	Dumpster	Reuse

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
	January	February	March	April	May	June		
Non-recyclable	0,43	0,21	0,43	0,21	0,21	0,21	Dumpster	Private landfill
Recyclable	0,83	0,41	0,83	0,41	0,41	0,41	Dumpster	Recycling

GENERATION OF SOLID WASTE – PUMA II PROJECT								
Solid Waste Type	Month Quantity (tonne)						Method of Storage, Handling and/or Treatment	Method of Recycling, Reuse or Disposal ²⁵
	January	February	March	April	May	June		
Organic	42,90	46,50	55,02	16,56	24,45	76,54	Dumpster	Composting
Non-recyclable	12,60	11,30	16,45	4,44	8,70	15,45	Dumpster	Private landfill
Paper	12,10	24,40	24,95	8,02	14,17	18,70	Dumpster	Recycling
Plastic	14,40	15,80	21,87	7,18	14,39	19,16	Dumpster	Recycling
Metal	5,00	17,00	5,50	3,31	10,92	9,38	Dumpster	Recycling
Wood	68,70	83,70	110,32	25,66	67,71	97,27	Dumpster	Biomass
Glass	0,10	0	0	0	0	0,12	Steel Drum	Recycling
Concrete	1200,30	1848,70	1460,52	1128,80	1596,71	602,60	Dumpster	Reuse

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 materials¹², 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

¹² Hazardous materials include ignitable, reactive, flammable, radioactive, corrosive and toxic substances.

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 division¹³</i>	<i>Generation January-June 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	0,51	50,00
PPE's IBAMA n° 15 02 02	9	0,09	
Fluorescent lamps IBAMA n° 20 01 21	2	0,22	
Flammable Liquids (Paints, Solvents, Glues and Fuel) IBAMA n° 20 01 13	3	0,22	
Stacks IBAMA n° 16 06 04	6	0,13	
Various Contaminated Solids (Tows, Cloths, Filters And Etc) IBAMA n° 15 02 02	9	4,71	
Soil Contaminated with Oil and Grease IBAMA n° 19 13 01	9	0,18	
Electronic Scrap IBAMA n° 16 02 16	6	0,14	

<i>Parameters (Same Parameters as Above)</i>	<i>PUMA/Klabin's Method of Storage, Handling and/or Treatment¹⁴</i>	<i>PUMA/Klabin's Method of Disposal¹⁵</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

¹³ 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.)

¹⁴ 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.

¹⁵ Report on method of disposal for hazardous waste used only.

<i>Parameters (Same Parameters as Above)</i>	<i>PUMA/Klabin's Method of Storage, Handling and/or Treatment¹⁴</i>	<i>PUMA/Klabin's Method of Disposal¹⁵</i>
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 division¹⁶</i>	<i>Generation January-June 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 Treatment¹⁷</i>	<i>PUMA/Klabin's Method of Disposal¹⁸</i>
Hazardous Waste Produced		
Miscellaneous hazardous materials (IBAMA nº 17 09 03)	Steel Drum	Industrial Solid Waste Landfill

¹⁶ 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.)

¹⁷ 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.

¹⁸ Report on method of disposal for hazardous waste used only.

Hazardous Materials Management Summary Puma II			
<i>Hazardous Material (Name and Number UN/CAS)</i>	<i>Class or division¹⁹</i>	<i>Generation January-June 2020 (tonne)</i>	<i>Maximum Quantity Stored on Site (tonne)</i>
Hazardous Waste Produced			
Miscellaneous hazardous materials (IBAMA nº 17 09 03) -	9	44,80	50,00

<i>Parameters (Same Parameters as Above)</i>	<i>PUMA/Klabin´s Method of Storage, Handling and/or Treatment²⁰</i>	<i>PUMA/Klabin´s Method of Disposal²¹</i>
Hazardous Waste Produced		
Miscellaneous hazardous materials (IBAMA nº 17 09 03)	Steel Drum	Industrial Solid Waste Landfill

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 (No. hectares)	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)
Plantation under proprietary management	Klabin	6.120	337.320	46,87%	43,35%	FM and CoC
	Vale do Corisco	0	43.514	55,25%	54,09%	FM and CoC
Plantation under Third Party management	Figueira	0	28.402	16,81%	15,20%	FM and CoC
	Forest Fostering Program	2.402	38.616	64,71%	23%	FM and CoC
Total		8.522	447.852			

¹⁹ 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.)

