CRUISE Industry

Season 2022/2023

Profile study and economic impacts of the cruise industry in Brazil

FGV

CLIA
CRUISE LINES INTERNATIONAL ASSOCIATION
BRASIL

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SEA CRUISES

PROFILE STUDY AND ECONOMIC IMPACTS OF THE CRUISE INDUSTRY IN BRAZIL

Season 2022-2023

FGV

CLIA
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BRASIL

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EXECUTIVE SUMMARY

The COVID-19 pandemic officially ended on May 5, 2023, according to the World Health Organization (WHO), but the tourism sector is still recovering as it was severely affected during that period. However, the maritime cruise segment has shown strength and significant results in the 2022/2023 season.

Despite a limitation imposed by the National Health Surveillance Agency (ANVISA), requiring a 2% separation of available ship capacity for possible COVID-19 cases during trips, the 2022/2023 season saw the highest number of cruise passengers since the 2011/2012 season (the season with the highest results in this regard), welcoming a total of 802,758 people.

As tourism-related activities are highly relevant for job generation across all income levels of the Brazilian population, with varying levels of expertise, its growth generates immediate and significant consequences for the country, creating more job opportunities and increasing the income of the population.

The 2022/2023 season welcomed approximately 803,000 cruise passengers, marking the highest number since the 2011/2012 season (the highest in the historical series)

The economic impact generated by the expenses of cruise companies for the 2022/2023 season was approximately R$ 3 billion, a result 2.5 times higher than that of the 2021/2022 season. This increase demonstrates the sector's recovery and economic strength.

The economic impact of the cruise companies in the 2022/2023 season was approximately R$ 3 billion.

On the other hand, the impact generated by the expenses of cruise passengers and crew in the cities and embarkation/disembarkation and transit ports amounted to R$ 2.1 billion, more than 6 times higher than the previous season, due to the increase in the total number of cruise passengers in the season, proportionally affecting the impact.

TOTAL ECONOMIC IMPACT
Evolution of numbers | In millions (R$)

Sources: FGV/CLIA BRASIL

The Economic Leverage Index (IAE) of the sector, which means how much economic activity was generated from the expenses incurred by cruise companies for the season (how much the execution of the season boosts the Brazilian economy), was R$ 4.05.

R$ 4.05
São movimentados na economia brasileira a cada R$ 1,00 gasto pelas armadoras na temporada.

MAIN RESULTS

Result of the 2022/2023 season and percentage variation compared to the 2021/2022 and 2019/2020 seasons.

SHIPOWNERS

Fuel

2022 | 2023	Compared season	Variation
R$ 1,504.8 MM	2021 | 2022 R$ 793.1 MM	89.7 %
	2019 | 2020 R$ 565.0 MM	166.3 %

Supply Chain

2022 | 2023	Compared season	Variation
R$ 748.3 MM	2021 | 2022 R$ 158.1 MM	373.3 %
	2019 | 2020 R$ 221.5 MM	237.8 %

Taxes

2022 | 2023	Compared season	Variation
R$ 416.4 MM	2021 | 2022 R$ 92.4 MM	350.6 %
	2019 | 2020 R$ 157.4 MM	164.5 %

Travel Agencies and Tour Operator Commissioning

2022 | 2023	Compared season	Variation
R$ 139.7 MM	2021 | 2022 R$ 24.7 MM	465.6 %
	2019 | 2020 R$ 74.5 MM	87.5 %

Marketing, guided tours and local office

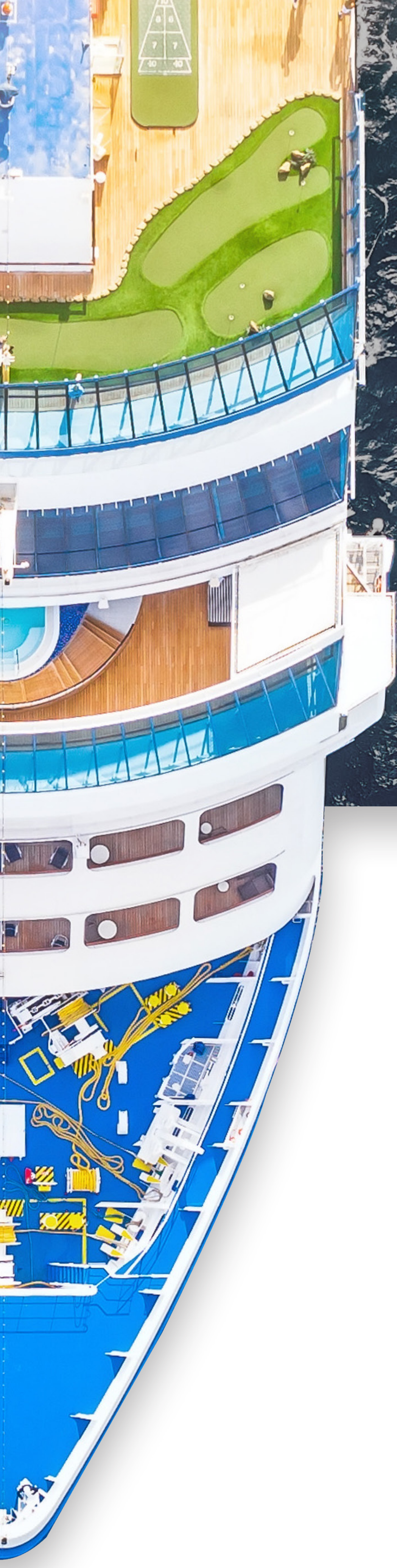
2022 | 2023	Compared season	Variation
R$ 76.8 MM	2021 | 2022 R$ 46.0 MM	67.0 %
	2019 | 2020 R$ 56.7 MM	35.4 %

Water supply and waste disposal

2022 | 2023	Compared season	Variation
R$ 70.1 MM	2021 | 2022 R$ 25.7 MM	172.8 %
	2019 | 2020 R$ 29.2 MM	140.1 %

Wages

2022 | 2023	Compared season	Variation
R$ 44.1 MM	2021 | 2022 R$ 26.2 MM	68.3 %
	2019 | 2020 R$ 26.3 MM	67.7 %



CRUISES AND CREWMEMBERS

Food and beverage

2022 | 2023	2021 | 2022 / 2019 | 2020	Variation
R$ 628.7 MM	R$ 95.4 MM	545.4 %
	R$ 335.2 MM	83.7 %

Retail

2022 | 2023	2021 | 2022 / 2019 | 2020	Variation
R$ 615.7 MM	R$ 101.5 MM	519.4 %
	R$ 333.4 MM	88.6 %

Transportation (before and/or after cruise trip)

2022 | 2023	2021 | 2022 / 2019 | 2020	Variation
R$ 323.9 MM	R$ 56.3 MM	475.3 %
	R$ 177.8 MM	82.2 %

Sightseeing

2022 | 2023	2021 | 2022 / 2019 | 2020	Variation
R$ 258.9 MM	R$ 39.8 MM	550.5 %
	R$ 146.0 MM	77.3 %

Local transportation

2022 | 2023	2021 | 2022 / 2019 | 2020	Variation
R$ 135.8 MM	R$ 22.4 MM	506.3 %
	R$ 71.3 MM	90.5 %

Lodging

2022 | 2023	2021 | 2022 / 2019 | 2020	Variation
R$ 93.4 MM	R$ 14.3 MM	553.1 %
	R$ 46.4 MM	101.3 %

MSC SEASIDE
VALLETTA

INTRODUCTION

Since the 2011/2012 season, CLIA BRAZIL, in partnership with the Getulio Vargas Foundation (FGV), has been monitoring the evolution of information regarding the significant impacts of the cruise sector on the Brazilian economy. The results of the current season confirm, after the limitations imposed by the world's experience during the COVID-19 pandemic, that the sector has a very significant impact on the tourism economy of important destinations along the Brazilian coast.

The aim of this work is to provide technical inputs on the economic and social advantages generated by the development of the sector to guide public policies and formulate strategies, scenarios, and indicators that enable the optimization and benefits of this important activity in the country.

All the data and results of this study are used by CLIA BRAZIL as a basis for the development of its action plans and those of its members, aiming to maximize the positive effects generated by maritime cruises in Brazil, in line with the institution's institutional mission.

The Brazilian cruise sector has overcome the difficulties posed by the varied economic scenarios of recent years. The global economic crisis since the beginning of 2020 due to the COVID-19 pandemic was certainly the worst moment ever experienced when an entire season could not take place (2020/2021), and the following season (2021/2022) faced limitations (such as a shorter total period with a 2-month interruption) and a reduction in ship capacity to 75% of the total available. The current season (2022/2023), in contrast to the previous one (2021/2022), had a very significant result, with a total of 802,758 cruise passengers, the second-highest in the entire historical series, surpassed only by the 2011/2012 seasons.

In the historical series, it can be observed that between the 2011/2012 and 2014/2015 seasons, there was a continuous reduction in the flow of cruises along the Brazilian coast. Due to the decrease in the number of ships, with a consequent drop in bed availability and itineraries by the cruise companies, there was a decline in the number of passengers embarked during this period. This reduction was attributed to the unfavorable economic situation that the Brazilian economy experienced during that period and the consequent reduction in the domestic market's share in this segment.

