Azul

EVALUATION OF CLIMATE AND ENVIRONMENTAL RISKS

Developed by:

H_2O Company

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AZUL LINHAS AÉREAS BRASILEIRAS

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SUMMARY

INTRODUCTION

This report compiles the analyzes and results of **Azul**'s Corporate Environmental Risk Assessment. The report presents the criteria, methodology and series of data considered in the analyses, and was developed by the consulting firm **H_2O Company** with the support of Azul's employees.

AZUL LINHAS AÉREAS BRASILEIRAS

Founded in 2008 by David Neeleman, **Azul** is the airline in Brazil with the highest number of departures and cities served, and the one that has grown the most in the country since the beginning of its operations. Headquartered in São Paulo (SP), the Company has the largest air network in the country, taking Brazilians to more than 110 national and international destinations.

With approximately one third of the Brazilian civil aviation market in terms of take-offs, Azul consolidates itself as the third largest airline in the country.

CORPORATE ENVIRONMENTAL RISKS

"Failure of climate responses" is the most impactful and second most likely long-term risk identified in the survey.

According to the Global Risks Report 2021, produced by the World Economic Forum, the most likely environmental risks for the next ten years include: extreme weather conditions, failures in climate responses and human-caused environmental damage. The most impacting environmental risks of the next decade include infectious diseases, flawed climate responses and other environmental risks.

The response of organizations to the effects of climate change on their business requires a robust risk management strategy. With this in mind, the present study aims to contribute to the incorporation of environmental risks in **Azul**'s strategic planning.

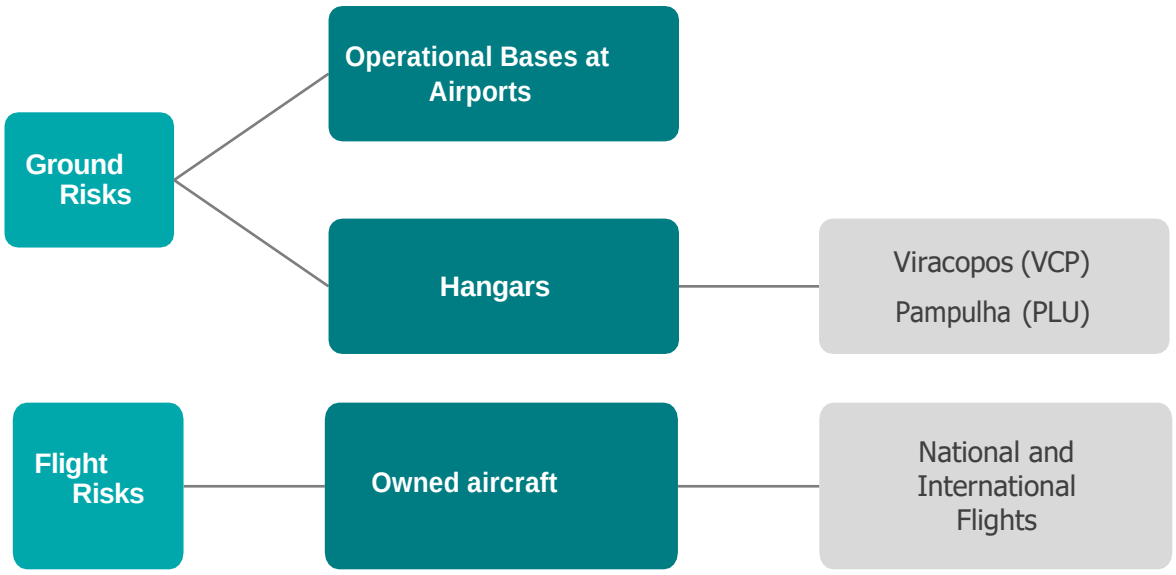
STUDY LIMITS

The organizational limits considered in Azul's environmental evaluation risk are presented below, as well as the environmental pillars selected for study.

OPERATING UNITS

Azul's corporate environmental risk evaluation was separated into two categories, according to the reality of the company's operation. **The Ground Risks** were evaluated, including the Operating Bases and Hangars and the **Flight Risks**, considering the company's own aircraft, in its national and international flights.

The following diagram illustrates the risk categories and types of Azul operations that were considered.



The following is a brief description of the types of operation presented.

Operational Bases: These are the operations that take place inside the airports and make flights possible, such as check-in, baggage handling, back office (administrative office), crew desk (pilots and flight attendants area) and line maintenance (light maintenance, carried out in the airport yard).

Hangars: Department intended for heavy aircraft maintenance, which can be classified as an "industrial" department, due to the activities carried out

Owned Aircraft: Activities aimed at preparing the aircraft for flight, including supply of food items on board (catering), internal cleaning of the aircraft, water supply (QTA) and cleaning of the waste tank (QTU).

Azul has several models of its own aircraft that differ in operation in terms of efficiency in fuel consumption, in the volume of potable water that needs to be supplied (QTA), and in the generation of effluents and waste generation, due to the greater amount of present passengers.

The aircraft models operated by Azul are shown in table 1.

Table 1 - Aircraft models operated by Azul - Source: Natural Resources Management Manual

Model	Description
ATR 72-600	Turboprop aircraft, which seats 70 passengers
Ejet E-195	Embraer jet aircraft, which seats 118 passengers;
E-2	Embraer's most modern jet aircraft, seats 136 passengers
Airbus A330-ceo	Jet aircraft, which seats 262 passengers
Airbus 330-neo	Most modern model of the A330-ceo, seats 298 passengers
Airbus A320-neo	Jet aircraft, which seats 174 passengers
Cesna Gran Caravan	Single-engine aircraft seats 9 passengers or up to 1,200 kg
Boeing 737	Jet aircraft, exclusively for cargo transport
Pilatus	Single-engine aircraft intended only for the transport of crew members on services, mainly remote maintenance

ENVIRONMENTAL PILLARS

For both risk categories presented (Ground and Flight), Azul's potential environmental risks were evaluated within four environmental pillars: Greenhouse Gas Emissions (GHG), Electricity Consumption, Water Consumption and Effluent Generation, and Waste Generation.

Among the environmental pillars evaluated, the central environmental issue for companies in the civil aviation sector is the Climate Change.

METHODOLOGY

The methodology used to evaluate Azul's corporate environmental risks was developed by the **H_2O Company** along with **Azul**'s Corporate Risk Management and Sustainability teams. The steps presented below were followed.

The following is a brief description of each step taken in the project.

Environmental Diagnosis	Stage carried out based on meetings with employees from different departments of Azul, data collection on each environmental pillar, and survey and evaluation of the management processes developed by the company in the evaluated topics and results already obtained.
Benchmarking	Survey of information on the identification, reporting and management of environmental risks in companies in the sector in the CDP and in the Transition Pathway Initiative, as well as actions, investments and management programs on the subject. Two companies that stand out in sustainability practices, which are not from the civil aviation sector (HP and Danone), were also included.
Risk Identification	Cross-referencing information from Azul's environmental diagnosis and sustainability benchmarking, in order to identify potential environmental risks for Azul's operation within the assessed topics.
Risk Prioritization	Criteria defined with the Azul team to prioritize identified risks, in order to classify them in according to the degree of relevance to the company.
Risk Report	Application of the CDP/TCFD framework to report three environmental risks selected by the company.

Below are the analysis and results obtained at each stage of Azul's environmental risk evaluation.

ENVIRONMENTAL DIAGNOSIS

To understand the relationship between Azul's operations and the environmental pillars selected for analysis, investigative meetings were held with employees from different departments of the company, under the supervision of Azul's sustainability coordinator

Table 2 presents the topics of the meetings held, as well as the employees involved.

Table 2 - Investigative meetings with employees about Azul's operation

Meeting Topics	Employees Involved
Water and Effluents in the Hangars	Victor Cipriano and Rodrigo Sidney
Hazardous and non-hazardous waste	Julianne de Pádua and Felipe Nagy
Water (non-drinkable) and Effluents on Flights	Osmar Barreira and Rodrigo Generato
Drinkable water consumption on flights	Rodolpho Zanardo and Leandro Hideki
Water consumption in aircraft maintenance	Antonio Eick and Ricardo Vasconcellos

After the meetings, a collection of quantitative data from Azul was carried out within each environmental pillar evaluated, for the period 2019 and 2020, seeking to evaluate the present trends. The data collected is analyzed in each section of the environmental pillars.

H_2O Company's team of consultants also evaluated **Azul**'s management processes, analyzing internal documents and procedures related to environmental pillars, and external documents related to the civil aviation carbon market (CORSIA). The documents evaluated in the environmental diagnosis stage are shown below

Table 3 - Azul documents evaluated in the environmental diagnosis

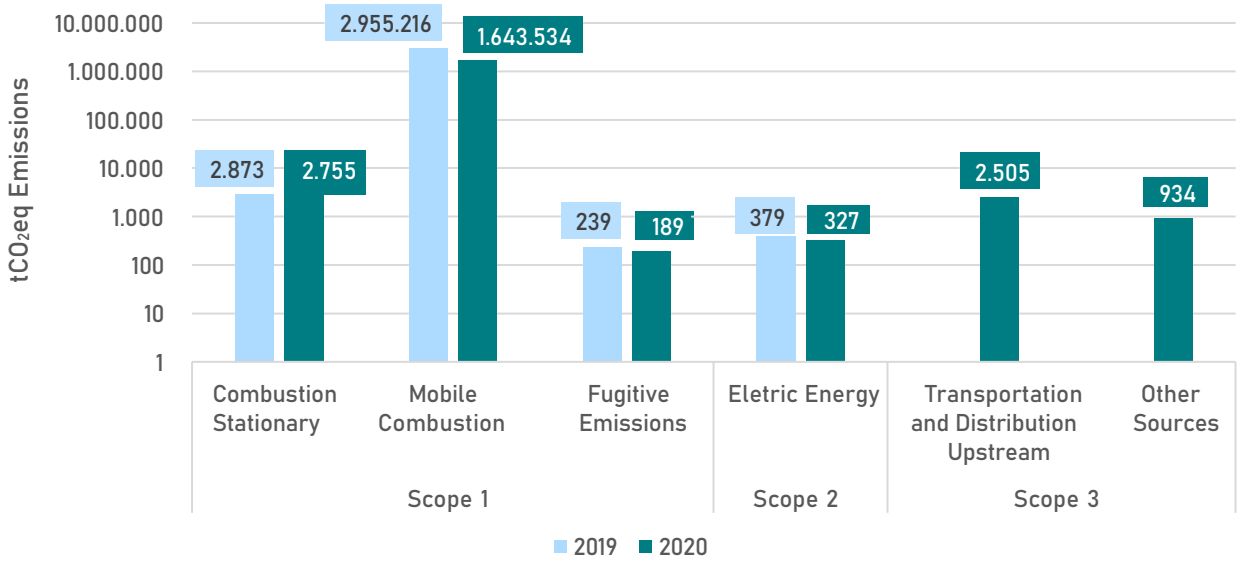
Document Evaluated	Applicable in
Operating Lincence	Viracopos Hangar
Operating Lincence	Pampulha Hangar
Natural Resources Management Manual	All Azul´s Units
Integrated Waste Management Program – PGRI	All Azul´s Units
Environmental Contingency Plan	Hangars and Bases
ReciclAzul (B2Blue) Report	Domestic Flights Basis
Standard Operating Procedure - Wild Fauna Standard	All Azul´s Units
Operating Procedure - Hazardous Waste	Hangars and Bases
Documents related to CORSIA	International Flights

The information evaluated in each environmental pillar and the main results of the analysis are presented below.

GREENHOUSE GAS EMISSIONS

Azul monitors its emissions through an annual GHG Inventory. Graph 1, below, shows the history of absolute GHG emissions by Azul, by scope and emission category.

Graph 1 – Azul's GHG emissions history (2019 and 2020)



Emissions are concentrated in the mobile combustion category, with jet fuel consumption being the company's main source of greenhouse gas emissions, accounting for more than 99% of total emissions.

Azul has 5 main practices for operational efficiency and reduction of GHG emissions

- Fleet Renewal Program: Constant updating of aircraft models in order to maintain a young and efficient fleet.
- Fuel Efficency Program: Through a team dedicated to fuel control, Azul applies the good practices indicated by IATA in its "*Guidance Material and Best Pratices for Fuel and Environmental Managment*" in aircraft operation in flight and taxiing.
- Applying "peripheral" practices that save fuel:
    1. Reducing aircraft weight by avoiding the entry of materials not needed for the flight and carrying only necessary water and food for on-board service;
    2. Change from using APU (Auxiliary Power Unit, which keeps the aircraft grounded and uses aircraft fuel) to GPU (Ground Power Unit, which uses diesel or electric);
    3. Use of external ACU (Air Conditioning Unit) equipment, which keeps the cold temperature inside the aircraft without having to keep them turned on, consuming QAV;
- Study and implementation of new routes: Shorter and more efficient routes, with DECEA;
- Aircraft preventive maintenance: Performed in our own hangars and outsourced hangars, in Brazil.

Azul's emissions index is calculated from the total GHG emissions in Scope 1 divided by the RTK (Revenue tonne kilometer) value for the same period considered.

Azul's GHG emissions index is presented in table 4.

Table 4 - GHG emissions, RTK and Azul's index - 2019/2020

	2019	%	2020
Scope 1 emission (tCO_2)	2.958.328	-44%	1.646.535
RTK	2.853.718.986	-43%	1.635.713.441
Emissions Index (tCO_2/RTK)	1.037	-3%	1.007

CORSIA

In 2016, the ICAO (International Civil Aviation Organization) launched CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), a global emissions offset plan applicable to international flights that seeks to stabilize aviation carbon emissions at 2019/2020 levels. Under the plan, airlines will be able to offset their emissions by funding reductions in other areas.