²⁰ 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.

²¹ Report on method of disposal for hazardous waste used only.

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

	Quantity	Unit
From plantations managed by Klabin – FSC certified	2.223.655,38	Ton
From plantations managed by Klabin – not FSC certified	103.124,30	Ton
From third parties – FSC certified	508.449,85	Ton
From third parties – not FSC certified	387.342,65	Ton
Number of third parties	133	Un.

Please report any significant fires that have occurred.

A total of 84,8 hectares of forests were impacted by fires between January and June 2020.

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

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

<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>	196	Men: 141 Female: 55	Management level: 01 female in coordination level. Workers:
<u>Contracted employees</u>	10 (PJ)	Men: 10 Female: 0	Management level: 0 Workers:

Worker’s organization

<i>Workers organization</i>	<i>Description</i>
<u>Trade unions or worker organizations/committee in workplace</u>	(Name and description of trade union or worker organization) SINTRAPAV (Sindicato dos Trabalhadores nas Indústrias de Construção Pesada)

<i>Workers organization</i>	<i>Description</i>
	SINTRACON (Sindicato dos Trabalhadores da Construção Civil)
<u>Meetings with workers' organization representatives in workplace</u>	<ul style="list-style-type: none"> • Number of meetings: 06 • Name of Trade union or worker organization: Sintrapav e Sintracon • Frequency of meetings: Whenever required by any of the parts.
<u>Collective bargaining agreements</u>	<ul style="list-style-type: none"> • Agreement signed on: An agreement was reached. Signatures are expected by the 4th week in July/2020. • Parties signing agreement: Sintrapav, Sintracon and the respective Contractors • Number of employees covered under collective bargaining agreement: 90% of total

Workers' grievances

Type of grievance	Received		Investigated		Resolved	
	Direct employees	Contracted employees	Direct employees	Contracted employees	Direct employees	Contracted employees
Overtime	N/A	10	N/A	10	N/A	10
Wages	N/A	02	N/A	02	N/A	02
Harassment	N/A	02	N/A	02	N/A	02
Sexual harassment	N/A	01	N/A	01	N/A	01
<i>Add rows as necessary</i>						
. Oct/19 to Jun/20						
. N/A – Not Applicable						

- 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.
No.

Local workforce development

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.
 - Telêmaco Borba; 1.733
 - Ortigueira: 557
 - Imbaú: 387
 - Other cities from Paraná: 1.160
- Community member enrolled/trained (#)
No training is being carried out due to the restrictions imposed by COVID/19
- Scholarships awarded (#)
Total of 68.
37 for students enrolled in the Mechanical Technical Course in Ortigueira.
31 for students enrolled in the Pulp and Paper Technical Course in Telêmaco Borba.

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 Anthropic Monitoring Committee, etc.

Anthropic Monitoring Program and Committee

The **Anthropic 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 Anthropic 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 Anthropic 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 Anthropic 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 January to June of 2020, there were 3 Anthropic Monitoring Committee meetings, as described below:

<i>Date</i>	<i>Description</i>	<i>Public (Including Klabin’s staff)</i>	<i>Location</i>
01/22/20	Anthropic Monitoring Committee Meeting	25	Puma Mill – Ortigueira
02/19/20	Anthropic Monitoring Committee Meeting	18	Puma Mill – Ortigueira
06/25/20	Anthropic Monitoring Committee Meeting	26	Remote Meeting (via Microsoft Teams)

The first meetings 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.

01/22/2020 Meeting – Puma Mill – Ortigueira:

The first meeting in 2020. About 25 people were present at the meeting, such as municipal secretariats and officials of Ortigueira, Telêmaco Borba and Imbaú City Halls, Civil and Militar Police Forces, Health and Educational Regional Nucleolus and members of Telêmaco Borba City Council.

The meeting consisted on a summary of the 2019 and a data presentation comparing and analyzing data of each month in the 5 macro themes of each Municipality (health, security, education, finances and social assistance). Edemilson Pukanski, Secretariat of Health in Telêmaco Borba, expressed his concern about the number of people seeking for the public health service and related it to the Project. In spite of the allegations, this fact might be in reason of an indirect impact caused by the increase of job offers in other sectors, such as commerce and services. The case will be evaluated within the scope of the Committee.

No other significant changes observed, although there was a debate about educational issues in the municipalities concerning two public schools and changes in its operations.