Starting from the 2017/2018 season, the sector began to show increased efficiency, despite the stability in the number of ships, with an increase in the total number of cruise passengers, a trend that only did not occur in the 2021/2022 season due to the COVID-19 pandemic.

In the 2022/2023 season, the subject of this study, nine ships visited 17 destinations within Brazil. In this season, there was a significant increase in the number of travelers compared to the previous season (2021/2022), totaling 802,758 cruise passengers, a result much higher, even, than the pre-pandemic period. The total economic impact also recorded a significant increase, contributing approximately R$ 5.1 billion to the Brazilian economy.

The economic activity generated by the cruise sector through the expenses of the cruise companies and passengers involves various economic activities that make up its value chain. Thus, the sector not only creates jobs in these different areas but also generates revenue for the government in the form of taxes, impacting the local and national economy.

Therefore, the businesses affected by the sector's activity are not limited only to the cities that receive the ships and their passengers. The supply chain related to the sector hires services and purchases products in different regions of Brazil

MAIN OBJECTIVES OF THE STUDY

1. Analyze the macroeconomic environment and the cruise sector
2. Evaluate the economic impact of coastal maritime cruises on the Brazilian coast during the 2022/2023 season
3. Assess the evolution of the current season's numbers in comparison to the previous one (2021/2022)
4. Present the profile and travel habits of cruise passengers
5. Present the main limiting factors and opportunities in the sector


CAPRI

MACROECONOMIC ENVIRONMENT

In 2022, the global economy took its first steps toward recovery from the recession caused by the Covid-19 pandemic, the deepest recession since World War II, with a growth rate of 3.1%.

Within this context, the global economy showed uneven growth, with some countries experiencing a robust recovery while others faced challenges and consequences of the pandemic. It continued to influence the economic trajectory in this season, but advances in vaccination helped alleviate restrictions and boost sectors such as tourism, transportation, and retail.

Inflation became a central concern, especially in the United States and Europe, leading central banks to raise interest rates to curb inflationary pressures. Global supply chains were also affected by supply crises, impacting the production and prices of various products. China faced challenges related to a slowdown in economic growth and reoriented its policies to stimulate domestic consumption.

In Brazil, inflation has also been a concern, and consequently, monetary policy has been stringent, leading the Central Bank to raise and maintain high interest rates to contain it.

Following the global vaccination campaign and the decrease and eventual lifting of isolation measures, the global economy began to breathe again. Still, within this context, expectations for 2023 are not very optimistic, with a predicted global economic growth rate of 2.1%, according to the World Bank.

In February 2022, the conflict between Russia and Ukraine began. There were serious economic consequences in the global markets for oil and food. Geopolitical tensions led to multiple sanctions on Russian exports, such as products and oil, resulting in a reduction in global supply and consequently, an increase in oil and derivative prices internationally. Russia is also a major global supplier of fertilizers, and with the conflict and restrictions, the availability of these inputs became uncertain, leading to increased fertilizer prices.

Furthermore, Ukraine, a significant producer of grains such as wheat, faced difficulties in food production and exports due to hostilities in its territory, leading to increases in grain prices in the world market. This situation not only raised production and transportation costs but also affected the prices of beef, pork, and poultry in general, as they are inputs, impacting industries and consumers worldwide and highlighting the vulnerability of the global economy to large-scale geopolitical events.

Tensions in global economic relations undermined business confidence, causing a decline in market expectations, resulting in worsened financial conditions, initially in more vulnerable emerging markets and subsequently in advanced economies, weighing on global demand.

According to estimated data from the World Bank, the global economy grew by 3.1% in 2022, a result worse than in 2021 (+6.0%) but better than in the previous years (+2.6% in 2019 and -3.3% in 2020). This significant post-pandemic growth can be attributed to the so-called rebound effect, a sharp growth peak due to business reopening, the resumption of consumption, private sector, and public sector investments. Amid the trade war and domestic issues, China achieved a growth rate of 3.0%, signaling a strong slowdown compared to its previous years. Meanwhile, the United States had a growth rate of 2.1%, lower than the average of advanced economies (+2.7% is the average of OECD member countries) and the Eurozone, which grew by 3.5% during the year.

IBGE data shows that in 2022, Brazil experienced a GDP growth of 2.9%, below the average for emerging economies, which was 6%, but higher than the previous two years. The Central Bank of Brazil raised the interest rate to 13.65% (SELIC) at the end of 2022 (currently maintaining at 13.65%). Also in 2022, Brazil closed the year with a primary surplus, ending the trend of deficits that had been ongoing since 2014. The Brazilian real, in turn, positioned itself as one of the currencies that appreciated the most in the world, with an average value against the dollar going from R$ 5.39/US$ in 2021 to R$ 5.27/US$ in 2022, a decrease of 5.32%.

According to the World Bank, the global economy is expected to slow down in 2023 to 2.1%, a result 1.0 percentage point lower than the 2022 forecast. A deceleration in the pace of growth in advanced economies is projected, from 2.6% (2022) to 0.7% (2023), 1.2 percentage points below the January projections.

Furthermore, according to the World Bank, the global economy is at risk of entering a recession in 2023. Meanwhile, Brazil has a growth projection of 1.7% in 2023 and 2.7% in 2024.

Among emerging markets and developing economies, a slight growth is expected, increasing from 3.7% (2022) to 4.0% (2023). This slow growth pace is expected to persist until 2023-2025, reflecting the disarray of fiscal policies offered amid the pandemic.

TOURISM ACTIVITY

Regarding global tourism, data from the United Nations World Tourism Organization (UNWTO) shows that travel in the first three months of 2023 has already reached 235 million international arrivals, more than double that of 2022 for the same period. The numbers indicate a growth trend since the resumption of seasons in (2021/2022).

Analyzing international tourist arrivals in the first months of 2023 compared to 2019, there is a 46% reduction in the Asia-Pacific region, 12% in Africa, 14% in the Americas, 10% in Europe, and a 10% growth in the Middle East, partly explained by the recent World Cup in Qatar.

However, the tourism sector is already showing a reaction with the numbers from the first three months of 2023, with nearly 235 million arrivals, more than double compared to the same period in 2022, which represents an 80% recovery compared to the pre-pandemic level (UNWTO).

Historically, among Brazilians, the preference is for domestic travel, which greatly exceeds trips abroad, regardless of the tourist's income level, further emphasizing the importance of coastal cruises in Brazil.

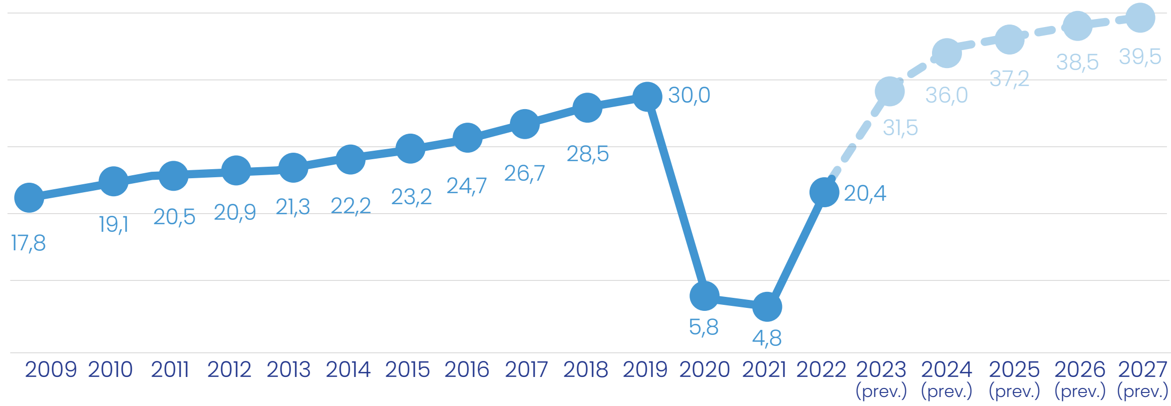
The high costs of international travel, mainly due to exchange rates (the high value of the Dollar and Euro compared to the Real), and the strengthening of tourism competitiveness in Brazil, explain the preference of Brazilians. These factors contribute to greater economic activity nationally and, consequently, increased job creation and income generation due to tourism activities.

THE CRUISE INDUSTRY

Globally, the industry shows a continuous growth trend through investments in new ships, with an increase in quantity and diversification of cruises. In 2023, the sector is expected to welcome 14 new ships from CLIA member companies worldwide. By the year 2028, there will be 44 new vessels, also belonging to CLIA.

Data from the International Cruise Lines Association (CLIA) shows that the total number of cruise passengers worldwide was 5.8 million in 2020, 4.8 million in 2021, and in 2022, it reached 20.4 million, indicating a growth trend in the sector, but still below the numbers of 2019.

Chart 1 | NUMBER OF PASSENGERS WORLDWIDE (in millions)



Sources: Cruise Lines International Association (CLIA) e Cruise Market Watch.