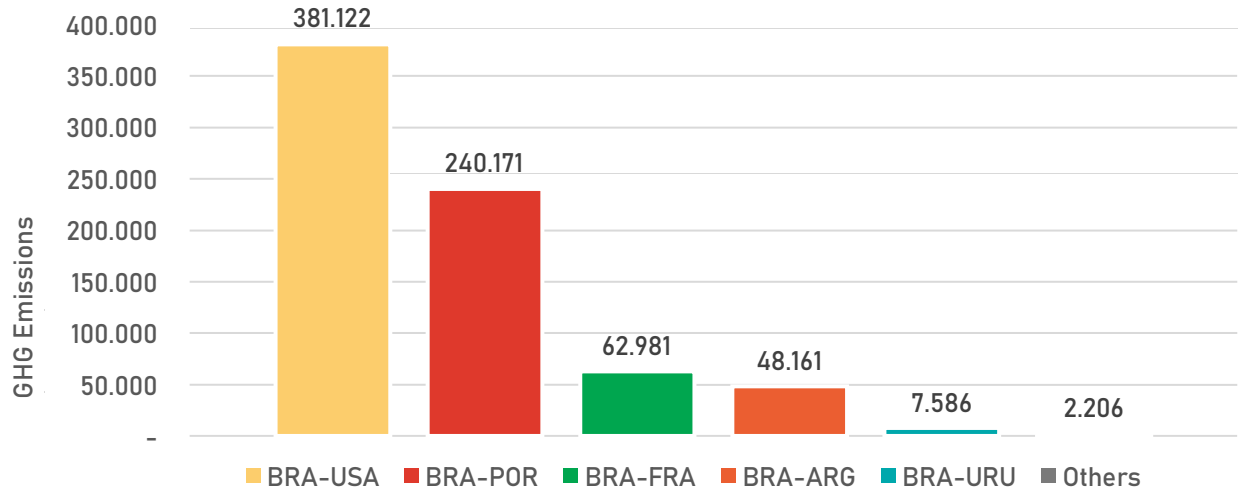
All operators will be required to monitor and report their emissions on all international flights, as well as purchase carbon credits to offset the increase in GHG emissions over the baseline (2019/2020).

The program is currently in its voluntary phase, which runs from 2021 to 2023. In the year 2021, 88 countries are participating in the voluntary phase of the program.

AZUL REPORT

Chart 2 presents Azul's GHG emissions on international flights, and which were reported to CORSIA, by route for the year 2019. The emissions presented account for the roundtrips on each route (e.g. BRA-USA and USA-BRA).

Graph 2 - Emissions on the main routes under CORSIA regulation (2019)



Total emissions from Azul reported for CORSIA in 2019: 742,227 tCO_2eq,

These emissions represent about 25% of Azul's 2019 GHG Inventory and could be the baseline for identifying emissions that should be offset.

Currently under discussion is the definition of the period that should be considered the emissions baseline for CORSIA. Due to the impact of the pandemic on economic activity in the year 2020, emissions from this year will not be considered for CORSIA. During the pilot phase, 2019 emissions will be used in place of 2020 emissions. Keeping the 2020 emissions as the baseline would have a considerable increase in the international aviation compensation obligations.

COMPENSATION RULES

Even though Brazil is not expected to participate in the voluntary phase of CORSIA (2021 - 2023), there is a possibility that **Azul** will need to offset GHG emissions from international flights. This may occur in the case of flights between countries participating in the voluntary phase, and that exceed the company's emissions baseline, established as GHG emissions in 2019.

Currently, credits accepted for offsetting emissions within CORSIA must have credit generation in the period between 01/01/2016 and 12/31/2020, and belong to one of the following programs.

- American Carbon Registry (ACR)
- China GHG Voluntary Emission Reduction Program
- Clean Development Mechanism (CDM)
- Climate Action Reserve (CAR)
- The Gold Standard
- Verified Carbon Standard (VCS)

Recently a report commissioned by the European Union was published analyzing the reliability of these carbon credits. The recommendation was that Europe should not rely on ineffective systems, such as the UN's CDM, and should reinstate all flights passing through its territory within the rules of its carbon market, the EU-ETS. Companies could buy permits, also under the rules of the ETS, which does not accept carbon credits from countries like Brazil, India, and China.

Link to access the report

Azul has not yet purchased carbon credits to offset its GHG emissions. The company may define internal criteria more restrictive than those of CORSIA for the acquisition of its credits. This is a format that some companies have been adopting to increase the reliability of the acquired carbon credits.

WATER CONSUMPTION

The Natural Resources Management Manual presents the main water consumption points by type of operation of Azul, as well as an estimate of consumption. The main information to be considered in the analysis of environmental risks and opportunities is presented below.

WATER CONSUMPTION ON GROUND

The following are the main water consumption points in Azul's ground operations.

- VCP Hangar: Drinkable water consumption for domestic use, supplied by the airport. Consumption of drinkable water for industrial activities, such as aircraft washing, parts washing, and workshop floor washing. Consumption of reused water from the Industrial Effluent Treatment Station (ETEI) for aircraft washing.

In a visit to Viracopos Hangar, in Campinas - SP, it was verified that the unit's ETEI is inoperative, not producing reused water for industrial purposes.

- PLU Hangars: Drinkable water consumption for domestic use, supplied by the Companhia de Saneamento de Minas Gerais - COPASA. Consumption of potable water for industrial activities, such as aircraft washing, parts washing, and workshop floor washing. Azul employees estimate that 70% of total consumption is for domestic purposes and 30% for industrial purposes.

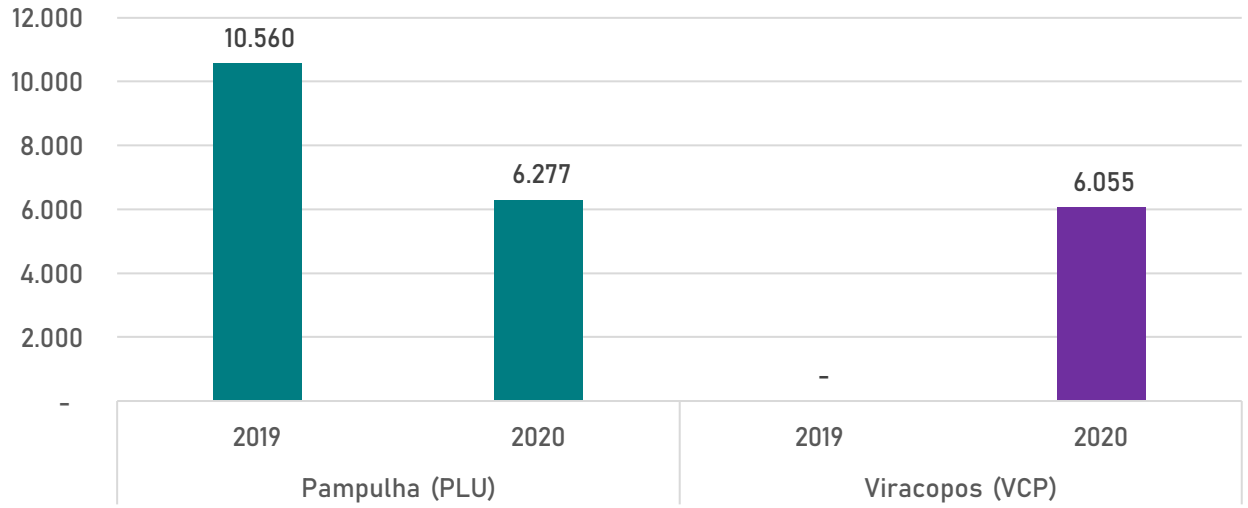
There is difficulty in monitoring the volumes of water consumed in administrative units / airports, because the water consumption points are the responsibility of the condominiums / airports and are not exclusive to Azul.

Only the PLU Hangar has individual water consumption measurement. According to the Natural Resources Management Manual, it is estimated that more than 90% of Azul's total water consumption is indirect, occurring in administrative or airport units, from airport or condominium supplies, in which there is no exact measurement of water consumption for Azul.

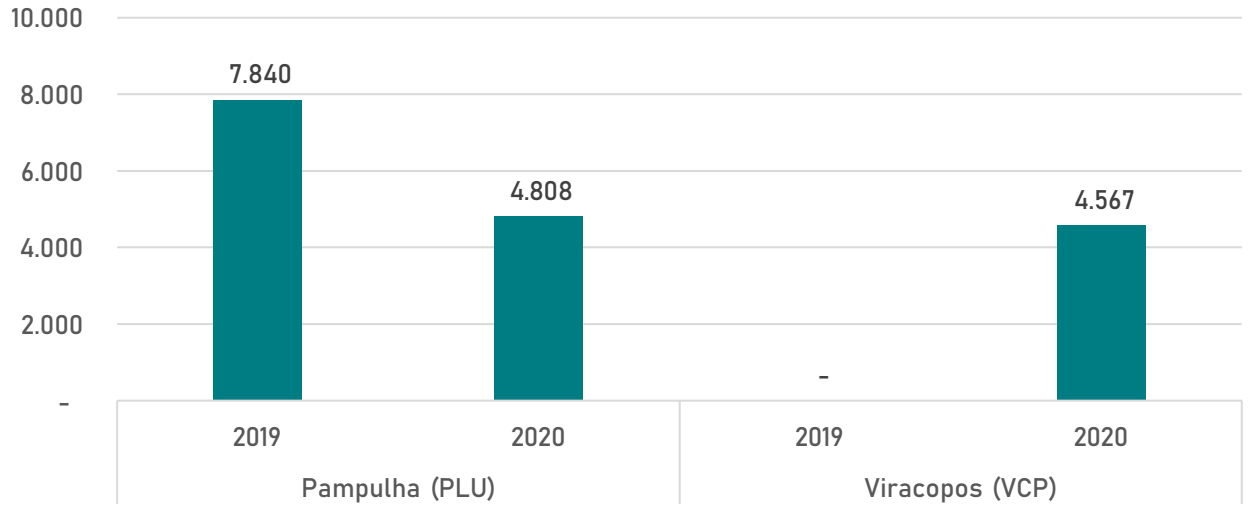
Water consumption and effluent generation data were collected in Viracopos (VCP) and Pampulha (PLU) Hangars for the years 2019 and 2020. The VCP Hangar was inaugurated in the year 2020, and therefore does not present previous data. Since there is no measurement of water consumption in the VCP Hangar, it was estimated based on the average value of the Effluent Generation Factor for the PLU Hangar.

Charts 3 and 4 show water consumption and effluent generation in the Hangars, respectively.

Chart 4 - Water consumption in VCP and PLU Hangars (2019 and 2020)



Graph 3 - Generation of effluents in the VCP and PLU Hangars (2019 and 2020)



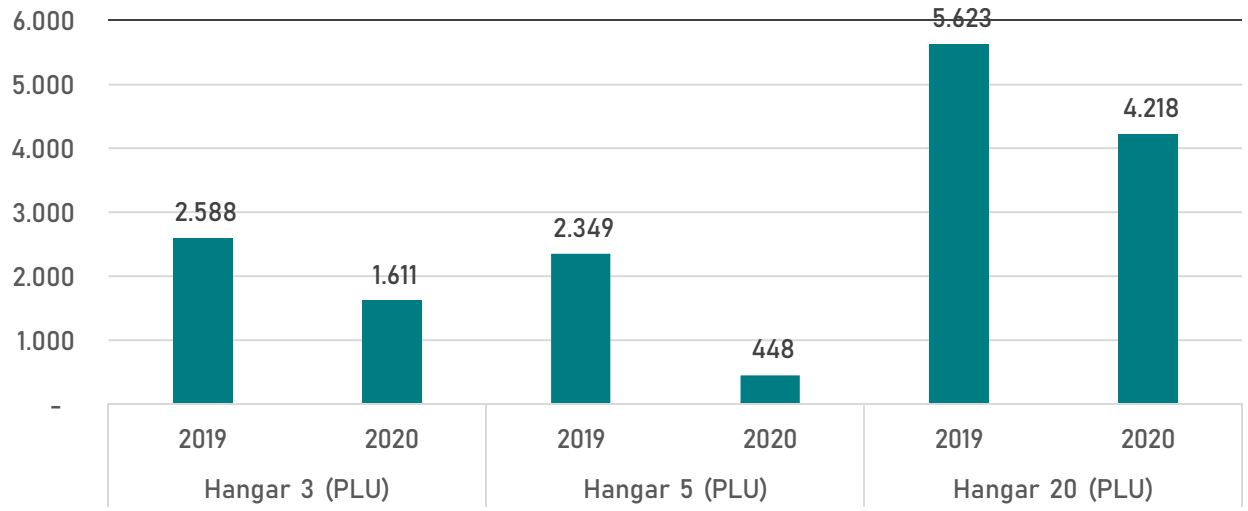
Effluent Generation Factor: In Hangar PLU, since there is measurement of water consumption and effluent generation data, it was possible to calculate the factor. In 2019, 74% of the water consumed generated effluent, and in 2020, this factor stood at 77%. The average factor of 75.5% was considered in the VCP Hangar for estimating water consumption, from the measured value of effluent generated.

Hangar PLU showed a 40% reduction in water consumption in 2020, compared to 2019, following the average reduction shown by the operation indicator (RTK), of 43%.

As water use in the hangars and workshops is exclusive to Azul, and there is the possibility to monitor the volumes of water consumed, as well as greater ease of implementing improvements in water management, compared to the administrative / airport units. Thus, sectored monitoring of water consumption in Hangar PLU and Hangar VCP is recommended, in order to track water consumption for domestic purposes and for industrial purposes.

The PLU Hangar has a subdivision into Hangar 3, Hangar 5 and Hangar 20, and there is monitoring of water consumption in each of these. Chart 5 shows the water consumption in each hangar at Pampulha.