Meeting's Presence List (not considering other 2 Klabin's employees) and report – in annex.

02/19/2020 Meeting – Puma Mill – Ortigueira:

About 18 people were present at the meeting, such as municipal secretariats and officials of Ortigueira, Telêmaco Borba and Imbaú City Halls and members of Paraná State Health Secretariat (Health Regional Nucleolus).

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. There was a debate about the meetings' periodicity and a presentation of the Health Regional Nucleolus about the concern regarding *dengue* cases in Paraná.

Meeting's Presence List (not considering other 3 Klabin's employees) and report – in annex.

06/25/2020 Meeting – Puma Mill – Ortigueira:

In the first remote meeting, about 26 people logged in, such as municipal secretariats and officials of Ortigueira, Telêmaco Borba and Imbaú 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. In addition, the Committee decided that the remote meeting model would continue during the pandemic scenario.

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

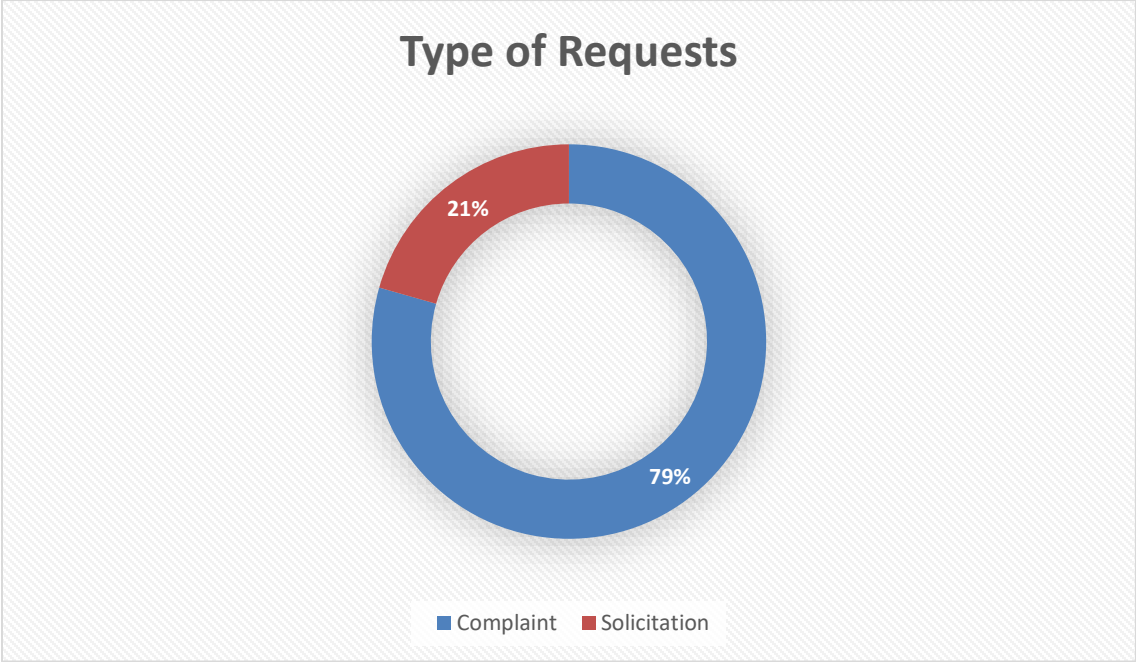
The ombudsman consists in a group of communication tools in which the objective is to develop the company's dialogue and relation with the population of its area of influence – considering the Puma and Monte Alegre mills, Forestry and the projects (such as Puma II).