Therefore, it becomes essential to analyze the travel numbers in Brazil for the Maritime Cruises sector and verify the capacity for generating tax revenue and jobs in the country.

Among the coastal cruise travelers in Brazil, the majority are usually Brazilians engaging in domestic tourism, which reinforces the argument mentioned in the previous section of the study. The sector is very attractive to Brazilians due to its service characteristics and the possibilities of visiting multiple destinations in a single trip, with a lot of comfort and a good experience.

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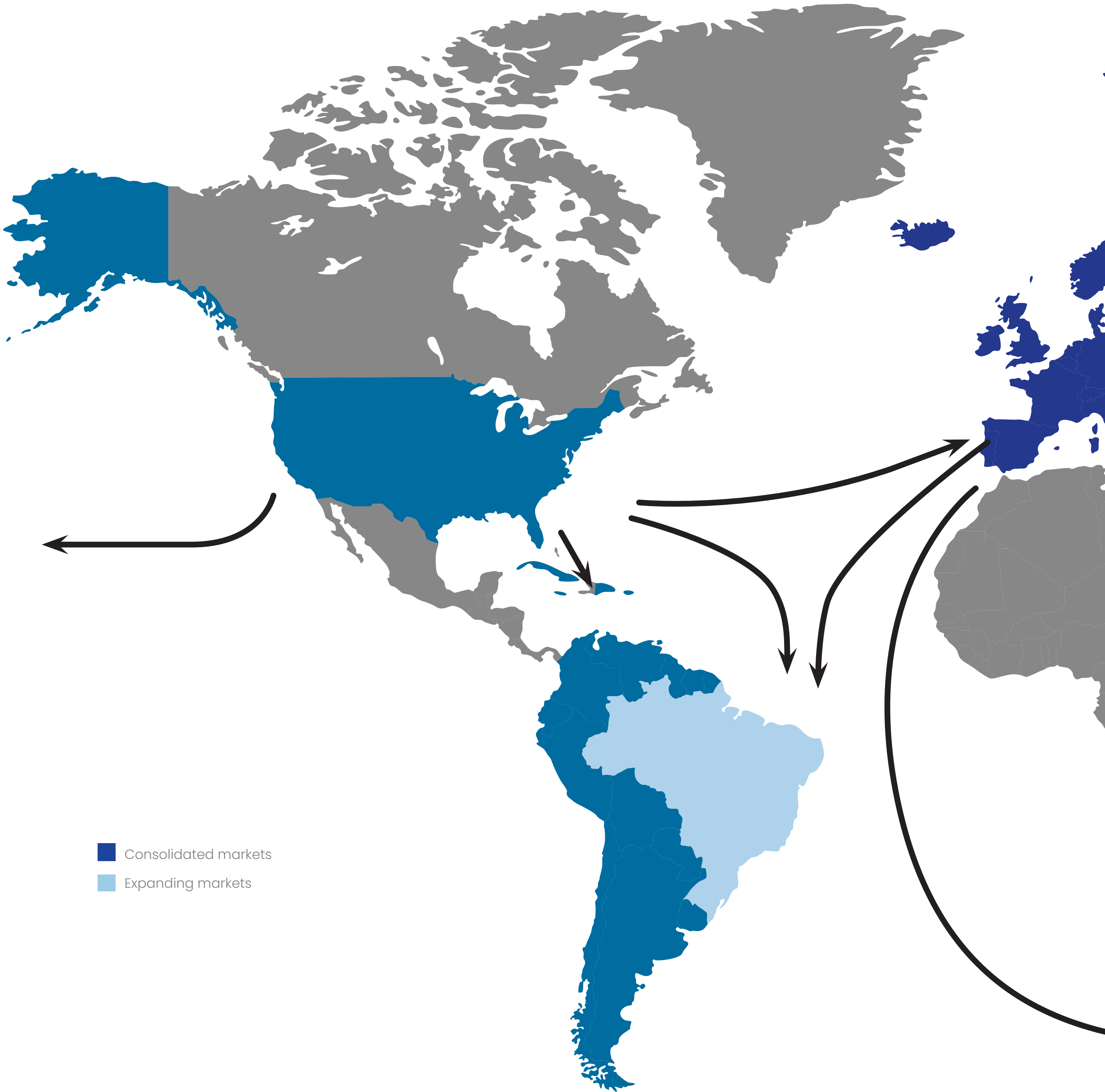
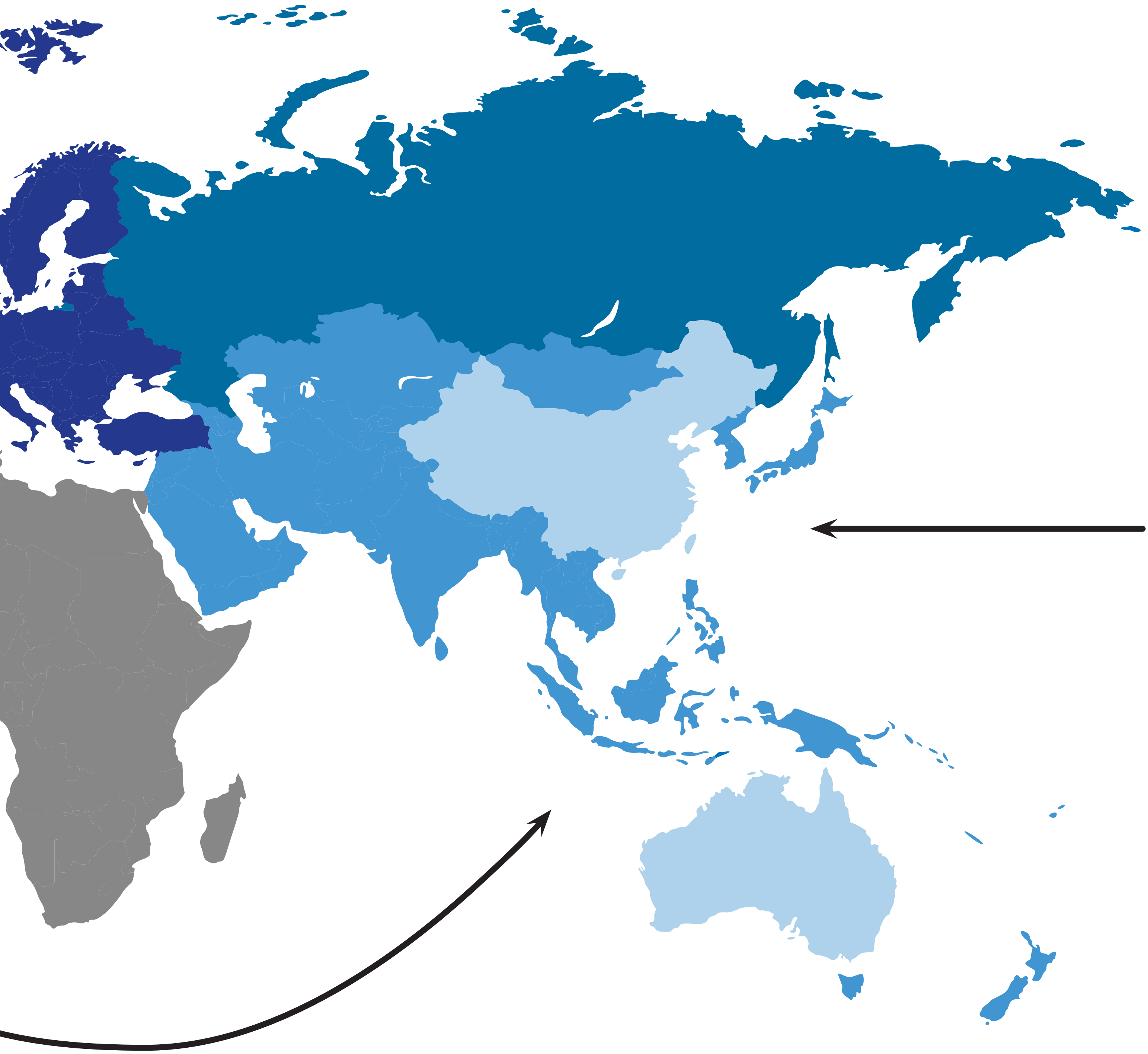