Chart 5 - Water consumption in PLU Hangars - Hangar 3, 5 and 20 - (2019 and 2020)

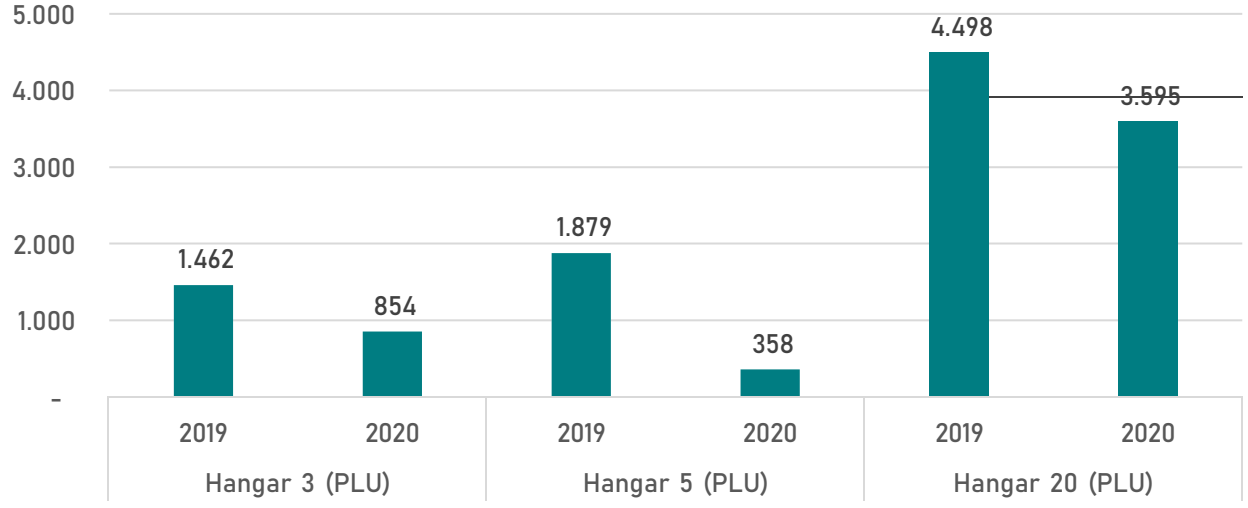


In 2020, Hangar 20 accounted for 67% of Pampulha's water consumption, followed by Hangar 3, with 26% of total consumption, and Hangar 5, accounting for 7%.

Hangar 5 had the smallest reduction in water consumption from 2019 to 2020, achieving an 81% reduction in water consumption. Hangar 3 reduced water consumption by 38%, followed by Hangar 20, which reduced water volumes consumed by 25% in 2020.

Graph 6 shows the generation of effluents in each Pampulha Hangar. The reductions in effluent generation follow the same proportion as the reduction in water consumption presented.

Graph 6 - Generation of effluents in PLU Hangars - Hangar 3, 5 and 20 - (2019 and 2020)



As a result of the investigative meetings, a survey was carried out on the most water intensive activities in each of the workshops of the Hangars.

Table 6 presents the activities developed in the PLU Hangar workshops and a beacon that indicates the probability of high water consumption in the execution of the activity, according to the perception of Azul's employees.

Table 5 - Employees' perception of water consumption in PLU Hangar activities

Workshop	Activity	Head light	Note
Interior Workshop	Seat cover cleaning	High probability	Required in the initial cleaning for all items received in the workshop.
	Coatings cleaning (cabin and lavatory)	High probability	Required in the initial cleaning for all items received in the workshop.
NDT Workshop	Screws cleaning	High probability	Required in final cleaning for all items where penetrant liquid was used for inspection.
Tire Workshop	Filter cleaning	High probability	Required in the initial cleaning for all items received in the workshop.
Pre-assembly workshop	Heat exchange cleaning	High probability	Required in the initial cleaning for all items received in the workshop.
Interior Workshop	Windows cleaning	Medium probability	In some cases, it is required in the initial cleaning for items received in the workshop.
	Tables cleaning	Medium probability	In some cases, it is required in the initial cleaning for items received in the workshop.
Battery Workshop	Battery cleaning	Low or zero probability	Few cases, it is necessary to mix with water for cleaning.
Compost Workshop	Cleaning of leading edge parts	Low or zero probability	In some cases, it is necessary to mix with water for cleaning.
Electronics Workshop	Component repair	Low or zero probability	-
Structures Workshop	Component repair	Low or zero probability	In a few cases used in the dissolution of Alodine.

The activities with the highest water consumption in the PMP Hangar are the cleaning of seat covers and coatings (cabin and lavatory), performed in the interior workshop, and the cleaning activities on screws, filters and heat exchange, performed respectively in the NDT, pneumatic and pre-assembly workshops. The interior workshop also has window and table cleaning activities, which have a medium probability of high water consumption. The other activities developed in the workshops of the PMP Hangar have low or zero probability of presenting high water consumption.

Table 7 presents the activities developed in the workshops at VCP Hangar.

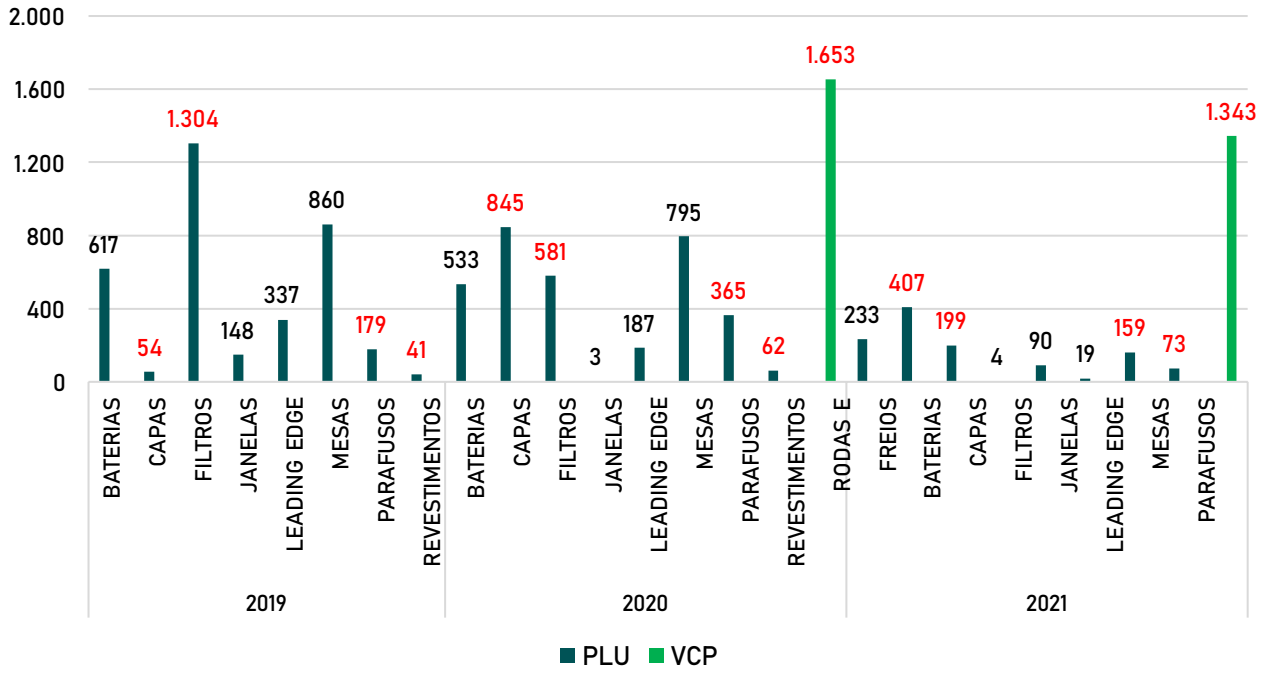
Table 6 - Employee perception of water consumption in activities at the VCP Hangar

Workshop	Activity	Head light	Note
Oxygen Workshop	Teste hidrostático de cilindros	High probability	Required for performing hydrostatic testing of cylinders - forecast
Wheels and brakes workshop	Limpeza de rodas e freios	High probability	Necessary in the cleaning of all units to be worked on.
	Limpeza de itens após NDT	High probability	Required in final cleaning for all items where penetrant liquid was used for inspection.
Battery Workshop	Limpeza de baterias	Low or zero probability	In a few cases, it is necessary to mix with water for cleaning - forecast
Pre-assembly workshop	Configuração de motores	Low or zero probability	-
Structures Workshop	Reparo de componentes	Low or zero probability	-

In VCP Hangar, the activities most likely to present high water consumption are the hydrostatic test of cylinders, performed in the oxygen workshop, and the activities of cleaning wheels and brakes, and cleaning items after NDT, both performed in the wheels and brakes workshop.

The volume of service performed in each activity developed was also surveyed. Chart 5 shows the component release volume per Hangar for the years 2019, 2020 and 2021 (until March). The values in red indicate the activities with high probability beacon.

Chart 7 - Volume of component releases per Hangar - Source: Azul (April/2021)



The most intensive activities in water consumption developed in the PLU Hangar and most performed in the period considered were the operations of washing screws, washing filters and washing seat covers. In the VCP Hangar, the most water intensive activity is the washing of wheels and brakes.

Sectored measurement of water consumption in these activities is suggested, as a way to identify actions to reduce water consumption.

Even though 2020 was a year of reduced civil aviation demand due to the pandemic, aircraft maintenance activities had little reduction compared to 2019.

We highlight the high volume of wheel and brake washing activities in the year 2021 at the VCP Hangar, which, despite accounting for only the first quarter of the year, is close to the volume of activity in the year 2020.

WATER CONSUMPTION ON FLIGHTS

For flights, the QTA operation is carried out, an activity that supplies the aircraft's drinking water reservoir. This water is used in the lavatories and also for the flight attendants' use when necessary. The supply of water in adequate volume and quality is the responsibility of the airports. For human consumption, bottled mineral water is used, which is the responsibility of the Azul.

For each type of aircraft there is a different reservoir capacity. Azul has as standard the supply of only 75% of the aircraft's reservoir.

The volumes of water consumed on flights are presented by aircraft type in table 8.

Filling the reservoirs with 75% of their volume has the potential to save large volumes of water. Azul estimates at 8,300 m³ saved in 2019 alone. Also, the lower volume of water filled reduces the total weight of the aircraft, increasing fuel efficiency.

Table 7 - Estimated in-flight water consumption, by aircraft type

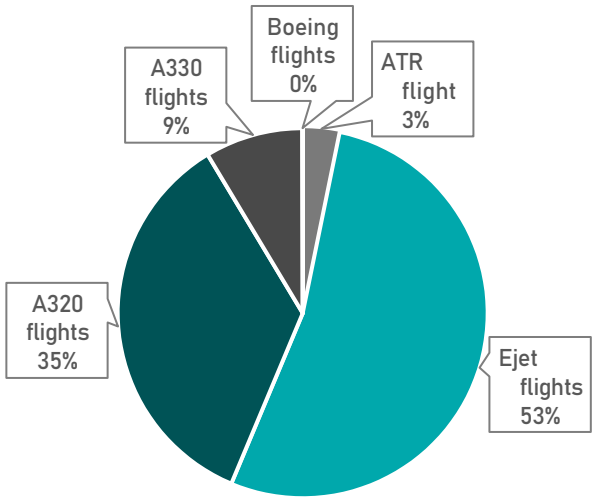
Aircraft Model	Flights (2019)	Capacity (L)	Consumption Calculation	Estimated volume	
ATR Flights	71.111	15	Flights x 11,25 L/voo	800	m³/year
Ejet Flights	160.424	110	Flights x 82,5 L/voo	13.235	m³/ year
A320 Flights	58.293	200	Flights x 150 L/voo	8.744	m³/ year
A330 Flights	4.069	700	Flights x 525 L/voo	2.136	m³/ year
Boeing Flights	1.228	7,6	Flights x 5,7 L/voo	7	m³/ year
			TOTAL:	24.922	m³/ano

The volumes of water that are not consumed in flights and are still returned in the aircraft are reused, so that the QTA operation is performed only to complete the remaining reservoir volume, until it reaches 75%. Thus, the volumes of water consumption in aircraft are conservatively estimated, since the actual values are possibly lower.

Chart 2 illustrates the representation of each aircraft in the total water consumption in flights. Ejet and A320 flights represent 88% of total water consumption. Thus, actions aimed at reducing supply volumes in water tanks can be directed mainly to these aircraft models.

ATR, A330 and Boeing flights together account for the remaining 12% of the volume of water consumed on flights.

Graph 8 - Representativeness of each aircraft in total water consumption on flights



It is recommended to monitor the remaining water volumes in the reservoirs of the Ejet and A320 aircraft after the flights, before performing the QTA operation to fill 75% of the reservoir again. Thus, you can evaluate the possibility of reducing the volumes of water supplied in the QTA operation of these aircraft.	Application example: If the water supply could be reduced from 75% to 60% for Ejet (66 L/flight) and A320 (120 L/flight) flights, an additional saving of up to 4,395 m³ could be achieved, depending on the number of flights in 2019. There is also the additional benefit of reducing the total weight of the aircraft on these flights, reducing GHG emissions per kilometer flown.

In addition, it is also suggested to evaluate the possibility of performing QTU operations more frequently, reducing the amount of effluent transported in the aircraft. However, not all airports have cloaca, the necessary infrastructure to perform the QTU operation, which can be a barrier to the adoption of this alternative.

Water consumption data for human consumption on flights were also collected from Azul's catering. The volumes of water consumed in 2019 and 2020 are presented in table 8.

Table 8 - Consumption of bottled water on flights (2019/2020)

Indicator	Consumption of bottled water	
	2019	2020
Bottled Water Consumption (m³)	3.538,23	2.183,11

ELECTRIC ENERGY CONSUMPTION

The Natural Resources Management Manual presents the information related to energy consumption by type of operation of Azul, as well as an estimate of consumption.

In all of Azul's units electric energy is consumed for lighting, loading and operation of various appliances. In some operational bases electric power is also used for the operation of equipment such as forklifts, GPUs, compressors, cleaning cabins, greenhouses and other electrical maintenance equipment in the workshops.

Individual metering of electricity consumption occurs only in the Hangars. Table 9 shows the average monthly consumption of the Viracopos and Pampulha hangars.

As in the case of water consumption, the vast majority of electricity is supplied by the condominium or the airport where the unit is located and there is no individualized metering, being treated as apportioned. This occurs in all the operational bases of airports

Table 9 - Estimate of electric energy consumption in the Hangars

Unit	Consumption Type	Source	Consumption 2020 (KWh)
VCP Hangar	Commercial use	CPFL Dealership	1.547.460
PLU Hangar	Commercial use	CEMIG Dealership	1.000.324
AzulVille	Commercial use	ENEL Dealership	977.047
UniAzul	Commercial use	CPFL Dealership	1.750.785
		TOTAL:	5.275.616

Azul does not consume renewable electric energy, since the units consume energy directly from the local utilities.