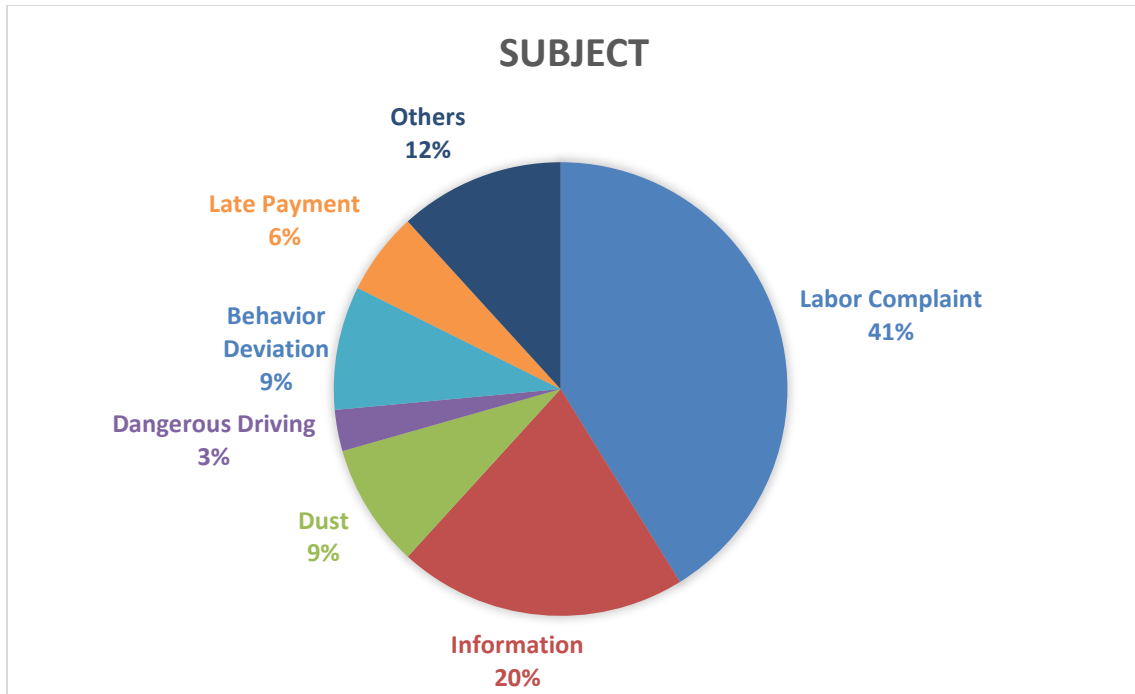
The requests received by e-mail (faleklabinpr@klabin.com.br), phone calls (0800 728 0607) or Social Media (Facebook and WhatsApp) are monitored periodically in order to provide quick response and avoid conflicts of information.

Complaints related to Project Puma II received from the community from January 1 to June 30, 2020:

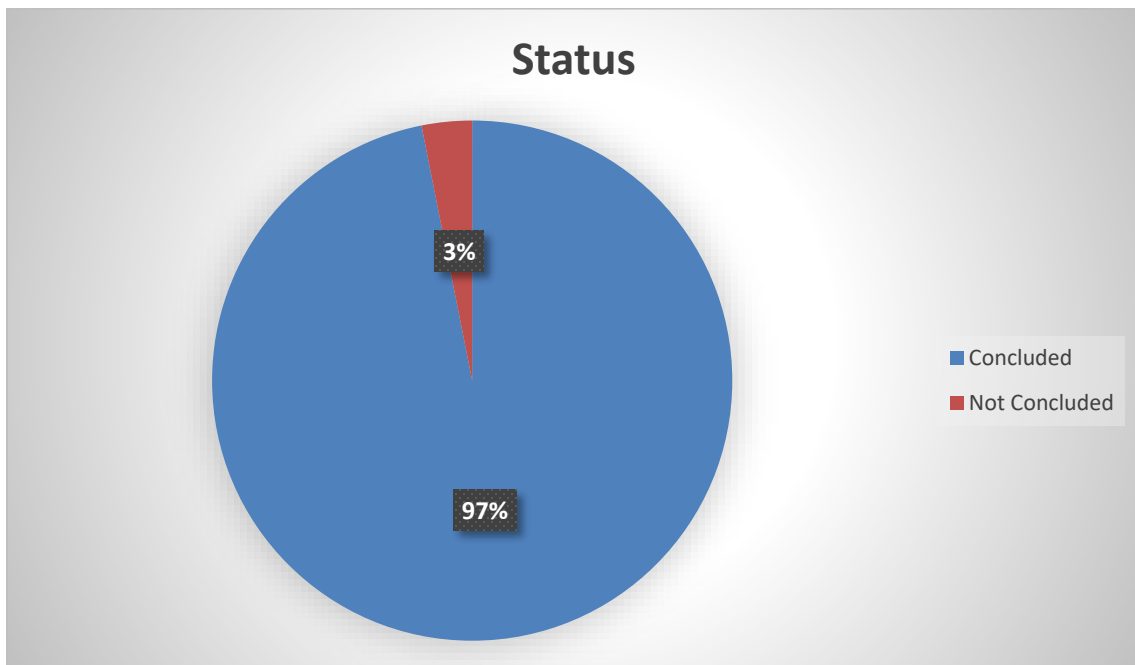
<i>Channel</i>	<i>Total</i>
Phone Call – 0800 (toll-free)	34

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.