75.300
Brazilians went on cruises outside of Brazil in 2022.

R$ 554 million
in revenue generated



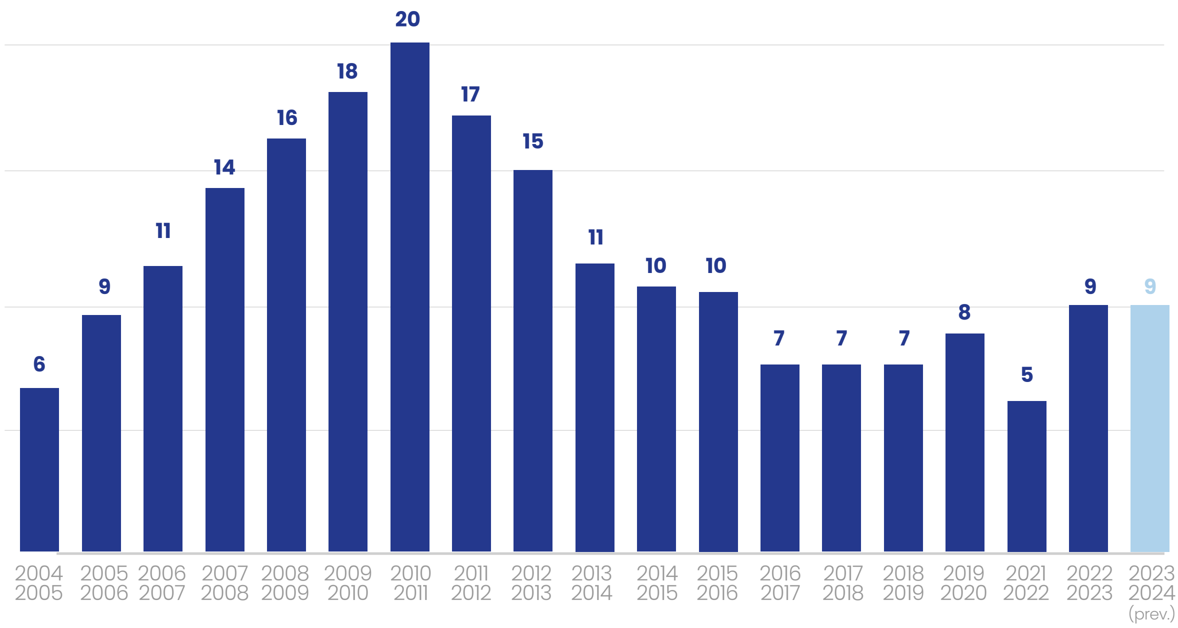
The number of Brazilian tourists who took cruises abroad in 2022 was 75,300, with an estimated revenue of R$ 554 million (R$ 320 million more than in 2021).

The Caribbean and the Mediterranean were the top destinations of choice for Brazilians traveling abroad for cruise vacations.

Brazilian Season 2022/2023

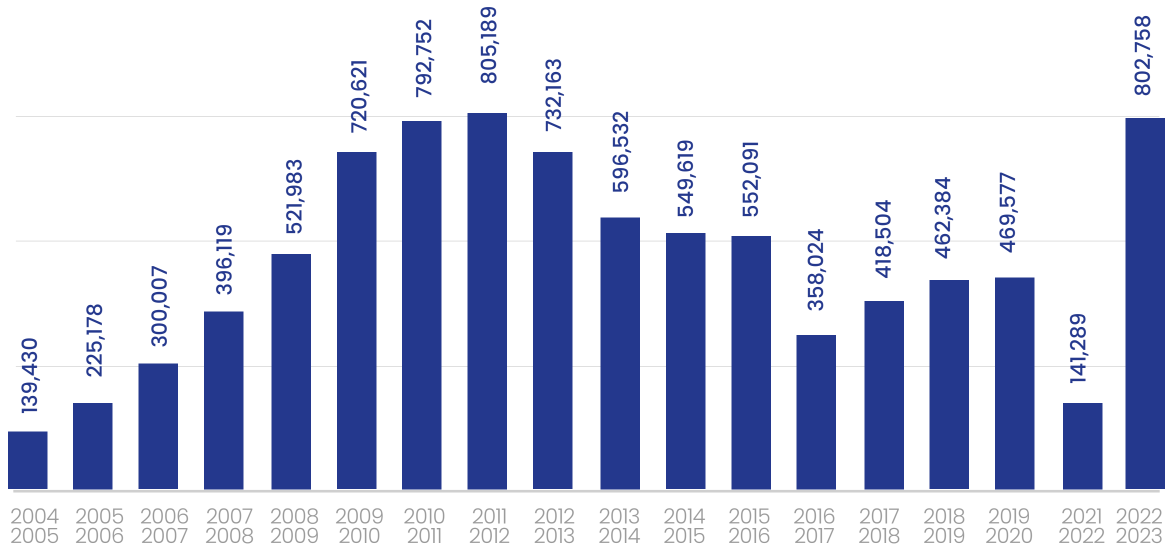
After the increase in the number of ships in the Brazilian coastal season of 2019/2020, reaching 8 vessels, the season of returning activities after the total shutdown in 2020/2021 due to the Covid-19 pandemic brought only 5 ships. This quantity is the lowest in the entire historical series of cruises in Brazil, being less than the 6 ships of the 2004/2005 season. In the just-concluded season (2022/2023), 9 ships operated on the Brazilian coast between October 2022 and April 2023, carrying 802,758 cruise passengers, demonstrating the sector's recovery after the Covid-19 pandemic period, with a higher number of vessels, even more than the 2019-2020 season. For the next season (2023/2024), 9 ships are also planned, as shown in the following graph..

Chart 2 | NUMBER OF SHIPS



Sources: FGV / CLIA BRASIL

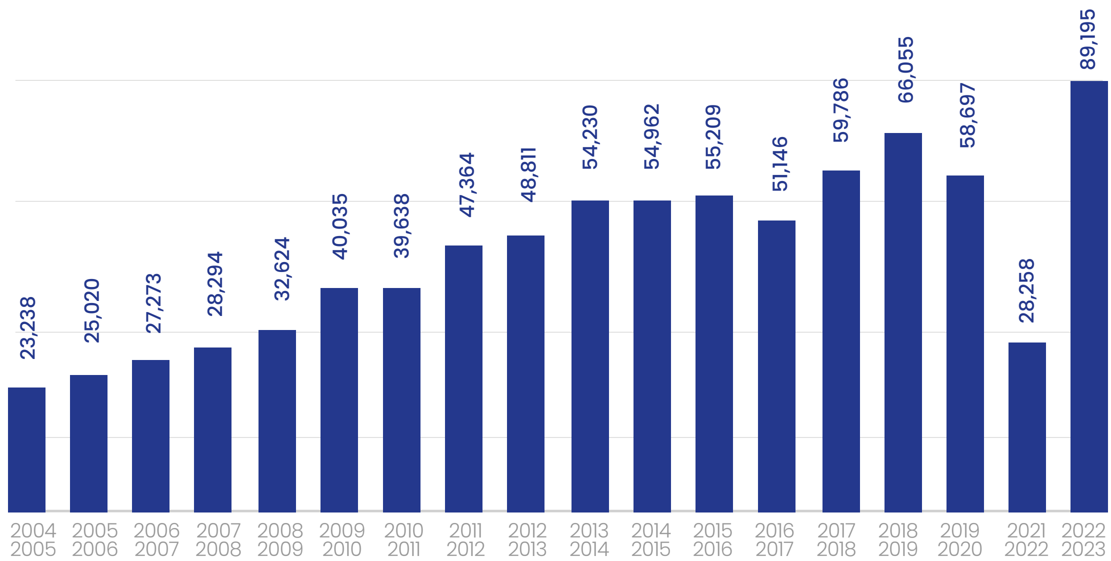
Chart 3 | NUMBER OF PASSENGERS



Sources: FGV / CLIA BRASIL

Graph 4 shows the evolution of ship efficiency, an important statistic for analysis, which shows the average number of cruise passengers per ship, per season. The only drop in the historical series had occurred in the 2016/2017 season, but the season of return to activities in the sector after the most acute period of the Covid-19 pandemic (2021/2022) recorded the lowest historical level of efficiency of ships, explained by the limitations/restrictions imposed by the moment experienced by the world still recovering from the pandemic.

Chart 4 | CRUISE PASSENGERS PER SHIP (AVRG)



Sources: FGV / CLIA BRASIL

BRAZILIAN SEASON 2022/2023

MSC Ships

	Capacity	Crew
SEASHORE	5,632	1,648
SEAVIEW	5,079	1,413
PREZIOSA	4,345	1,388
FANTASIA	4,363	1,370
ARMONIA	2,520	780
MUSICA	3,013	987

COSTA Ships

	Capacity	Crew
FIRENZE	3,710	1,292
FORTUNA	2,850	1,027
FAVOLOSA	2,850	1,110

9 CRUISE SHIPS

203 CRUISES

37,442 AVAILABILITY

11,015 CREWMEMBERS

859,922

BEDS OFFERED
IN THE SEASON

(The itinerary forecast at the beginning of the season may vary according to each company's commercial issues, increasing or decreasing.)

802,758

EMBARKED
CRUISERS

(93.4% of beds offered)

ECONOMIC IMPACTS

Cruise tourism benefits tourist destinations in various ways, stimulating the inflow of foreign currency and promoting the destination nationally and internationally through increased tourist traffic in cities, generating economic activity in the local and surrounding areas, creating employment and income for the population.

These benefits depend on the following aspects:

- Type of reference port (whether it's an embarkation/disembarkation port or a stopover);
- Time of the voyage (beginning, middle, or end);
- Duration of the cruise ship's stay at the port of call;
- Number of ports of calls in the itinerary;
- Existing infrastructure at the destination to meet the needs of the ships and passengers.