The electricity consumption under the responsibility of Azul in 2020 was 5,275,616 KWh or 5,275.62 MWh. UniAzul represents the largest consumption, with 33% of the total, followed by Hangar VCP, which accounts for 29% of energy consumption. AzulVille and Hangar PLU account for 19% each.

There is the possibility of inserting renewable energy in the company's electricity matrix. The alternatives are the insertion of Azul in the free market of electric energy, or the purchase of I-REC.

These alternatives are briefly presented below.

FREE ENERGY MARKET

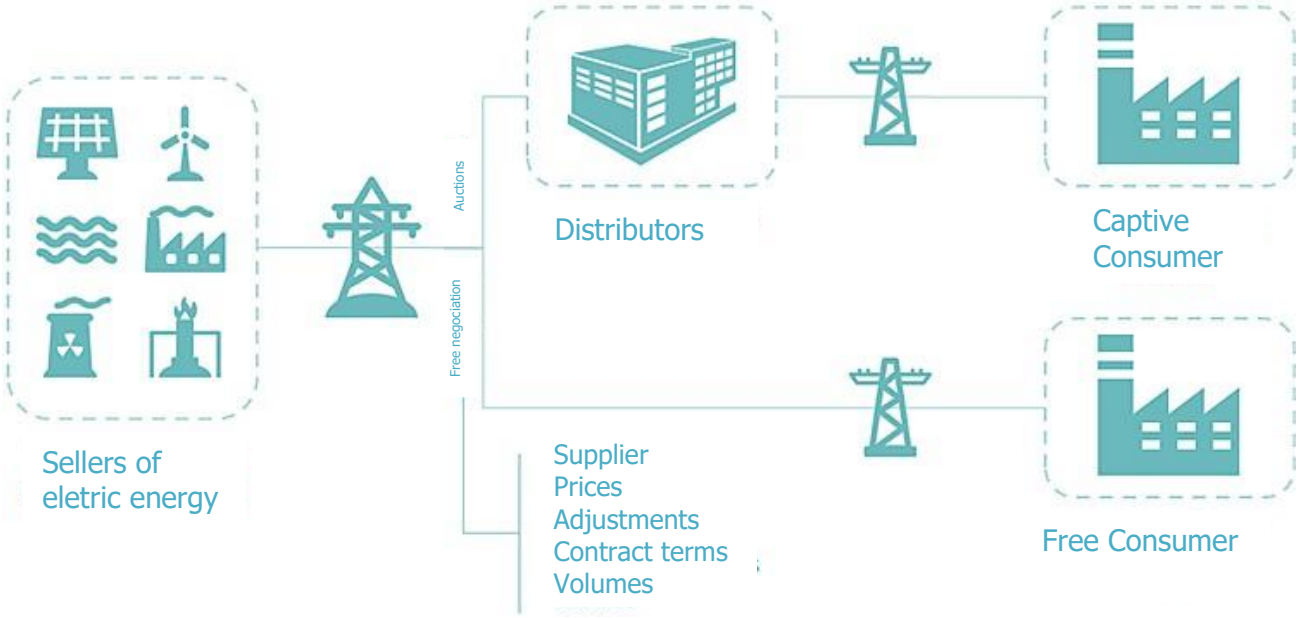
The consumption of energy through the utilities represents the Captive Energy Market, which is the environment of electric energy contracting in which the consumer's role is passive, since the energy is supplied exclusively by the local distributor, with the tariff and other supply conditions regulated by the National Electric Energy Agency (ANEEL).

The Free Energy Market is a negotiation environment in which consumers negotiate prices, term, volume and form of payment directly with the electricity generators or sellers.

According to data from the Brazilian Association of Energy Sellers (Abraceel), the Free Energy Market represents 30% of all electricity consumed in Brazil. Some 6,870 free consumers operate, with 1,161 entries in 2019 alone, representing a 20% increase.

This negotiation environment provides predictability of the company's energy costs, because the contract can be negotiated with a fixed price, indexed to an inflation index. For example, tariff flags imposed by the government have no influence, because the price is previously defined in the contract. It also allows the option of buying only from renewable electricity generators.

The following diagram illustrates how the two environments work for the captive consumer and the free consumer of electricity.



To become an agent in the Free Energy Market, the consuming company needs to meet some requirements, mainly the contracted demand. Currently to have the option to be a Free Consumer, each consumer unit must present a minimum contracted demand of 1,500 kW.

A 2019 ordinance set a schedule for minimum requirement reduction, as follows.

- 01/01/2022: Consumers with load equal to or greater than 1,000kW and any voltage level.
- 01/01/2023: Consumers with load equal to or greater than 500kW and any voltage level.

It is also necessary that the consumer company signs the connection and use contracts of the distribution systems and that it adapts the measurement system to the class of accuracy required by the CCEE (Chamber of Commercialization of Electric Energy).

To evaluate the possibility of transition to the free energy market, the current voltage and demand requirements of the units should be evaluated, the current contracts with the local distributors should be analyzed, especially the conditions for termination, and an economic feasibility study should be conducted.

TRACEABILITY OF RENEWABLE ENERGY

In order to prove the consumption of renewable electricity through the free market, making it possible to reduce the associated GHG emissions, it is necessary for Azul to request declarations from the entire electricity generation and distribution chain. For example, such a declaration should be requested from the power plant generating the renewable energy and from the energy trading company.

I-REC (INTERNATIONAL RENEWABLE ENERGY CERTIFICATES)

I-RECs are international renewable energy certificates that certify to customers and suppliers around the world that the energy consumed by the company is of renewable origin and has been sent to the grid. They are a way to track renewable energy from the point of generation to the end consumer. The main benefit is proof that the origin of the electricity consumed is renewable, and a corresponding reduction in Scope 2 GHG emissions.

Each REC is proof that 1 MWh (one megawatt hour) has been injected into the system from a renewable energy generation source. There are renewable energy certificates from wind, solar, SHP (Small Hydro Power Plant) or biomass. Thus, for a company to make its electricity matrix 100% renewable through the purchase of I-REC certificates, it must purchase the number of certificates corresponding to the amount of electricity consumption in MWh.

The current (May/2021) average cost of IREC is R$: 2.60 / MWh for solar energy. This value may vary due to the amount of electricity generated by the renewable source in the period and the demand for this type of energy.

Example of application: If Azul opts for the purchase of I-REC certificates to guarantee that 100% of the energy consumed in the Hangars VCP and PLU, AzulVille and UniAzul, is renewable, and even deduct these GHG emissions from its Corporate Inventory, the estimated cost would be:

Cost = 5,276 MWh x R$: 2.60 / MWh
R$: 13.717,60

WASTE GENERATION

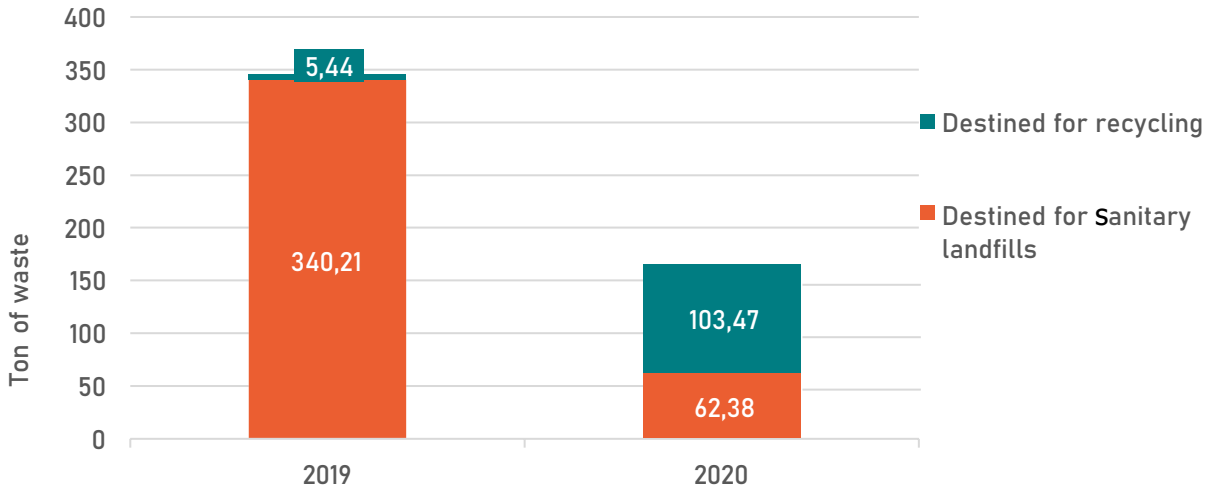
The Integrated Waste Management Program is the document that determines how all waste is managed - common, hazardous and infectious - generated during the operational and administrative activities of all Azul sites. The following is the data and information evaluated, and which are considered in the identification of risks and opportunities in the topic.

WASTE ON FLIGHTS

In onboard services, all waste generated on domestic flights is classified as common - except for that from aircraft toilets. For international flights, however, all residues are currently treated as infectious, to ensure the safety of customers and airport and airline employees. The collection and transport from the place where the waste is generated (flights) to the airport's temporary storage area is done by companies hired by Azul.

Chart 9 presents the data collected on the disposal of non-hazardous waste generated in flights for the years 2019 and 2020.

Graph 9 - Destination of non-hazardous waste generated in flights (2019/2020)



In 2020, a total of 165.85 tons of non-hazardous waste, a 52% reduction compared to 2019, when 345.65 tons were destined. This reduction follows the same trend as the operation indicator (RTK), which reduced by 43% in the same period.

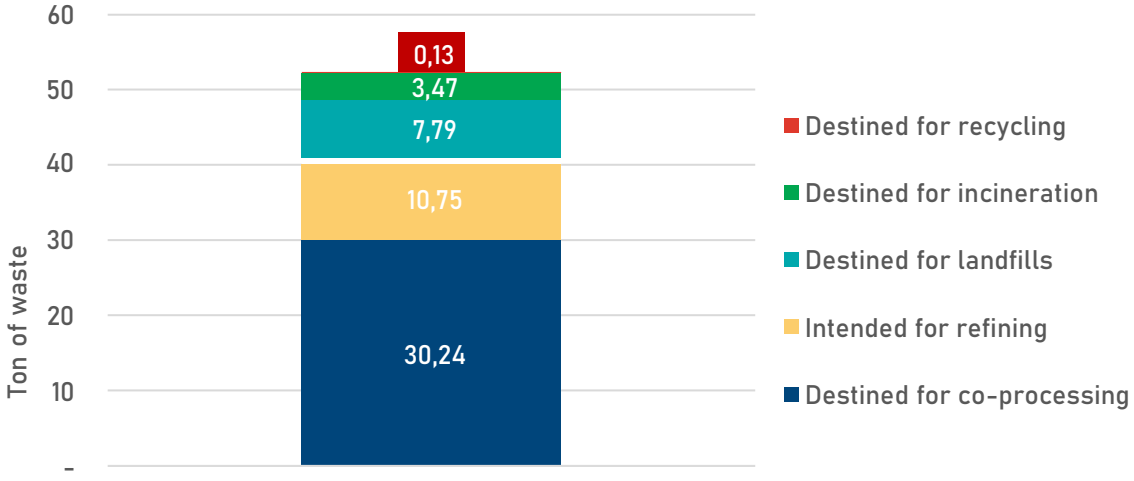
It is noteworthy that in the year 2019, 98% of the waste had as final destination landfills, and in the year 2020 this percentage was reduced to 38%, so that the destination of waste for recycling increased from 2% in 2019 to 62% in 2020.

In the aircraft lavatories, paper and other solid waste, as well as the effluent from toilet use (UUTF) are considered infectious waste. The cleaning of the UFQ is done in a special equipment

and specialized personnel. This procedure is only carried out in airports that have a septic tank, similar to septic tanks, specifically to receive the contents of the QTU. Both the destination of infectious solid waste and the septic tank are the responsibility of the airport, which is in charge of giving the appropriate destination to this waste and effluents generated on flights.

Graph 10 presents the destination of hazardous waste generated in flights for the year 2020.

Graph 10 - Disposal of hazardous waste generated on flights (2020)



In 2020, 52.37 tons of hazardous waste generated in flights were destined. Co-processing is the main destination of this waste, accounting for 58% of the total destined, followed by refining (21%). Landfills account for 15% of the hazardous waste, and incineration for 7%. Recycling accounts for less than 0.3% of the waste destined.

RECICLAZUL

Azul's recycling program for flight residues is carried out for aluminum cans. On the ground, a team is responsible for removing the residues from the aircraft and placing them in a pre-defined location for the storage of recyclable materials. After this stage, they are taken to the recycling cooperatives, which perform the fine segregation and send the material to the recycling industries.

Azul is evaluating the possibility of replacing the materials used in its flights with those that have less of an impact on the environment. A study is underway, conducted by the company in partnership with the São Joao del Rei University, to evaluate the replacement of snack packaging, aiming to improve its recyclability.

The program reached about 40% of domestic flights, and Azul intended to expand the program to reach 60% of flights by the end of 2021. In 2020, with the pandemic, the in-flight service was discontinued, and therefore the Recicla Azul Program also ceased to exist.

EURECICLO SEAL

Azul started a partnership with **Eureciclo Seal** to mitigate the impact of snack packaging generated in flight. One hundred percent of the plastic snack packages distributed on Azul flights in 2020 will be environmentally compensated. The company will ensure that the same amount of waste discarded after flights will be recycled by partner cooperatives in each state in Brazil that Azul flew in the same period.

PAPERLESS

Azul also has the paperless project, an initiative to reduce paper consumption through the digitalization of mandatory flight documentation, for all the company's aircraft.

The goal is to reduce or eliminate the use of paper (as well as document search and delivery activities) in providing regulatory and operational information for 100% flight dispatch. The idea is to replace this medium by digital, making the information available through available technologies. The company is working with the goal of reducing or eliminating the use of paper in the dispatch of 100% of its flights by the end of 2022.

SOIL RESIDUES

Due to the maintenance operations, of the residues generated in the hangars, special attention is given to hazardous waste.