There is only one demand not concluded, related to a silt up situation. Klabin's ambience team is handling the situation along with the environmental sector of the Municipality and others involved.

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 in March, 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 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 2019, 30.000 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 – its distribution continued in 2020.

In this last edition, there is a special attention to the Project Puma II, the largest private investment in Paraná's history, considering its big repercussion. There is a summary of the project, with information about its development, operation, job information and opportunities for local labor force qualification.

PDF Version in annex.

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.

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.

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. First 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.

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.

The 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.

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 e 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.

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, 15 from TI Queimadas and 9 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 – evidence in annex.

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 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.

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.

• 6 DATA INTERPRETATION AND CORRECTIVE MEASURES

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 activities and Sound pressure contribution of roads	The monitoring will be done during the annual shutdown	October 2020	2100	-

• 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.

Item #	Basis of Applicable Requirements	Key Aspect	Key Corrective Actions	Evidence / Product	Priority	Deadline for Completion	Progress Status
6 11 6		Operating Procedures and Techniques	Review land acquisition procedure to include risk mitigating measures when the area is located within a predefined buffer of an indigenous or	Updated land acquisition procedure.	CLOSED.	Six Months After Closing	CLOSED.

			traditional community.				
8 2 8		Organizational Capacity and Competency	Analyze the social team's staffing needs (e.g. projected workload, team skills set, etc.) for the next five years to ensure it is adequately staffed and has the appropriate expertise.	Analysis of social's team workload and updated staffing plan.	CLOSED.	Three Months After Closing	CLOSED.
13 14 13		Management Programs and ESMS	Present updated social baseline for PUMA II and associated Social Investment Plan activities.	Scaled/Updated Social Investment Plan	HIGH	Three months after Closing	In partnership with Fundación Avina, Interação Urbana, Cidadela Editora, Diferencial Pesquisas and IPARDES, Klabin developed a Puma II social baseline for 12 municipalities of its area of influence, through the application of the Social Progress Index (SPI) methodology. The report is in its last phase of elaboration and the final version is due to July 31 th . SPI Final presentation in annex.
18 6 18		HR Management (Contractors Management)	Develop disciplinary procedures, and procedures to respond and investigate sexual harassment and gender-based	Documented procedures Communicating/training plan Evidence of conformation	HIGH	One Month after Closing	Social Responsibility and Community Relations team is aligned with the Integrity team to work along in the documented procedures. Integrity Channel's

			<p>violence (GBV) complaints. Assure mandatory training for contractors' workers and management. Assign a team of qualified individuals to handle sexual harassment and GBV complaints using a survivor-centered approach and ensuring confidentiality.</p>	<p>of a dedicated team to investigate/ follow-up sexual harassment/GBV incidents.</p>			<p>detailed procedures in annex.</p> <p>A GBV Prevention Plan's already approved by the company's board. Its Communication/Training Plan as well. One of the actions in the GBV Prevention Plan consists on the training of a dedicated team to investigate the incidents. The two teams are also working along in this theme.</p> <p>Klabin has just signed a partnership with the consulting company, the GBV Prevention Plan actions will start by the end of July.</p> <p>GBV Prevention Plan, evidence of GBV thematic communication and actions in march and consulting company's technical proposal in annex.</p>
26 9 24		HR Management (Gender Based Violence and Sexual Harassment)	<p>Engage the services of specialized organization(s) to implement GBV prevention programs for target groups (children, adolescent groups, sex workers, etc.) in the Project area and in hotspots along transportation</p>	<p>Engagement with third-party GBV specialized organization(s) and/or networks.</p>	HIGH	One month after Closing	<p>Topic covered by the GBV Prevention Plan in annex.</p> <p>A consulting company will work along with Klabin to engage third-party GBV specialized organizations and/or network. Technical proposal of consulting company in annex.</p>