The economic impacts of the cruise tourism sector are generated by the expenditures made by travelers and crew during the voyage and by the expenditures made by cruise companies during the coastal navigation season in Brazil. These economic impacts are divided into direct, indirect, and induced impacts.

Direct impacts are the values of expenses incurred by travelers and crew during the trips and by cruise companies during the season with the necessary goods and services. The companies and establishments that directly receive these expenses also need to purchase products and services from other sectors of the local economy (suppliers); these are the indirect impacts, which include, for example, hotels purchasing food and beverage services.

During the rounds of direct and indirect impacts, revenues are returned to local residents in the form of wages, distributed profits, rents, among others. These are the induced impacts.

Among the expenditures of travelers and crew at embarkation/disembarkation and transit ports, the economic activity includes purchases of tourist excursions, souvenirs, food and beverages, transportation, and lodging before and/or after the trip.

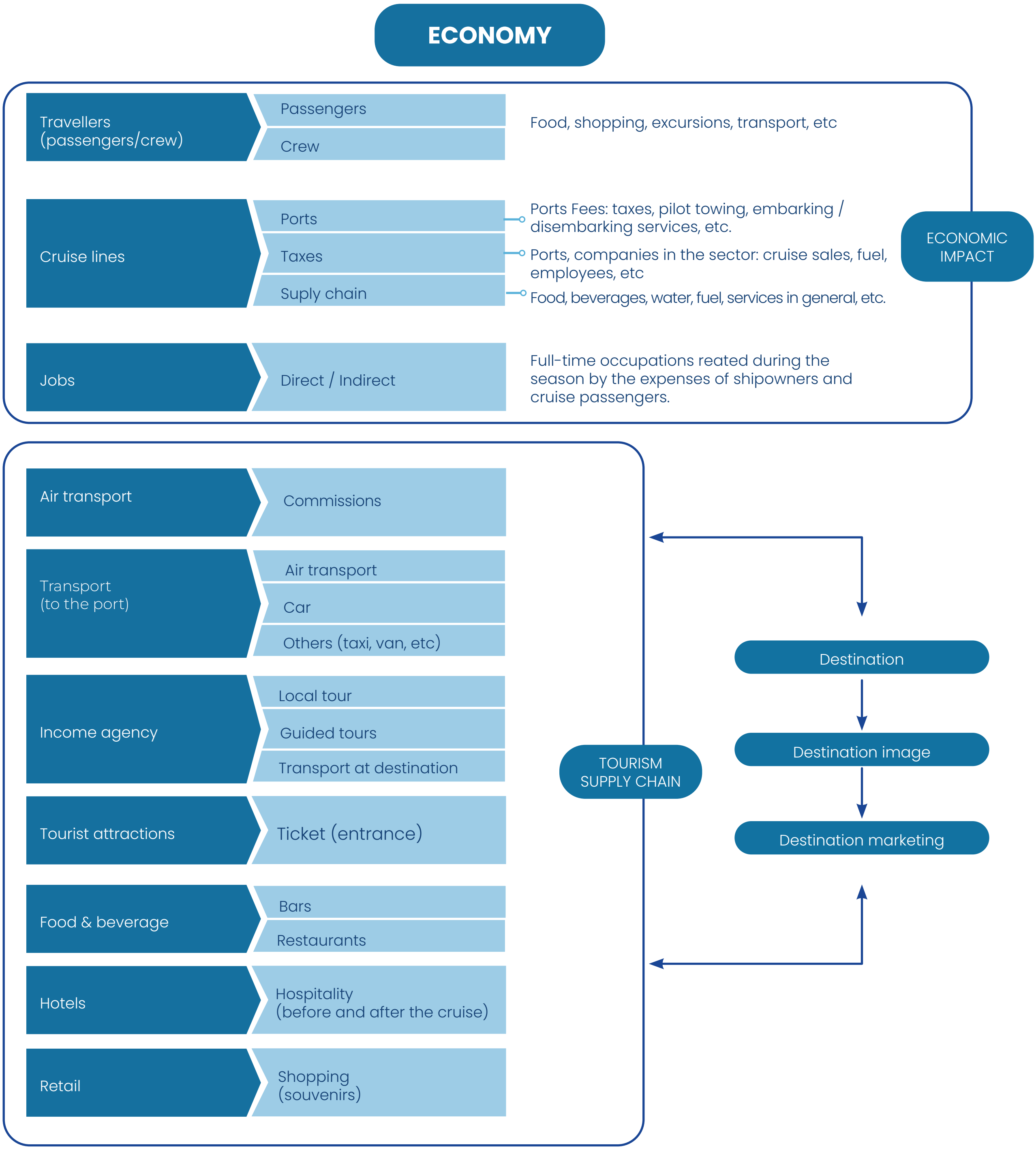
The expenditures of cruise companies include salaries paid, expenses for food and beverages (supplies), water and waste management, fuels, commissions for agents and tour operators, port fees, taxes, marketing, and others.

The economic impact study of cruise tourism in Brazil used the Input-Output Matrix (IOM) from the Brazilian Institute of Geography and Statistics (IBGE) to develop the economic activity analysis and thus capture the totality of economic impacts.

The model represents the Brazilian economy through 68 economic sectors and 128 categories of products from the National Accounts System of the Brazilian economy. It allows estimating, through multipliers, the total impacts (direct, indirect, and induced) of activities related to cruise tourism on national production, employment, and income.

CRUISE SEGMENT ECONOMIC IMPACT

The following figure illustrates the activities impacted by Maritime Cruises



RESULTS FOR SEASON 2022/2023

For the 2022/2023 season, data from the spending profiles of cruise passengers and crew from the research conducted during the 2019/2020 season were used, with values updated for inflation during the period (IPCA).

Regarding the expenditures of cruise passengers and crew, only those incurred outside the ship, before and/or after the trip, and expenditures made in the cities where the ship made stops and where the tourist and crew members disembarked to explore the city are analyzed.

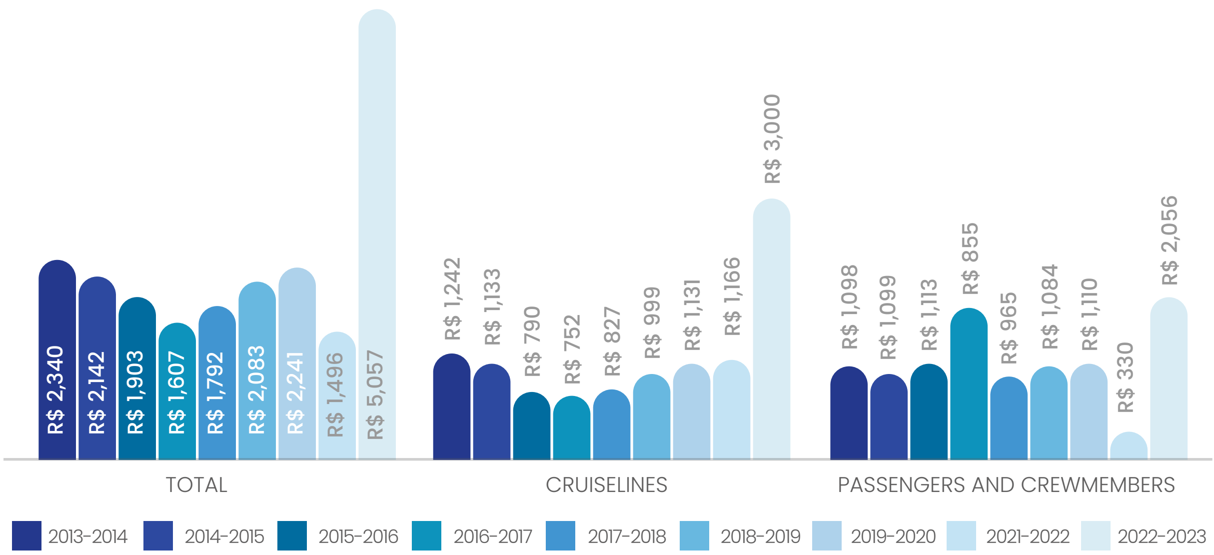
The calculation of economic impact does not take into account the values of the packages paid by cruise passengers (a portion of these funds is used for payment to foreign cruise companies) or on-board expenses. However, this information is collected from the cruise companies for inclusion in this report.

According to the data from the economic impact survey in Brazil, the average ticket price for cruise passengers in the 2022/2023 season was R$ 5,073.51 - the average expenditure per passenger on the purchase of the cruise trip. The average duration of cruises during this season was 4.9 days.

4.9 days
(versus 4.8 days from the previous season)
Average cruise duration

R$ 5,073.51
average expenditure per passenger when buying the trip

TOTAL ECONOMIC IMPACT
Evolution of numbers | Millions (R$)



The total economic impact generated by cruise companies in the 2022/2023 season was approximately R$ 3 billion, including direct, indirect, and induced impacts. Fuel expenditures by cruise companies are the most significant among the expenses incurred, which can be explained primarily by the characteristics of the ships, such as their larger size, for example.

The expenditures by cruise companies in the operation of the 2022/2023 season and their effects on Brazil's economic activities generated revenues for the government in the form of taxes. This amount was R$ 332.9 million, including federal, state, and municipal taxes.