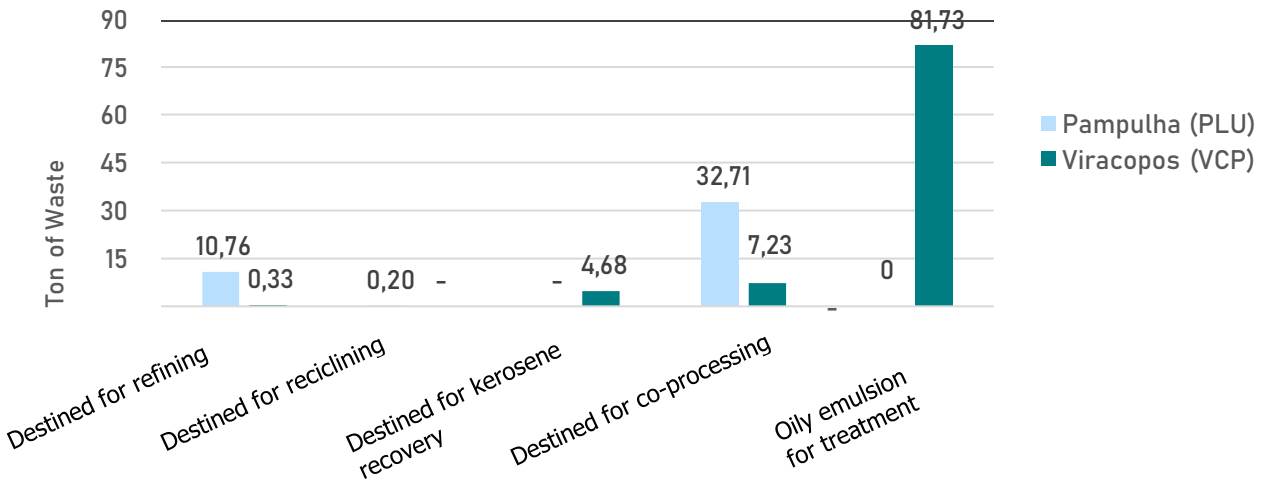
For these, five types of final destination are adopted. The choice is determined by the type of waste and service availability at the site of the unit, and can be:

The main hazardous wastes generated in ground operations are oil packaging, maintenance fluids and chemicals, residual aviation kerosene, contaminated solid wastes, and electronic and aeronautical components.

- Industrial Landfill: Contaminated solid residues in general
- Co-processing: Contaminated solid residues in general
- Incineration: Contaminated solid residues in general, expired chemical products, paint residues and cargo residues considered as dangerous items
- Re-refining: Residual oils and hydraulic fluids
- Recycling: residual aviation kerosene, lamps, batteries and electronic components

Data was collected on the destination of waste in the VCP and PLU Hangars. Graph 11 shows the quantities of waste disposed of in the year 2020.

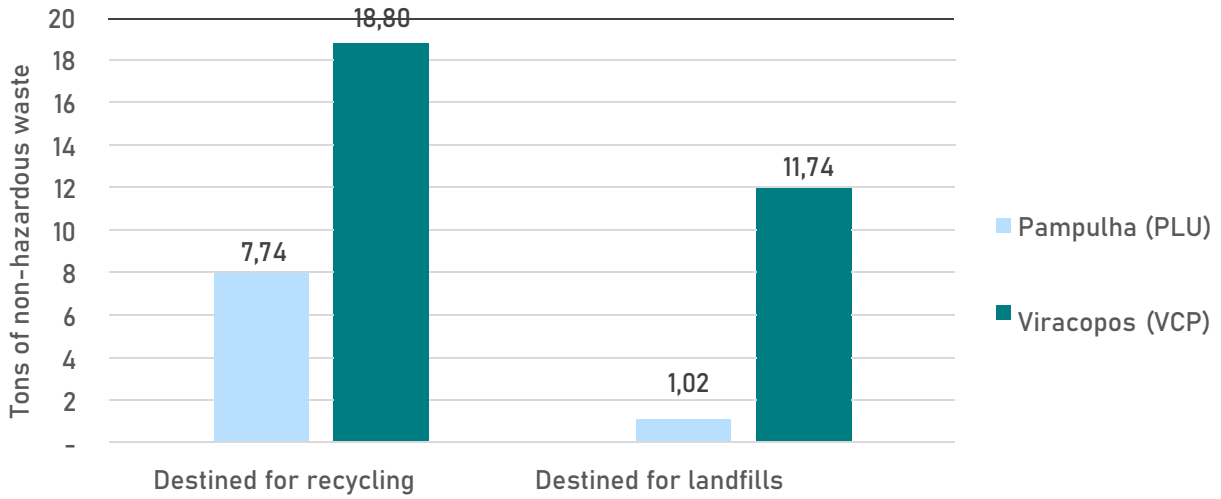
Graph 11 - Disposal of Hazardous Waste in 2020 - VCP and PLU Hangars



The total destination of residues in the PLU Hangar was 43.67 tons, with the main final destinations being co-processing (75%) and refining (25%). The VCP Hangar disposed of a total of 93.97 tons, most of which was oil emulsion for treatment (87%), followed by co-processing (8%) and kerosene recovery (5%).

Data was also collected regarding the destination of non-hazardous waste in the Hangars (recycling and landfills). Graph 12 shows the amount sent to each destination by each hangar, in the period 2020.

Graph 12 - Disposal of Non-Hazardous Waste in 2020 - VCP and PLU Hangars



The total destination of non-hazardous waste in the PLU Hangar was 8.76 tons, with the main destination being recycling (88%), followed by landfill (12%). In the VCP Hangar, the total destination of non-hazardous waste was 30.54 tons, with the main destination being recycling (62%), followed by landfill (38%). Of the total waste disposed of by the two Hangars, 32% was recycled are destined for landfill.

Among the non-hazardous waste, recently the plastic has received special attention due to the problems of contamination by single-use plastic materials such as straws, cutlery, packaging and cups. Some municipalities have even passed laws that prohibit the supply of single-use plastic utensils, such as the city of São Paulo.

Azul has not yet carried out a structured program to eliminate the acquisition of single-use plastic materials, with plastic cups still being used in its operational units.

In collecting information about the use of plastics, the PLU Hangar responded that it still purchases single-use plastic materials. The VCP unit responded that it does not purchase single-use plastic materials. However, during a visit to VCP, it was verified that the unit's restaurant still uses plastic cups. Because it is an outsourced service within the unit, the consumption of these plastic cups may not have been accounted for.

SUSTAINABILITY BENCHMARKING

The sustainability benchmarking was carried out by evaluating information from the CDP - Carbon Disclosure Project, one of the main databases of sustainability practices in the world, and the TPI - Transition Pathway Initiative, an initiative that evaluates the level of preparation of companies in the transition to a low carbon economy, by activity sector.

Receiving a good rating on these sustainability initiatives represents that the company is aligned with the global demands for sustainable development.

The information published in these indexes is used by groups of investors to assist in decision making, based on the comparison between management practices of GHG emissions, water security, and other environmental fronts evaluated. Customers, NGOs, and other stakeholders can also use this information to evaluate the companies in relation to the commitments made and efforts employed.

The comparison between the ratings of companies in sustainability indices can represent a risk to the image and reputation of poorly rated companies.

CDP - CARBON DISCLOSURE PROJETCT

CDP evaluates companies by rating them with a score from A - highest score to F - lowest score. This assessment is published annually for each company that responds to CDP's questionnaires.

The three highest rated companies within the civil aviation sector in the Climate Change Questionnaire were selected for analysis: American Airlines (Score: A), United Airlines Holdings (Score: A-), Avianca Holdings S.A (Score: B). The following are the main highlights of the evaluated questionnaires. All questionnaires evaluated were answered in CDP 2020, and therefore refer to information from companies up to June/2020.

GOVERNANCE

The three airlines evaluated report that there is oversight of climate issues by the Board of Directors, through Board Committees. United has a Public Responsibility Committee that annually reviews the company's environmental programs, policies and initiatives related to climate change, as well as monitors the company's environmental commitments and goals.

American Airlines has a Corporate Governance Committee, with responsibility for providing strategic oversight of the topic (including assessment of climate risks and opportunities), of goals, performance, and progress made. As an example of a decision made at this committee level, American cites the creation of a new executive director position to lead the company's sustainability strategy. At Avianca, the Executive Committee is responsible for managing climate issues, such as the preparation of the CORSIA action plan, as well as the risk management of emerging regulations, such as Colombia's Carbon Market.

> American Airlines cites that: "In early 2020, the Corporate Governance Committee Charter was updated to formally insert this function, including explicit reference to oversight of climate-related risks and opportunities. As of 2020, climate issues will be a standing agenda item for Committee meetings and included in all quarterly meetings"

All three companies also have monetary incentives for managing climate issues, mainly related to the reduction and conservation of fuel consumption.

At United, executives and certain other managers receive stock-based awards and annual cash incentives, the value of which is tied to performance metrics. The company reports that every 1% reduction in fuel consumption is estimated at $1.92 per share, encouraging United's executives and managers to conserve fuel and reduce GHG emissions.

Avianca informs that pilots, first officers, dispatchers and administrative employees have variable compensation according to fuel consumption metrics, which is paid according to compliance with conservation initiatives established by the company.

RISKS AND OPPORTUNITIES

All three companies evaluated report that the climate risk assessment process is integrated into the company's overall multidisciplinary risk management process. All three companies reported assessing climate risks related to current regulatory, emerging regulatory, technological, legal, market, reputational, and chronic and acute physical risks.

Regarding current and emerging regulation, American Airlines cites concerns about the European carbon market (EU ETS) and CORSIA, respectively. United cites that it considers a risk the possibility of emerging regulation related to mandates mandating the use of Sustainable Aviation Fuel (SAF), which could increase operating costs.

Regarding market risks, all companies evaluated cite the issue of changing consumer preference for flights with lower impacts, such as low-carbon travel. This change in behavior could lead to changes in demand from international air travel to domestic air travel, or changes in demand for air travel that can have its emissions offset.

United's market risks include induced changes in the environment that could impact the demand for air travel, such as changes in traditional vacation destinations depending on changes in the weather, such as temperature increases or the occurrence of extreme events, making certain destinations undesirable.

In reputation risks, companies cite the fact that they are not seen as market leaders in terms of disclosure and reduction of GHG emissions. The impact on reputation can lead customers to seek alternative airlines. Avianca reports a scale of impact related to company reputation risks, considering whether the company's reputation can be affected locally, nationally or internationally, and whether the impact is reported in the media or social networks. The company considers that a compromise in the brand can lead to a drop in market share.

American Airlines defines a significant financial impact as one that would cause the company a loss large enough to change its internal risk management approach, which they determine to be 1% of its pre-tax revenue, or equal to $:29 Million in 2019. United and Avianca did not report a quantitative indicator defining a significant financial impact.

Airlines also report considering acute and chronic physical risks in their evaluation. American reports that it includes these risks in assessments because atmospheric disturbances caused by climate change may contribute to more frequent and intense turbulence events on its flights, and also considers that such risks may impact its employees who work outdoors.

All three companies report risks and opportunities associated with climate change within the full CDP/TCFD framework, including valuation of financial costs associated with identified risks and opportunities.

STRATEGY

All three companies evaluated report that the climate risks and opportunities evaluated have influenced the companies' strategy and/or financial planning. Regarding the provision of new services, United Airlines and American Airlines report that they have developed programs to offset emissions from their passenger and cargo flights.

United Airlines highlights its commitment to investments in sustainable aviation fuel (SAF). United states it is the airline with the largest investment ($30M) in sustainable fuel development, in partnership with Fulcrum BioEnergy. American Airlines reports that in 2020 it has committed to purchase 9 million gallons of renewable fuel over the next 3 years with the company Nest.

Regarding the carbon market, Avianca reports having been impacted by regulations in Colombia, which is why it influenced the decision to offset emissions from its domestic operation in the country, through the purchase of carbon credits, thus avoiding taxation.

In 2019, Avianca invested about US$: 1,398,925.36 in carbon credits paid without taxation, offsetting 300,000 tons of CO2, which corresponds to 30.25% of the emissions generated by the company's operation in Colombia.

United and Avianca report that they use an internal carbon price to better understand the carbon markets, and report values of US$:8.00 /tCO2e and US$:4.94 /tCO2e, respectively.

In the evaluation of practices related to the company's strategy, the three companies report having already carried out an assessment of climate scenarios that helped define the company's strategy.

United Airlines' scenario analysis shows that the coastal areas where some of the company's markets are located - such as hubs in Houston, Los Angeles, New York and San Francisco - could be affected by climate change due to rising sea levels and population migration. Approximately 70 percent of United's 2019 capacity departed or arrived from these hubs.

Using climate scenarios to define corporate strategy is one of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

American Airlines examined seven climate-related hazards and their impacts in ten most critical locations in the US and UK. Three chronic impacts were assessed: rising temperatures, sea level rise, and increased precipitation; and four acute impacts: extreme temperatures, flooding, cyclonic events, and prolonged drought.

GHG EMISSION REDUCTION TARGETS

All companies evaluated have GHG emissions intensity reduction targets, with only United Airlines reporting an absolute emissions reduction target, which is the ICAO target for the civil aviation sector (50% absolute emissions reduction by 2050 based on 2005). The targets reported by the companies are presented in table 10.

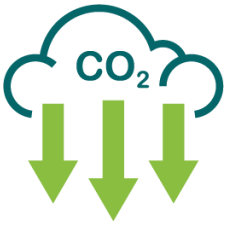


Table 10 - GHG emissions reduction targets - CDP Benchmarking

Airline	GHG emissions reduction target
United Airlines	Intensity (tCO_2eq/RTK): Reduce by 15% the emission index by 2020, considering the 2009 emission index
	Absoluta: Reduce emissions by 50% by 2050, considering 2005 emissions
American Airlines	Intensity (tCO_2eq/RTK): Reduce by 9% the emissions index by 2020, considering the 2014 emissions index
Avianca	Intensity (tCO_2eq/RTK): Reduce by 9% the emissions index by 2020, considering the 2014 emissions index

United and American Airlines audit their GHG inventory for scopes 1, 2 and 3. Avianca does not audit its GHG emissions.