			<p>corridors.</p> <p>Identify, across the Project's area of influence, gaps in psychosocial, medical, police and judicial response services to GBV survivors and present them to the Anthropic Monitoring Committee to provide support and continuously find ways of strengthening these services.</p>				
28 3 26		Human Resources	Confirm hiring of anthropologist to be in charge of the implementation of the Indigenous People action plan (PBAI).	TOR and contract of anthropologist.	CLOSED.	Three Months after Closing	CLOSED.
29 12 27		Organizational Capacity and Competency	Put in place communication/training to prevent discrimination and harassment of traditional groups and communities (indigenous and non-indigenous) by Klabin's and contractor's personnel engaged in PUMA II as done for PUMA I.	Anti-discrimination/anti-harassment campaign.	CLOSED.	Three Months after Closing	CLOSED.
30 13 28		Organizational Capacity and Competency	Strengthen communication/training regarding procedures of relationship with	Updated communication/training plan.	MEDIUM	Three Months after Closing	Communication and training plan developed and approved – in annex. Due to the pandemic scenario,

			traditional groups and communities (indigenous and non-indigenous) – mainly for drivers and workers in patrimonial security.				the campaigns that were supposed to be held in march and april, and the event “Caminho Certo” were postponed. New dates to be defined. Workers’ Integration Welcome folders in annex.
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ENVIRONMENTAL AND SOCIAL ACTION PLAN - PUMA II						
No.	Aspect	Action	Deliverable	Expected delivery date	Responsible	Status
Assessment and Management of Environmental and Social Risks and Impacts						
1	Environmental and Social Assessment	Undertake new noise modelling by including additional traffic due to PUMA II, noise guarantees for PUMA II equipment, and new (measured) acoustic baseline.	Updated noise study.	Six Months After Closing	Henrique Luvison	Ongoing
2		Update air dispersion modelling considering recent changes in the Project's emission sources, documented (not guarantees) emission rates from Monte Alegre and PUMA I, emission performance guarantees for PUMA II, baseline concentrations of air pollutants, and validated meteorological data sets (wind speed/direction).	Updated air dispersion modelling.	Six Months After Closing		Ongoing
3		Taking into account 1 and 2 above, prepare a cumulative impact assessment report.	Cumulative Impact Assessment Report.	Six Months After Closing		Ongoing
4	Operating Procedures and Techniques	Update existing software (Plataforma Verde) or implement a new system to address PUMA II's unique waste management needs during construction and operation.	Updated or new PUMA II's waste management software.	One Month after Closing	Henrique Luvison	Ongoing
11	Management Programs and ESMS	Develop an ESH&S-MS Manual for Puma II including the structure, responsibilities and stakeholders for Puma II. Required sub-actions include: <ul style="list-style-type: none"> • Structure of the Integrated Management System, • Procedures set out in the Integrated Management System, • Evidence of training of the construction management team, and • Evidence of the implementation of the Integrated ESH&S-MS. 	Evidence of Integrated Management System (ESH&S-MS) implemented	Three Months After Closing		Closed
12	Management Programs and ESMS	Require PUMA II contractors and their sub-contractors to implement OHS and environmental programs consistent with PS1 .	Updated OHS and Environmental policies for contractors.	Two Months After Closing	Henrique Luvison	Closed
			Updated common OHS and environmental inspection checklists for contractors.			Closed
20	Numerical Standards (Air Emission, Effluent Emissions, Solid Wastes)	Develop a comprehensive Numerical Standards document with the standards for air emissions, effluents and waste generation that the project will adopt during its operation. Numerical standards should be the strictest among IFC EHS Guidelines, BAT 2001 and Brazilian regulations.	Numerical Standards document.	Three months before startup	Henrique Luvison	Ongoing
21		Update comparison of air emissions and effluents from PUMA II to Brazilian regulation and IFC EHS Guidelines to reflect the current Project configuration and design.	Comparison report based on updated design specifications.	Three months before startup		Ongoing
22		Adapt ambient water quality monitoring program to understand the the cumulative impact of effluents from Klabin's operations (PUMA I, PUMA II, Monte Alegre mills, Monte Alegre Forest Management Unit) in the Tibagi watershed.	Updated water monitoring program.	Six months after Closing and then ongoing monitoring		Ongoing

When applicable the Progress Status should include responsible of the conducted and pending actions.

• 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)²² applying the GHG Protocol methodology. Please report fossil and wood based emissions separately

- Annual report (Puma I)

²² Quantification of GHG emissions will be conducted by the client in accordance with internationally recognized methodologies and good practice, for example, the GHG Protocol.