R$ 545.2 million
The value moved by the cruise industry, in taxes, during the 2022/2023 season

The expenditures of cruise passengers and crew generated a total economic impact of R$ 2.1 billion in the 2022/2023 season, six times greater than the impact generated in the previous season, encompassing direct, indirect, and induced impacts. In addition to the greater number of ships, the increase in their efficiency was also significantly higher (average number of cruise passengers per ship) in the 2022/2023 season.

The economic activity generated by the spending of cruise passengers and crew in the related sector also generates government revenues in the form of taxes. In the 2022/2023 season, this tax revenue amounted to R$ 213.3 million, at the federal, state, and municipal levels.

R$ 639.09
The average economic impact generated by cruisers in stopovers

R$ 813.56
Average economic impact generated by cruise passengers in the cities of embark and disembark

ECONOMIC LEVERAGE INDEX

The total economic activity in the cruise tourism sector for the 2022/2023 season (R$ 5.1 billion) arises from the expenditures made by cruise companies for planning and operation (R$ 1.25 billion). Therefore, the Economic Leverage Index (ELI) of the sector can be calculated, which indicates how much economic activity was generated from the expenses incurred by the cruise companies for the season's operation.

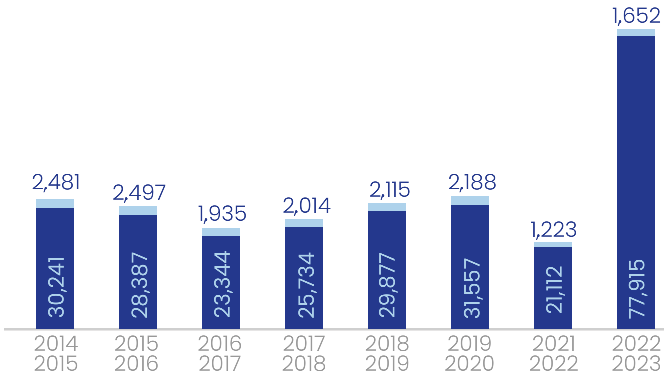
This indicator is particularly interesting as it shows how much the season's operation boosts economic activity. For the 2022/2023 cruise season, this index was 4.05, meaning that for every R$ 1.00 spent by cruise companies, R$ 4.05 were generated in the Brazilian economy.

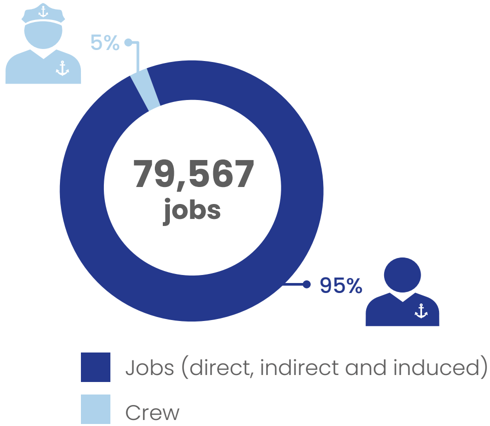
Economic Impact	÷	Total spend in operation	=	Economic Leverage Index
R$ 5.066 billion		**R$ 1.250 billion**		**4.05**

GENERATION OF EMPLOYMENT OPPORTUNITIES

The expenditures of cruise companies and cruise passengers have significant impacts on job creation, both on board the ships and in the supply chain affected by cruise passengers in port cities and by cruise companies in various cities across the country.

During the 2022/2023 season, 79,567 jobs were created in the Brazilian economy, representing a result 3.5 times higher than in the previous season. Out of the total jobs created by the segment, 1,652 were for ship crew members (35.1% higher than the previous season), and another 77,915 were various direct, indirect, and induced jobs (almost four times higher than observed in the previous season). These jobs were motivated by the expenditures of cruise companies, cruise passengers, and crew members in embarkation/disembarkation port cities and visited cities, as well as those generated in the support supply chain for the sector.





Sources: FGV / CLIA BRASIL

SHIPS ON THE BRAZILIAN COAST

In addition to the coastal navigation data, the image below presents information about ships passing along the Brazilian coast in the 2022/2023 season. These ships depart from other international destinations, traverse Brazil, generating economic impacts, and continue their routes around the world (they do not engage in coastal navigation, meaning they do not depart from or arrive at Brazilian ports, but only make stops). This is distinct from coastal navigation ships.

SHIPS THROUGH THE BRAZILIAN COAST

29 SHIPS PASSING THROUGH	17 DIFFERENT CRUISE LINES	38 TOTAL DESTINATIONS
22,673 TOTAL CAPACITY	15,500 CREW MEMBERS	322 ITINERARIES

Fontes: FGV / CLIA BRASIL.

ENVIRONMENT

Concern for the environment is a focus in various economic sectors worldwide, which is why the cruise industry has been making investments and implementing various mechanisms to reduce pollution and improve efficiency in ship operations. The ocean cruise lines of CLIA, for example, have set ambitious goals, charting the path towards cruises with net-zero carbon emissions by 2050.

Furthermore, the International Convention for the Prevention of Pollution from Ships (MARPOL) has established rules to eliminate intentional pollution of the environment by substances from ships and to minimize accidental discharges of substances into the air and sea.

WATER TREATMENT

To handle the waste generated on board, the cruise industry has implemented advanced systems for the purification and treatment of wastewater. These systems are often comparable to the best land-based treatment facilities and go beyond international requirements.

Currently, 100% of newly ordered ships are specified to have these systems, and approximately 78% of CLIA's maritime cruise fleet capacity is already served by them, representing a 4% increase from 2021.

GAS TREATMENT

Considering the importance of cleaner energy sources, the cruise industry has also sought solutions to improve air quality. Exhaust gas cleaning systems have been adopted, benefiting both the marine environment and ports.

With the goal of reducing carbon dioxide emissions into the atmosphere, one of the greenhouse gases responsible for global warming, the sector has committed to ambitious targets set in international treaties. The aim is to reduce CO_2 emissions by 40% by 2030 and subsequently eliminate 100% of these emissions by 2050, based on carbon emission levels from the year 2008.

RECYCLING

Cruise companies have been dedicated to implementing advanced and efficient recycling methods, becoming a reference in this area in the country. To achieve this goal, the use of single-use plastics has been eliminated, while other waste materials are incinerated to generate energy.

In addition, selective collection on board the ship is carefully carried out, with the resulting substrate sent for recycling to third-party Brazilian companies. These measures have significantly contributed to promoting the circular economy and sustainability, allowing some ships to achieve a 100% recycling rate for the waste produced on board.

TECHNOLOGY OPTIMIZATION

All these changes aim to enhance the efficiency of resources used on ships, requiring a comprehensive approach that considers both the choice of fuel, which is a long-term measure, and the better utilization of currently available resources. The pursuit of greater efficiency in the use of current fuel is also crucial to reduce the emission of polluting gases.

To achieve this goal, the industry has invested in technological innovations, such as special coatings for ship hulls that provide better water slip, resulting in a significant reduction in fuel consumption of up to 5%.

Furthermore, air lubrication systems for ship hulls have been adopted to reduce drag and fuel consumption, further enhancing operational efficiency.

Energetically efficient engines have also been implemented, reducing fuel consumption and, consequently, emissions of polluting gases.

ENERGY SAVINGS

In the quest for greater sustainability and efficiency, all electrical equipment is programmed to automatically shut down when the space is vacant or when the equipment is idle, optimizing energy consumption.

In addition, the use of LED lighting has been widely adopted, as this technology has a lifespan 25 times longer than traditional bulbs and consumes approximately 80% less energy.

Other actions include the installation of tinted glass, the use of higher energy-efficient appliances, and more efficient HVAC (heating, ventilation, and air conditioning) systems, as well as windows designed to capture and recycle heat. Intelligent air conditioning systems have been designed to reuse cooling water, which would normally be wasted, in bathrooms as toilet flushing water, maximizing the use of available resources and contributing to reducing energy consumption and promoting sustainability on board ships.

LNG AND SUSTAINABLE FUELS

One of the strategies adopted by the cruise industry to reduce the emission of polluting gases is the use of alternative fuels that generate clean energy and ensure long-term energy security. Among the options available in the international market, liquefied natural gas (LNG) stands out, emitting considerably fewer polluting gases than the currently used fuels.

Currently, LNG is already present in 44% of new ships launched. Although the fuel exists in Brazil, it is not yet available for refueling ships.

Cruise lines are now realizing the benefits of LNG as a transitional fuel, with nearly zero sulfur emissions, a reduction of 95% to 100% in particle emissions, and an 85% reduction in NOx emissions, and up to 20% reduction in greenhouse gas emissions.

These positive results have led to an increase in the number of ships capable of using LNG as their primary propulsion. According to projections, 61% of new shipbuilding capacity will depend on LNG for primary propulsion.

ONSHORE ELECTRICITY

An additional solution to reduce ship costs is the provision of electricity by the electricity companies in port cities directly at the ship berths, allowing ships to be fully powered by onshore electricity when docking in ports.