SCIENCE BASED TARGETS

The Science Based Target Initiative is the institution responsible for evaluating and approving science-based GHG emissions reduction targets. None of the companies evaluated in the CDP benchmark have a science-based target. The companies in the civil aviation sector that have already publicly committed to developing science-based targets are presented in table 11, followed by the level of ambition of the commitment.

Table 11 - Airlines developing science-based reduction targets

Science Based Targets	Ambition Level
International Consolidated Airlines Group (IAG)	1,5°C
IBERIA, Líneas Aéreas de España, S.A	1,5°C
YASAVA Solutions AS	1,5°C
GOL (GOL Linhas Aéreas S.A.)	2,0°C
ANA Holdings Inc.	2,0°C
LATAM Airlines Group S.A.	2,0°C

NET ZERO COMMITMENTS

Among the airlines evaluated, those that have already made public commitments to become carbon neutral are: American Airlines, United Airlines, IAG, GOL and LATAM. These companies have committed to achieving emissions neutrality by 2050.

Table 12 presents a summary of the CDP benchmarking, by category evaluated, as well as the last two evaluations of the companies analyzed.

Table 12 - Benchmarking best practices for GHG emissions management - Source: CDP 2020

Company	CDP Climate Change		Governance		Risks and Opportunities		Strategy			Goals and Performance			Carbon Market	Additional Metrics
	2019	2020	Council responsible for climate issues	Incentives for managing climate issues	Evaluation estimation of financial impact	Climate Scenarios	Offsetting of emissions for customers	Renewable fuel procurement target	GHG emissions reduction target	Science-Based Target	Verified GHG Inventory	Generated/ purchased carbon credits	Internal Carbon Price	
United Airlines Holdings	A-	A	Yes, through the Public Accountability Committee	Yes, monetary incentives for executives.	Yes, within the company's risk assessment processes.	Yes, evaluated IEA 2DS scenario.	Yes. for passengers and cargo.	Yes.	Yes, absolute target and intensity target	No, but consider it a scientific based goal.	Yes, Scopes 1, 2 e 3	Yes.	Yes, to better understand the carbon markets. 8$ / tCO2e	
American Airlines Group Inc	B-	A-	Yes, through the Corporate Governance Committee	Yes, monetary incentives for energy reduction projects	Yes, within the company's risk evaluation processes	Yes, evaluated under IPCC RCP8.5 scenario.	Yes. for passengers.	Yes.	Yes, intensity goal.	No, but we plan to implement it in the next 2 years	Yes, Scopes 1, 2 e 3	No.	No.	
Avianca Holdings S.A	B-	B	Yes, through the Executive Committee.	Yes, monetary incentives for operational and administrative positions.	Yes, within the company's risk evaluation processes.	Yes, evaluated IEA 2DS scenario.	No.	No.	Yes, intensity goal.	No, but consider it a scientific based goal.	No.	Yes.	Yes, to better understand the carbon markets. 4,94$ / tCO2e	
AZUL	NA	D	Yes, through the Director of People.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	

TPI – TRANSITION PATHWAY INITIATIVE

The initiative evaluates the level of companies, by sector of activity, in their performance in the transition to a low carbon economy, through public data collection. It evaluates 19 indicators distributed into five levels (0 to 4) that represent the efforts made by companies to face the climate crisis. The companies Jetblue (Level 4), LATAM (Level 3) and American Airlines (Level 3) were selected for analysis.

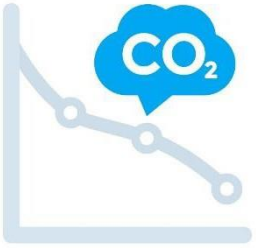
All companies evaluated meet all level 0 (Unawareness of Climate Change as a Business Issue) and level 1 (Recognizing Climate Change as a Business Issue) indicators. They also meet level 2 (Building Capacity), with GHG emissions reduction targets and publication of scope 1 and 2 GHG emissions information. LATAM is one of the companies committed to developing a science-based target in SBTi.

It is noteworthy that one of the sources of public information that the TPI initiative uses is the CDP. Thus, there is a strong relationship between the indicators evaluated by TPI and the issues analyzed in the CDP.

At level 3 (Integrating into Operational Decision Making), the three companies evaluated have quantitative GHG emissions reduction targets, report Scope 3 emissions, and audit Scope 1 and 2 emissions. American Airlines and Jetblue inform that they have a board member or board committee with responsibility for oversight of climate issues, and both have a climate-related risk management procedure. Only Jetblue meets all the indicators assessed at this level. Indicator 13 is not applicable to the civil aviation sector (N/A). At level 4 (Strategic Assessment), all three companies report having established long-term quantitative targets for reducing their GHG emissions. Jetblue publishes an internal carbon price and American Airlines publishes that it incorporates climate change risks and opportunities into its strategy.

INTENSITY OF GHG EMISSIONS

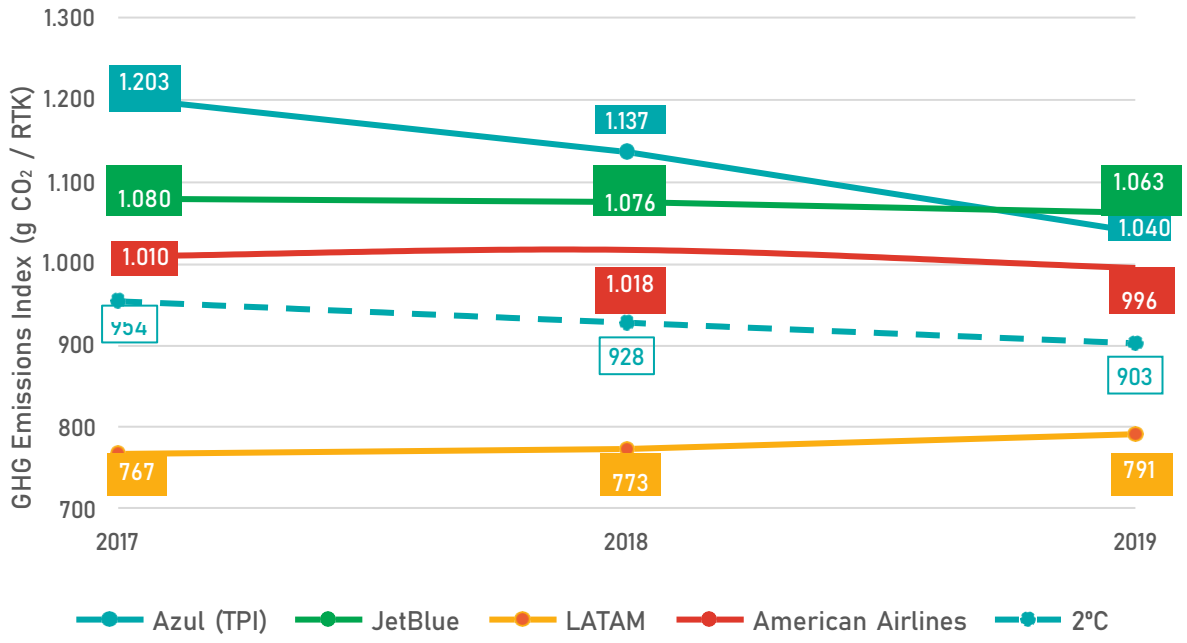
One of the differentials of the TPI initiative is that it seeks to evaluate the performance of companies and compare it with the efforts necessary to limit global warming to 2ºC, through the GHG emissions intensity index. Thus, the initiative collects scope 1 and 2 GHG emission data from companies, as well as the denominator of the emissions index, which in the civil aviation sector is the RTK (*Revenue tonne kilometer*).



The airlines that report only RPK data have this data transformed into RTK for generation of the emissions index and comparison with other companies in the sector, by the initiative itself. As already presented, according to the last assessment of Azul, the TPI initiative did not identify the public reporting of scope 1 and 2 emissions, and therefore these values were estimated.

Graph 13 presents the emissions index of the selected companies in the IPT, in gCO2/RTK. The dashed line indicates the emission index value for the civil aviation sector in line with efforts to limit global warming by 2°C.

Chart 13 - GHG emissions intensity - TPI Benchmarking



LATAM is the only airline evaluated that has an emissions index within the acceptable values for limiting global warming by 2ºC. The other companies have emission rates higher than the limit. Azul is the airline that presents the highest percentage reduction of its index from one year to another, demonstrating efforts to reduce GHG emissions, emitting less GHG per RTK each year.

The real values of Azul's emissions index, calculated based on the GHG Inventory and RTK data, are lower than the values estimated by TPI. Thus, there is an opportunity for Azul to disclose its scope 1 and 2 emissions, so that in the next TPI evaluation, these values are updated, and Azul is better

Table 13 shows the 19 indicators evaluated by TPI, the date of the last evaluation each company received, as well as the current rating.

Table 13 - Benchmarking best practices for GHG emissions management - Source: Transition Pathway Initiative

Level 0: Unawareness of Climate Change as a Business Issue	Jetblue last evaluation in: 08/26/2019 current rating: LEVEL 4	LATAM 11/12/2019 LEVEL 3	American Airlines 03/03/2020 LEVEL 3	Azul 07/11/2019 LEVEL 2
1. Does the company recognize climate change as a significant business issue?	OK	OK	OK	OK
Level 1: Recognizing Climate Change as a Business Issue				
2. Does the company recognize climate change as a relevant business risk and/or opportunity?	OK	OK	OK	OK
3. Does the company have a policy or commitment for action on climate change?	OK	OK	OK	OK
Level 2: Building Capacity				
4. Has the company established goals for reducing greenhouse gas emissions?	OK	OK	OK	-
5. Has the company published information about its Scope 1 and 2 greenhouse gas emissions?	OK	OK	OK	-
Level 3: Integrating Operational Decision Making				
6. Has the company appointed a board member or board committee with explicit responsibility for overseeing climate change policy?	OK	-	OK	-
7. Has the company established quantitative targets for reducing its greenhouse gas emissions?	OK	OK	OK	-
8. Does the company report Scope 3 emissions?	OK	OK	OK	-
9. Has the company had its operational (Scope 1 and/or 2) greenhouse gas emissions data verified?	OK	OK	OK	-
10. Does the company support national and international efforts to mitigate climate change?	OK	-	-	-
11. Does the company publicize its membership and involvement in trade associations engaged in climate issues?	OK	OK	-	-
12. Does the company have a climate-related risk management process?	OK	-	OK	-
13. Does the company disclose emissions from the use of its Scope 3 products?	N/A	N/A	N/A	N/A
Level 4: Strategic Evaluation				
14. Does the company has established long-term quantitative targets for reducing its greenhouse gas emissions?	OK	OK	OK	-
15. Does the company's compensation for senior executives incorporate performance on the topic of climate change?	-	-	-	-
16. Does the company incorporate climate change risks and opportunities into its strategy?	-	-	OK	-
17. Does the company do climate scenario planning?	-	-	-	-
18. Does the company publish an internal price for carbon?	OK	-	-	-
19. Does the company ensure coherence between its climate change policy and the positions taken by the trade associations of which it is a member?	-	-	-	-

OPPORTUNITY SUMMARY

The following is a summary of the opportunities identified based on the information evaluated in the Blue Environmental Diagnosis and Benchmarking sections.

GHG EMISSIONS

Table 14 presents the opportunities identified to improve the management of emissions at Azul.

Table 14 - Summary of opportunities for managing GHG emissions

Opportunity	Description
Publish GHG Emissions	The TPI initiative considers that Azul does not publish its Scopes 1 and 2 emissions, and estimates Azul's emissions index since 2017.
Audit GHG Inventory	Perform third-party verification of Azul's GHG emissions.
Conduct Evaluation of Climate Scenarios	Evaluation developed by other companies in the industry to evaluate climate-related risks and opportunities and incorporate into business strategy. It is one of the TCFD recommendations.
Establish a target for SAF (*Sustainable Aviation Fuel*) use or acquisition	Target associated with the reduction of GHG emissions, and used by companies in the sector to demonstrate commitment to the climate issue.
Establish GHG emission reduction target	Science-based targeting, following the SBTi (Science Based Targets Initiative) methodology, is considered best practice in the market.
Implement monetary incentive for executives associated with ESG goals	Considered as one of the main ways for companies to direct efforts towards climate issues. For example, linking variable compensation for executives to the achievement of GHG emissions reduction targets.
Participate in an institution related to climate change	Azul's institutional participation in associations that demonstrate commitment to the climate issue (for example, the UN Global Compact and CEBEDS).
Incorporate climate-related opportunities into business strategy	Companies in the industry have done zero-carbon flights, offset CO2 emissions with accumulated miles, offer extra miles for flights offset by passengers, etc.
Internal Carbon Pricing	Companies use internal carbon pricing to factor the costs associated with emissions into business decisions, and prepare for the international civil aviation carbon market (CORSIA).
Define internal criteria for the acquisition of carbon credits	Establish Azul's criteria for purchasing carbon credits, with the objective of avoiding the purchase of credits of low reliability.

WASTE

Table 15 presents the opportunities identified to improve waste management at Azul.

Table 15 - Summary of opportunities for waste management

Opportunity	Description
Establish a goal for the destination of waste to landfills	Limiting the destination of waste to landfills, giving preference to destinations that generate lower environmental impacts. Some companies have set targets to zero destination to landfills.
Replace bottled water material supplied on flights.	Currently there are alternatives to supply water in more sustainable packages or in aluminum cans, which is a material that presents excellent recyclability in Brazil.
Implement policy of not purchasing single-use plastics.	Do not buy single-use plastics at the Azul units. Mugs and squeezes can be offered to employees. Azul has not yet carried out a structured program for the elimination of single-use plastics.

WATER

Table 16 presents the opportunities identified for improving water management at Azul.

Table 16 - Summary of opportunities for water management

Opportunity	Description
Produce reuse water at the ETE of VCP Hangar	Activate the unit's ETE, starting the production of reuse water for industrial activities. It is suggested to install a water meter at the station, in order to measure the volume of reused water consumed.
Implement rainwater harvesting in the Hangars	Diversify the sources of water collection of the operational units, avoiding dependence on conventional sources of supply.
Sectorize water consumption in the hangars	Install hydrometers in the workshops with the highest water consumption in the hangars, in order to monitor the volumes consumed in activities that are intensive in the consumption of this resource, and implement water efficiency measures.
Set a goal to reduce water consumption	Implement a goal to reduce water consumption in industrial activities (Hangars).
Monitor volumes of water supplied to the aircraft.	Monitor volumes of water supplied to each aircraft in QTA operations, in order to identify possibilities of reducing the volumes of water supplied on flights.

ENERGY

Table 17 presents the opportunities identified to improve energy management at Azul.

Table 17 - Summary of opportunities for water management

Opportunity	Description
Establish a goal for electrification of equipment in the Hangars	Some companies in the industry have set targets for electrification of equipment used in their operations. For example, replacing diesel GPUs with electric GPUs.
Set a goal of having a 100% renewable electric matrix (direct consumption)	Many companies have made commitments to achieve 100% renewable energy in their operations. One strategy for proving the origin of energy is the use of renewable energy certificates (I-REC).
Set a goal to reduce energy consumption at Azul	Implement energy efficiency goal in the industrial activities (Hangars).

ENVIRONMENTAL RISK EVALUATION

Based on the information evaluated in the environmental diagnosis and sustainability benchmarking stages, the main environmental risks that may be related to Azul's direct or indirect operations were identified.

RISK IDENTIFICATION

The identified risks were separated into three categories: Strategic Risks, Ground Risks and Flight Risks. Tables 18, 19 and 20 present the risks identified in the respective categories, with a description of the risk, and an example of materialization for Azul.

Table 18 - Risks identified in the strategic risk category

ID	Risk	Description of the risk for Azul
STRATEGIC RE 1	Image and Reputation (Investors)	Investor perception of the company's reputation regarding the management of its GHG emissions and efforts to mitigate the effects of climate change may represent a risk. If Azul does not adequately manage its GHG emissions, it may lose credibility with investors, with consequent financial impacts for the company. Example: In 2021 Azul received a request from a group of investors, requesting the adaptation of its reporting to the recommendations of TCFD (*Task Force on Climate-related Financial Disclosures*).
STRATEGIC RE 2	Market (Clients)	Changing consumer preferences, for example, regarding the carbon footprint of air travel may pose a risk of reduced demand for longer-distance domestic travel or international travel. If customers do not perceive that Azul is aware and acting to reduce the impact of its operations on climate change, they may choose to fly with other airlines. Example: Some airlines already offer a flight emissions offset service for passengers and cargo. Some customers may have a preference for airlines that offer this type of service.
STRATEGIC RE 3	Fuel Supply	The regions of supply/storage of aviation fuel for Azul may be affected by weather events (storms, intense winds, rise in sea level), which may lead to reduced production, increased costs, or even interruption in supply to Azul. Example: Occurrence of flooding events, flooding, landslides, sea level rise in regions where Azul supplies fuel.

Table 19 - Risks identified in the soil risk category

ID		Risk	Description of the risk for Azul
GROUND	RS 1	Rise in electric energy costs	The Azul units (Hangares, UniAzul and AzulVille) acquire electricity for their operations through the power grid (local concessionaires). The increase in the cost of electricity from the grid, or even the interruption in power supply represents a risk to Azul's operations. Example: In the last rainy season, from September/2020 to May/2021, Brazilian rivers registered the lowest average volume of water in 91 years. There is a risk that the drought predicted in the Paraná River basin for this period will result in problems in the supply of energy to the South, Southeast and Center-West regions.
	RS 2	Lack of water for Hangars operation	Azul's hangars have maintenance workshops with intensive activities in water consumption (mainly cleaning operations - seat covers, coatings (cabin and lavatory), screws, filters, heat exchange, wheels and brakes, items after NDT). The Hangars are located in watersheds considered to be critical in terms of quality and quantity (ANA). The reduction in water availability, or even interruption, for the Hangars represents a risk to Azul. Example: Region of Campinas (Hangar VCP) was greatly affected by the drought in the southeast region in the period 2013-2015
	RS 3	Extreme Weather Events (Ground)	The occurrence of extreme weather events such as intense rainfall, storms, intense winds can cause damage to the physical structure of the Azul units (Hangars, UniAzul and AzulVille). Example: Occurrence of flooding events, floods, landslides in regions close to the hangars or other units of Blue, can cause difficulty of access of inputs or employees.
	RS 4	Single-Use Plastic Waste	Plastic has received special attention due to the problems of contamination from single-use plastic materials such as straws, cutlery, packaging, and cups. Many campaigns have been conducted regarding the contamination of plastics in the oceans. Azul has not yet carried out a structured program to eliminate the purchase of single-use plastic materials and is still using, for example, plastic cups in its operational units. Example: Some municipalities have passed laws that prohibit the provision of single-use plastic utensils, such as the city of São Paulo. The advancement of regulations of this kind can represent a risk for Azul. This could also represent an image risk for the company.
	RS 5	Indirect risks at airports	A considerable part of Azul's water and energy consumption occurs indirectly at its operational bases. The responsibility for supplying water and energy for these indirect operations lies with the airports where the bases are located. These consumptions are not measured, but only estimated. The unavailability of water or energy supply at the operational bases could represent a risk to Azul's operations. Example: In an investigative conversation with Azul employees, a low water quality event was reported at an airport (no impact on the operation was reported).

Table 20 - Risks identified in the flight risk category

	ID	Risk	Description of the risk for Azul
FLIGHT	RV 1	CORSIA	Currently, CORSIA is in the voluntary phase (2021-2023), where countries are not required to participate. The increase in international flights (between participating countries) by Azul should increase emissions under CORSIA regulation. Brazil's entry into the CORSIA (by 2027) should significantly increase emissions from international flights under CORSIA control. Azul will have to offset GHG emissions that exceed the base year emissions (2019 or average between 2019 and 2020). Example: 25% of Azul's GHG emissions in 2019 would be subject to CORSIA regulation if all countries had already joined the program.
	RV 2	Emerging Regulation PL1873/2021 (Biocomb.)	In Brazil, the PL n. 1873/2021 is under discussion, which establishes the National Program for Advanced Renewable Fuels, in order to promote the production and consumption of aviation biokerosene. It establishes mandatory minimum addition percentages of renewable aviation kerosene to fossil aviation kerosene throughout the country. The percentages are 2% as of 2027, increasing by 1% until reaching 5% in 2030. Example: This regulation may cause an increase in the cost of aviation fuel sold in the country, which may represent a risk for Azul.
	RV 3	Emerging Regulation PL528/2021 (MBRE)	In Brazil, the PL No. 528/2021, which establishes the Brazilian Emissions Reduction Market (MBRE), is under discussion. The Ministry of Economy, within 5 years from the publication of this law, should regulate the mandatory national GHG emissions offset program. The PL recommends establishing sectoral and individual targets for reduction, removal and offsetting in a progressive manner and in accordance with the Nationally Determined Contribution (NDC) provided for in the Paris Agreement. Example: Regulating GHG emissions within the country by establishing mandatory offsets represents a risk for Azul, since approximately 75% of its emissions are domestic.
	RV 4	Waste Generated on Flights	The waste generated during flights is managed by the catering operation at the operational bases. Some bases do not have a catering operation by Azul, and waste management is the responsibility of the airport. The inadequate disposal of waste generated during flights can represent a risk for Azul. The use of non-recyclable materials in the onboard service may also bring a perception of low sustainability by customers. Other countries' regulations may exist concerning in-flight waste. Example: Occurrence of incorrect waste disposal at an airport, associated with waste generated by Azul, can cause damage to the company's image. Emerging regulations on the subject may also represent some risk.
	RV 5	Extreme Weather Events (Flights)	The occurrence of extreme weather events, such as winds and heavy rains, can cause delays or even flight interruptions in regions with airports that are Azul's origin/destination. The delays and interruptions may represent significant financial impacts for the company. Example: In severe conditions, weather can significantly interfere with airline operations, resulting in delays, cancellations, and accidents. With the effects of climate change, these conditions may become more intense and frequent.

RISK PRIORITIZATION

From the identified risks, they were evaluated in a comparative manner based on the two parameters of the Blue Risk Matrix: Likelihood and Severity. These parameters were adapted to perform the environmental risk assessment. The parameters used in the evaluation, and their respective scales, are presented below.

ASSESSMENT SCALES

Likelihood is the chance of something happening. Impact is the severity, or harmful consequences to the achievement of the goal. These two parameters can be described qualitatively or quantitatively. For the proposed environmental risk assessment, the Fibonacci sequence was selected as the evaluation scale for these two parameters.

According to risk assessment methodologies, the use of the Fibonacci sequence for assessing the impact and likelihood of an event occurring is a good alternative to other purely sequential or arbitrary scales. The Fibonacci sequence facilitates a comparative risk assessment, since the scales are more closely spaced, favoring comparability, both on the axes of the probability and severity scales.

Table 21 - Risk evaluation scales for the Probability parameter

PROBABILITY	DESCRIPTION
3	Almost inconceivable that an event will occur
5	Very unlikely to occur (not known to have occurred)
8	Unlikely to occur, but possible (has occurred rarely)
13	Likely to occur from time to time (has occurred infrequently)
21	Likely to occur several times (has occurred frequently)

Table 22 - Risk assessment scales for the Severity parameter

SEVERITY	DESCRIPTION
3	Low severity impact - *does not require immediate mitigation*
5	Acceptable impact - *requires mitigation without increasing costs*
8	Considerable impact - *requires mitigation without considerable cost escalation*
13	Considerable impact - *requires mitigation with considerable cost escalation*
21	Extremely significant impact - *requires mitigation with significant costs*

For each environmental risk identified, an evaluation was performed based on the parameters indicated.

RISK EVALUATION

Azul's environmental risk assessment was carried out taking into account two approaches.

1. Evaluation by H2O Company consultants, based on the information and data evaluated in the Environmental Diagnosis and Benchmarking stages.
2. Evaluation of Blue employees, based on their perceptions and specific knowledge of each department, regarding the probability of occurrence and severity of the identified environmental risks.

This evaluation was conducted in the form of a Workshop, held on 07/06/2021, with employees from the Sustainability, Compliance, Fuel and Corporate Risk departments.

The final value of each parameter - P (Probability) and S (Severity) - of Azul's environmental risks is the average of the two assessment approaches. The PxS values were rounded to the nearest whole number. Table 23 presents the final assessment of Azul's environmental risks.

Table 23 - Azul's Environmental Risk Assessment (Probability x Severity)

		Identified Risks	Environmental Risk Evaluation		P x S
			P	S	
Strategic	RE 1	Image and Reputation (Investors)	13,0	9,7	126
	RE 2	Market (Clients)	7,7	11,3	87
	RE 3	Fuel Supply	11,3	16,7	189
Ground	RS 1	Rise in electric energy costs	18,3	9,7	177
	RS 2	Lack of water for Hangars operation	9,7	8,0	77
	RS 3	Extreme Weather Events (Ground)	14,0	6,0	84
	RS 4	Single-Use Plastic Waste	6,0	8,7	52
	RS 5	Indirect risks at airports	6,0	11,3	68
Flight	RV 1	CORSIA	21,0	14,0	294
	RV 2	Emerging Regulation - PL 1873/2021 (Biofuels)	18,3	21,0	385
	RV 3	Emerging Regulation - PL 528/2021 (MBRE)	9,7	15,7	151
	RV 4	Waste Generated on Flights	8,7	9,7	84
	RV 5	Extreme Weather Events (Flights)	11,3	18,3	208

For further details about the evaluations carried out by Azul employees and consultants, see the spreadsheet "H2O_AZUL - Environmental Risk Evaluation_v1".

RISK CLASSIFICATION

The classification of the environmental risks was also adapted from the Azul´s Risk Matrix, using the same 4 categories, from the results of the PxS factor (Probability x Severity), as presented in table 24.

Table 24 - Risk classification according to the Probability x Severity factor

P X S	Classification
P x S > 200	Intolerable Risk
200 > P x S >100	Tolerable Risk within Mitigation
60 > P x S >100	Tolerable Risk
P x S < 60	Acceptable Risk

According to the final result of the environmental risk assessment, presented in table 23, Azul's environmental risks are classified as presented in table 25.