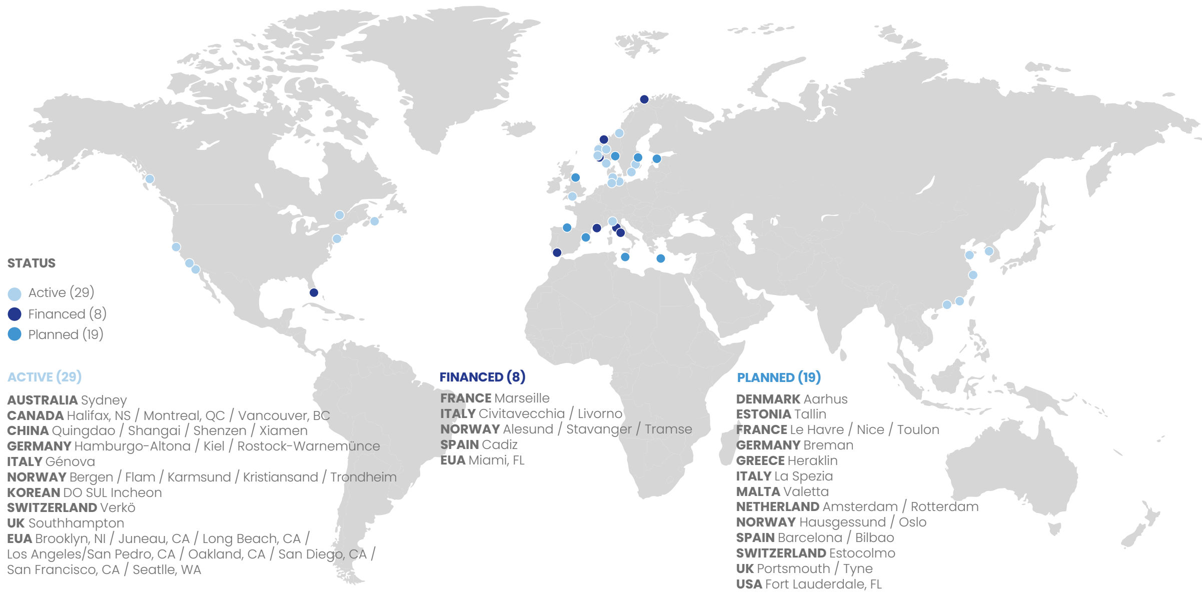
Cruise lines have made significant investments in connecting ships to onshore electricity, with most new ships planned to operate with this option between now and 2028.

Approximately 98% of global shipbuilding capacity until 2028 is expected to be equipped with onshore electricity systems or configured to add this option in the future.

Currently, approximately 29 ports worldwide already have at least one cruise berth equipped with onshore power, although this represents less than 2% of the total number of ports in the world with this capacity available at at least one cruise berth.

Overall, about 40% of global ship capacity is prepared to operate with onshore electricity, reinforcing the cruise industry's commitment to seeking more sustainable alternatives for its port operations and reducing environmental impact during port stays..

Ports with at least one onshore power berth



Source: Cruise Lines International Association (CLIA)

SUSTAINABLE MARITIME PROPULSION AND FUELS

The cruise industry has been at the forefront of seeking sustainable maritime fuels, exploring various options such as biofuels, biodiesel, methanol, ammonia, hydrogen, and electric batteries.

This search also includes the adoption of hybrid solutions, with over 15% of new vessels scheduled for the next five years being equipped to incorporate fuel cells or batteries, aiming for a hybrid approach to reduce the carbon footprint of travel.

Furthermore, approximately 75% of the global cruise fleet already has the capacity to use sustainable maritime fuel, representing a significant milestone in the use of more environmentally friendly alternatives once these fuels become available on a larger scale.

FACTORS OF INFLUENCE FOR RECOVERY OF THE CRUISE SECTOR

In a common market scenario, the opportunities for expansion are strategically observed by the cruise industry in Brazil, which is evident as the sector grows in the world. The industry will receive 26 new ships in 2022 and 22 more in 2023, with an additional capacity of just over 104,000 beds, with more ships and beds expected for the next few years (2024-2026).

Considering a post-pandemic scenario and social isolation, there are opportunities for expansion that are continuously worked on by the sector and that increasingly need the support of public policies and strategies for the market, such as:

- In the international arena of development opportunities for the Brazilian market, attention should be paid to the tensions established between markets that may cause movement of substitution of destinations, generating the need to transfer ships to other routes, in addition to the already use of ships more efficiently during the winter in the northern hemisphere;

- New destinations for the Brazilian cabotage season collaborate so that the cross-makers have more factors of influence at the time of the decision for travel and will be fundamental according to the companies of the sector for recovery in the post-pandemic period;

- With the return of business activities in the country, the return of corporate events should return to be a great option for shipowners, bringing positive results for the sector, as an alternative for organizations seeking to get out of the conventional;

- Has already mentioned in previous reports, the niche of weddings on the high seas should be worked as a great opportunity, where the participants of the event, in addition to attending the party, take the opportunity to make the ship trip alongside friends and family.

OPPORTUNITIES AND LIMITING FACTORS

OPPORTUNITIES

The most important factor as an argument for the recovery of the cruise sector in Brazil, after the pandemic period, is that opportunities for economic growth and development are identified for the country, generating jobs and income for the population, with highlights for:

COMPETITIVE ADVANTAGES FOR TOURISTS

- ***Convenience*** – On the cruise trip, the tourist finds the equivalent of a package of tourist services in only one trip: lodging, transportation, food, leisure and entertainment (plays, dance, parties, art, gymnastics among others);

- ***Opportunity to visit multiple destinations on the same trip*** – The tourist can enjoy the trip by ship and get to know the cities of stop while the ship is anchored or moored in the port. Taking a sightseeing tour in the city or having lunch at a typical restaurant, for example, is part of the options;

- ***Confort*** – The ships offer quality services and have an excellent structure to meet tourists also in the comfort;

- ***Cost-benefit*** – The values of cruise trip packages are accessible and payment terms are increasingly facilitated by shipowner (credit). Because of the large territorial extension, the use of ships becomes an economic advantage as well.

EXHIBITION AND PROMOTION OF TOURIST DESTINATIONS

The sea cruise seasons take thousands of passengers and crew to several Brazilian ports, which allows many visits to the cities of stopovers. These visits, although considered fast, are important for travelers to know the cities and wish to return to other opportunities, as demonstrated in the profile survey of cruisers.

In addition to the dissemination of Brazilian destinations through "word of mouth" marketing, there is also spontaneous dissemination that happens from social media, where people share images and comments about their experiences. Therefore, it is up to the destinations to take advantage of this opportunity and provide, on their shelves, quality products and services to be offered to travelers during their stay in the city.

JOB CREATION

The same happens in relation to the jobs generated in ports and cities as a whole during the seasons: commerce, bars and restaurants, receptive, transportation and tourist attractions, moving the entire chain of local services.

Another important factor is that the Ministry of Economy, according to cabotage law, determines that ships that stay more than 30 days on the Brazilian coast must have 15% of the crew composed of Brazilians. In addition, the ship's environment favors cultural exchange with the crew of different nationalities, professional qualification and job opportunities abroad.

SUPPLY CHAIN MOVEMENT AND SERVICES

The main management areas in ships are hotel and maritime operations, which follow international criteria of quality and safety of operation. This qualifies good on-board service and standardizes the supply chain.

The cruise supply chain is related to:

- Acquisition of fuel and petroleum products (lubricants, oils and others);
- Corporate purchases (office supplies, computers, etc.);
- Technical purchases (engine parts, carpets, etc.);
- Hotel purchases (food, beverages and general consumption items);
- Part of the cruise sums such as perishable food and *hortifrut*;
- Hiring entertainment services (shows, presentations, etc.).

LIMITING FACTORS

Even with all the opportunities already explained that the sector represents for the country's economy, there are still some factors that are considered limiting for the growth of the maritime cruise sector, the main ones being:

PORT FEES AND COSTS

The operating rates practiced by Brazilian ports are not competitive when compared to other international cruise markets. In the Caribbean, for example, taxes and fees are much lower, making it the most attractive destination for shipowners around the world. Some examples of costly costs are:

- Practice;
- Mooring rates;
- Towing;
- Boarding, disembarkation, transit and baggage fees, per passenger.

INFRASTRUCTURE OF BRAZILIAN PORTS

Despite the progress made in recent years in the Brazilian port system, especially in the ports of Rio de Janeiro and Santos, there is still a need for significant public and private interventions and investments, especially in the passenger sectors, docking facilities, and general services.

Some of the offered destinations lack dedicated port facilities for ship docking, requiring the use of private docks and marinas. Among the critical points highlighted in the port terminals, the following improvement needs can be emphasized as the main ones:

- Infrastructure for food and beverage services and souvenir shops;
- Greater integration with local transportation;
- Reduction of the average time for luggage retrieval;
- Improvement of external information regarding ship docking (information panels and signage within the ports);
- Expansion of maneuvering areas;
- Increase in passenger terminal capacity, due to the current capacity of the ships.