Table 25 - Final classification of Azul's environmental risks

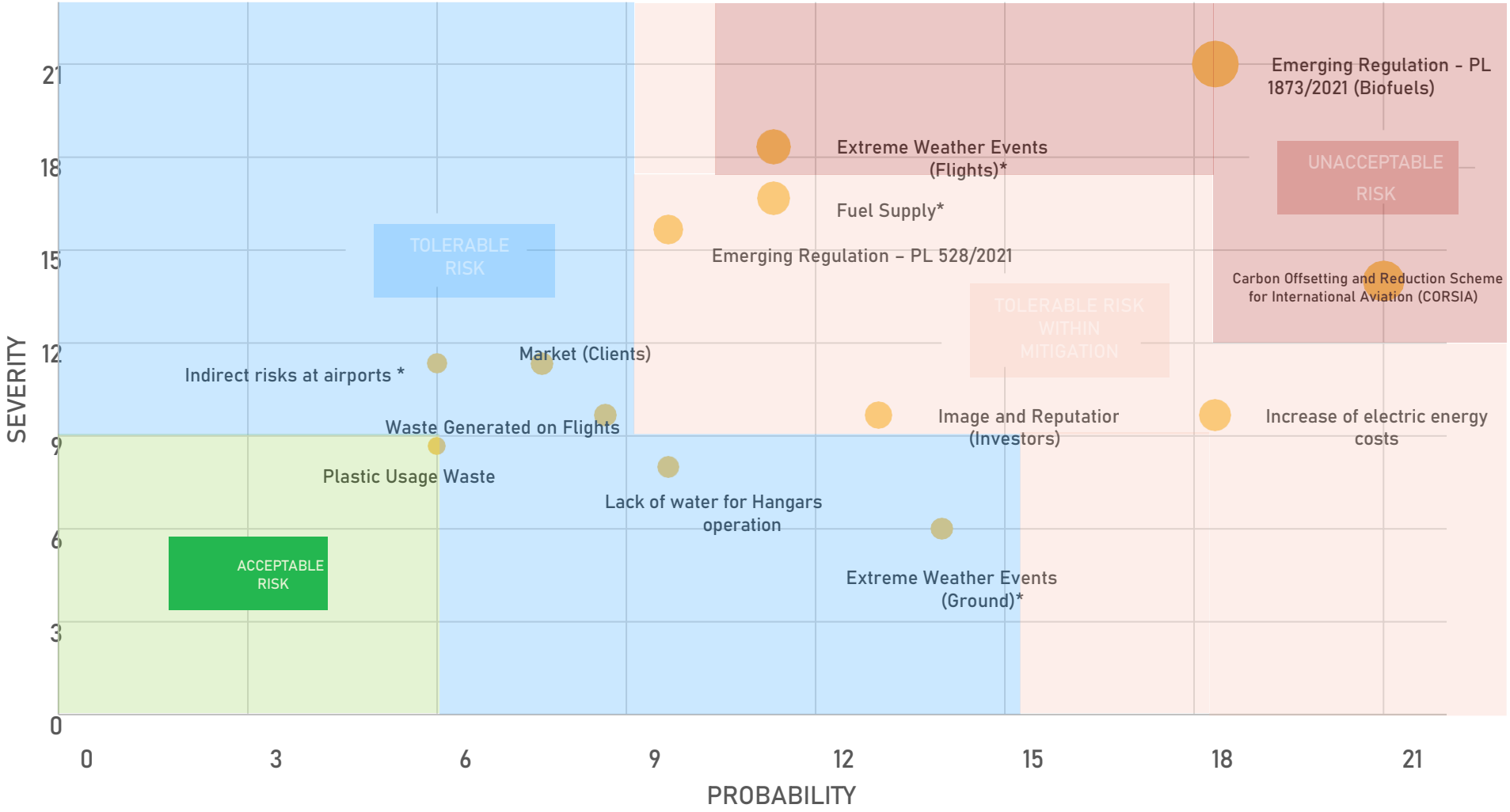
Evaluated Risks		P x S	Classification
RV 2	Emerging Regulation - PL 1873/2021 (Biofuels)	385	UNACCEPTABLE RISK
RV 1	International Civil Aviation Carbon Market - CORSIA	294	
RV 5	Extreme Weather Events (Flights)	208	
RE 3	Fuel Supply	189	TOLERABLE RISK WITHIN MITIGATION
RS 1	Rise in electric energy costs	177	
RV 3	Emerging Regulation - PL 528/2021 (MBRE)	151	
RE 1	Image and Reputation (Investors)	126	
RE 2	Market (Clients)	87	TOLERABLE RISK
RS 3	Extreme Weather Events (Ground)	84	
RV 4	Waste Generated on Flights	84	
RS 2	Lack of water for Hangars operation	77	
RS 5	Indirect risks at airports	68	
RS 4	Single-Use Plastic Waste	52	TOLERABLE RISK

From the final classification of the environmental risks, each risk can be plotted on a graph, according to the P and S parameters of Azul.

ENVIRONMENTAL RISK MATRIX

Chart 14, below, presents the consolidation of Azul's environmental risk assessment, through the Azul's Environmental Risk Matrix.

Chart 14 - Azul's Environmental Risk Matrix



RISK REPORTING

According to the final environmental risk assessment, the risks assessed as "considerable" had reporting prepared in alignment with the CDP framework and TCFD.

The CDP options for classifying risks with respect to time horizon and probability of occurrence.

According to Azul's last report to CDP (2020), the company's definition for classifying the time horizon of each risk was identified. Azul defines short term as 0 to 1 year, medium term as 1 to 5 years and long term as 5 to 10 years.

Table 26 - Reporting options to CDP for the parameters Time horizon and Probability

Temporal Horizon	Probability	Impact Dimension
Short Term (0 to 1 year)	Most likely	High
Medium Term (1 to 3 years)	Very likely	Medium-high
Long Term (3 to 10 years)	Likely	Medium
Unknown	More likely than unlikely	Medium-low
	As likely as unlikely	Low
	Unlikely	Unknown
	Very unlikely	
	Exceptionally unlikely	
	Unknown	

Below is the reporting of Azul's top three environmental risks (intolerable risks), according to the assessment performed. These three risks were reported in the CDP Climate Change Questionnaire 2021.

The estimates of financial impact of Risk 01 (PL 1873/2021) and Risk 02 (CORSIA) were performed through projections in the spreadsheet "H2O_AZUL - Environmental Risk Assessment_v1".

RISK REPORT 01: PL 1873/2021

Point in the value chain where the risk factor occurs: Direct Operations

Type of risk: Emerging Regulation

Main climate risk factor: Mandates / regulations on existing products and services

Main potential financial impact: Increased direct costs

Company-specific description: In direct operations, the main climate risks are related to maintaining the efficiency of the company's own aircraft fleet, since aviation kerosene consumption is one of the three largest costs (21% in 2020) and the company's main source of greenhouse gas emissions (about 99%). One of Azul's central objectives is to have an efficient fleet of aircraft, with lower fuel consumption per transported passenger.

Azul consumes large volumes of aviation kerosene (aviation fuel), one of its main operating expenses, and therefore any cost increase over the volumes purchased of aviation kerosene can represent a significant financial impact for the company.

In Brazil, the Bill (PL) No. 1873/2021 is under discussion, which establishes the National Program for Advanced Renewable Fuels, in order to promote the production and consumption of aviation biokerosene in the country. It establishes mandatory minimum addition percentages of renewable aviation kerosene to fossil aviation kerosene throughout the country. The percentages are 2% as of 2027, increasing by 1% until reaching 5% in 2030.

This regulation may cause an increase in the cost of aviation fuel commercialized in Brazil, since renewable AAQ has a higher cost, representing a significant climate risk for Azul.

Timeframe: Long Term

Probability: Very Likely

Dimension of impact: High

Value of potential financial impact (minimum): R$ 141,000,000.00

Amount of potential financial impact (maximum): R$ 705,000,000.00

Explanation of the amount of financial impact: According to the Law Project (PL) n. 1873/2021, of all Azul's aviation kerosene (QAV) fuel consumption in 2027, 2% should be aviation biokerosene, and by 2030, this percentage should reach 5%.

To estimate fuel consumption in the year 2021, an average value between 2019 and 2020 consumption was considered. To calculate the QAV consumption in 2027, a fuel consumption growth rate of 6% per year was assumed. The cost of fossil fuel considered was R$: 3.30 / Liter, and two scenarios were evaluated.

In Scenario 01, it was considered that the cost of Renewable AAQ was 20% higher compared to Fossil AAQ, and in Scenario 02, it was considered that the cost would be 100% higher. According to the projections made, the total financial impact for Azul's operations between 2027 and 2030 will be about R$ 141 million in Scenario 01 and R$ 705 million in Scenario 02. The values were rounded conservatively.

Cost of risk response: R$:138,300,000.00

Response description and cost explanation: Our main strategy for reducing fuel consumption is to maintain a fleet that is always young. Azul has the youngest aircraft fleet in Brazil, with an average age of 6.6 years. We ended 2020 with 62 new generation aircraft, representing 66% of our seat supply. The company is working with the goal of reaching 100% of the new generation fleet faster than any other airline in the region.

Although it was briefly postponed due to the pandemic, our fleet renewal plan continues as one of the strategic pillars for the growth and sustainability of our business, and we will transform our fleet as soon as possible. At the same time, we are improving our environmental management.

Azul invests an average of R$138,300,000.00 per year to renew its aircraft fleet. The latest models that were acquired by the company are E2, A320neo and A330neo. These investments are significant and have an impact on Azul's financial planning in the long term.

As an example of the efficiency of the new generation aircraft, the A320neo model has an emission of 55 gCO2/passenger.km and the E2 model 63 gCO2/passenger.km, while a motorcycle emits 72 gCO2/passenger.km and a compact car 130 gCO2/passenger.km. In other words, Azul's new aircraft models emit less GHG per passenger.km than a motorcycle (about 20% less emission) and than a compact car (about 50% less emission).

RISK REPORT 02: CORSIA

Point in the value chain where the risk factor occurs: Direct Operations

Type of risk: Current Regulation

Main climate risk factor: Carbon pricing mechanism

Main potential financial impact: Increased overhead costs (operational)

Company-specific description: Currently, CORSIA is the main carbon pricing system under which Azul's GHG emissions are regulated. CORSIA is applicable only for emissions from international flights.

The pilot phase of CORSIA (2021-2023) and the first phase (2024-2026) are voluntary, where countries are not required to participate. The increase in international flights (between participating countries) performed by Azul is expected to increase emissions under CORSIA regulation. At the moment, the Brazil is not part of the program, therefore, flights to and from Brazil are not counted for emissions offset.

Brazil's entry into the CORSIA (by 2027) should significantly increase emissions from international flights under the control of this mechanism. Even though Brazil is not expected to participate in the voluntary phase of the CORSIA, there is also the possibility that Azul will need to offset GHG emissions from international flights. This may occur in the case of flights between countries participating in the voluntary phase, and that exceed the company's emissions baseline, established as GHG emissions in 2019.

Azul's emissions reported to CORSIA for the year 2019 were 742,227 tCO2eq. In the year 2020, due to the COVID-19 pandemic, these emissions were reduced by 64%, being reported 268,037 tCO2eq, referring to the year 2020.

Timeframe: Long Term

Probability: Virtually right

Dimension of impact: High

Value of potential financial impact (minimum): R$ 37.000.000,00

Amount of potential financial impact (maximum): R$ 513.000.000,00

Explanation of the amount of financial impact: Since CORSIA will be maintained on a voluntary basis until 2026, becoming mandatory in 2027, Azul performed a projection of GHG emissions on international flights, which would be under regulation, based on its reported data in the years 2019 and 2020. To estimate the financial impact due to the compensation of emissions, a Minimum Carbon Price (US$6) and a Maximum Carbon Price (US$30) were considered. To convert the values into reals (R$), the value of R$5.19 / US$30 was considered.

Currently under discussion by CORSIA is the base year that should be adopted as the emission limit for airlines. There is a big difference between adopting the base year in 2019 or 2020, and it is known that not only 2020 will be considered as the base year, due to the effect of the COVID-19 pandemic. Thus, Azul carried out projections considering 2 different scenarios.

- Scenario 01: CORSIA adopts base year 2019

This represents the lowest impact scenario, since the 2019 emissions are the highest, and would be considered as the base year. The total financial impact in this scenario varies between R$: 37 Million and R$ 186 Million; according to the Maximum and Minimum Carbon Prices considered.

- Scenario 02: CORSIA adopts as base year the average emissions between 2019 and 2020

This represents the scenario with the highest impact. The total financial impact in this scenario varies between R$ 103 Million and R$ 513 Million; according to the Maximum and Minimum Carbon Prices considered.

The estimates were made based on an individual, non-sectoral emissions scenario, which represents the highest cost scenario for Azul.

Cost of risk response: R$:84.990,00

Response description and cost explanation: Azul monitors its GHG emissions annually, in order to report to CORSIA the emissions on international flights. The costs of conducting the GHG inventory (R$ 25,800.00) and reporting to the CORSIA, and the project of identification and evaluation of corporate environmental risks (R$ 59,190.00), which resulted in the projections of emissions under CORSIA regulations, and the respective estimates of financial impact reported, were considered as response costs.

The company is also considering starting voluntary offsetting of GHG emissions before it becomes mandatory through CORSIA or another emissions taxing mechanism. In this way we hope to gain greater knowledge about the carbon market and be better prepared for the stage when the CORSIA becomes mandatory for all countries in 2027.

We also evaluated the possibility of establishing our own criteria for acquiring carbon credits, in order to avoid image or reputational risk with the acquisition of carbon credits that do not effectively represent carbon capture measures.

RISK REPORT 03: Extreme Weather Events (Flights)

Point in the value chain where the risk factor occurs: Direct Operations

Type of risk: Acute Physical

Main climate risk factor: Increased severity and frequency of extreme weather events, such as cyclones and floods

Main potential financial impact: Increased overhead costs (operational)

Company-specific description: In severe conditions, the weather can significantly interfere with airline operations, leading to delays, cancellations, or even accidents. Some studies indicate that among the various reasons for flight delays and cancellations, weather is the most recurrent factor.

With the advent of climate change, these conditions may become more intense and more frequent, since most climate models predict increased temperatures, sea level rise, and changes in precipitation patterns, which should lead to greater interference in operations. Changes in the

dynamics of winds, precipitation, and temperature can lead to major disruption to civil aviation operations. For example, the temperature and elevation of an airport influence the maximum takeoff weight of an aircraft. So for a given runway length, elevation above sea level, and aircraft model, there is an optimum temperature (ºC) for takeoffs. Heavy rainfall can also reduce visibility, cause overflows in airport drainage systems and lead to delays and cancellations.

Thus, the increase in the severity and frequency of extreme weather events represents a significant climate risk for Azul's flight operations, as these interferences in the flight operation represent financial impacts. In this way, Azul evaluates how to deepen the knowledge on the subject and develop mechanisms to evaluate these impacts.

Time Horizon: Medium Term

Probability: Likely

Dimension of impact: Medium

Value of potential financial impact: It was not possible to estimate

Explanation of the amount of financial impact: The amount of the financial impact of this climate risk refers to possible delays and flight cancellations due to the effects of climate change on our operations.

Currently, Azul does not perform financial impact estimates related to weather events. We intend to develop an internal process to relate the occurrence of weather events at airports with interferences in our flight operations, in order to enable a financial impact estimate in the future.

Cost of risk response: R$: 80,500.00

Response description and cost explanation: Azul has already identified this climate risk through its environmental and climate risk identification and assessment process.

In 2021, a climate scenario study will be developed to identify the main routes and airports used by the company that may increase the occurrence of extreme climate events. The study will be developed for all our operations in Brazil.

Based on these results, Azul will be able to prioritize routes and airports that require mitigation actions for the effects of climate change, and prepare its risk response action plan. The cost of risk response corresponds to the study of climate scenarios that will be developed in 2021 (R$: 80,500).