TAXES

In relation to taxation applied to the sector, below are the main taxes and possible improvements, especially at the time of recovery that the sector will pass in the post-pandemic period:

- Contribution to PIS, contribution to PIS-Import, COFINS and COFINS-Import on the sale and import of marine fuel oil (Bunker);
- Incidence of local taxes (PIS and COFINS) on the chartering of vessels (both exclusive to the cruise sector, not impacting the cargo sector, for example);
- Collection of taxes to international ships on the way through the country (which does not occur in any other country);
- Is collection for the real value of the service provided;
- Reduction of tax on international remittances - IRRF;
- Reduction of ICMS for cabotage vessels.

REGULATION (MLC 2006)

There is a need for greater cooperation between Shipowners and the Brazilian Government to consolidate agreements on labor conventions within ships. The Maritime Labour Convention - MLC, for example, is an International Labour Organization (ILO) convention established in 2006 that consolidates all updated standards and recommendations related to onboard work. This convention needs to be ratified by the National Congress

AGENTS INVOLVED IN THE OPERATION

The existence of different stakeholders in the operation, with their respective competencies and attributions, make the process more costly and bureaucratic. Greater operational flexibility must meet the growth of the sector, allowing greater efficiency.

AGENTS INVOLVED IN THE OPERATION

Sectorial regulation	Ministry of Tourism
Regulation of the Transport sector	Ministry of Infrastructure
Border control and passport authorizations	Federal Police
Monitoring tax payments	IRS
Representing workers of the cruise industry	Unions
Legislation for employment	Ministry of Economy (Labour Secretariat)
Sanitation control in production and retailing	National Agency for Sanitation (Anvisa)
Monitoring the operational activities of the international crew	Migration National Council (CNIg)
Operational tracking and inspection	Port Captaincy
Port administration	Port Authority
Support for the development of infrastructure and superstructure ports and maritime, inland waterway, and port facilities.	National Secretariat for Ports
Regulation of tariff s and vessel transportation	National Agency for Water Transport (ANTAQ)

PROFILE AND TRAVEL HABITS OF CRUISERS

The data presented in this chapter are from a research conducted in the 2019/2020 season, in November and December 2019 and January and February 2020 in the two main ports of tourist movement in Brazil: Santos and Rio de Janeiro.

The survey was conducted with passengers and crew in two moments:

- At passenger/crewmember's disembarkation (end of the trip);

- In transit in the cities of Santos and Rio de Janeiro, that is, when the passenger/crewmember`s got off the ship to spend the day in one of these two cities.

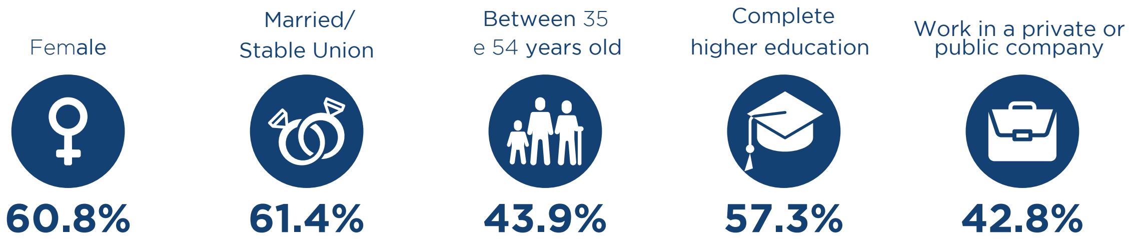
There is a lot of specificity with regard to the travel habits of cruisers. The results of the research reinforce the argument that the cruise trip serves for travelers to know several destinations dynamically and return to the destinations visited at another time. The results of this research indicated that 78% of the cruisers descended at one or more stops during the trip, and 87.2% indicated a desire to return to the destination(s) visited in a new opportunity.

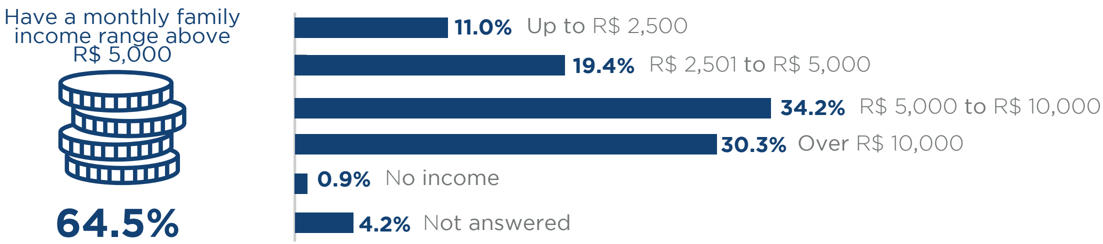
As for the frequency of travel, 66.1% of the cruisers made their first ship trip, while the remaining 33.9% had already traveled by cruise, on average, approximately four times, which shows that cruises are always taking new tourists to the destinations of the itineraries.

Among the Cross cruisers surveyed, 87.5% reside in Brazil, most of them coming from the State of São Paulo (with just over 60%), followed by the State of Rio de Janeiro (17%). Among foreigners (12.5%), Argentina stands out, with 87.2% of the foreign surveyed.

Regarding the gender of the surveyed, 60.8% are women, with 39.2% being male. Regarding marital status, 61.4% reported being married or in stable union. Regarding the age of the interviewees, 43.9% of the cross-workers who participated in this survey were between 35 and 54 years old.

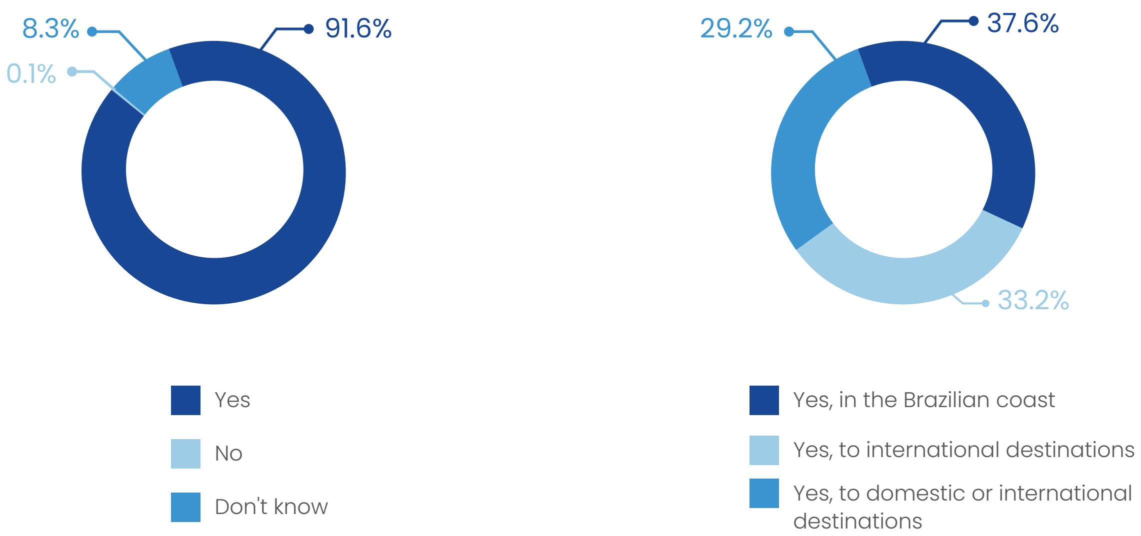
In general, tourists travel accompanied (98.9%), being the main companions children and relatives (51.9%), spouse (24.7%), and friends (19.5%). On the education of the cross-workers surveyed, 57.3% have completed higher education and 42.8% are employed in a private or public company. Of the interviewees, 64.5% had a monthly family income range above R$ 5,000.





Most of the respondents (more precisely 91.6%) want to make a new cruise trip, and when asked about the preferred destination in Brazil, 66.2% of them reported the Northeast Coast, and among those who indicated interest in carrying out cruises abroad, 41.8% indicated the Caribbean and 36.8% Europe as a preference for travel abroad.

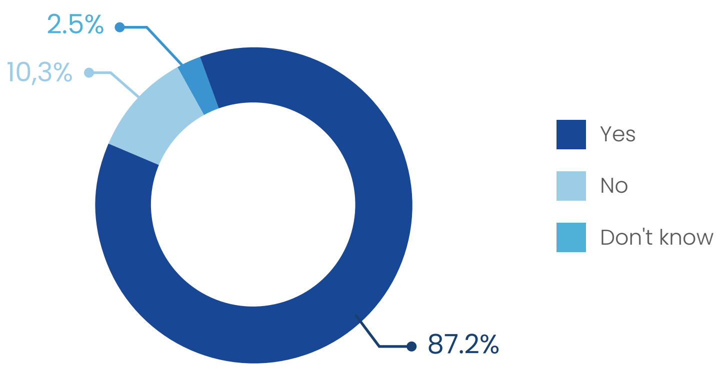
Graph 7 | Desire to make new cruise trip



Sources: FGV / CLIA BRASIL.

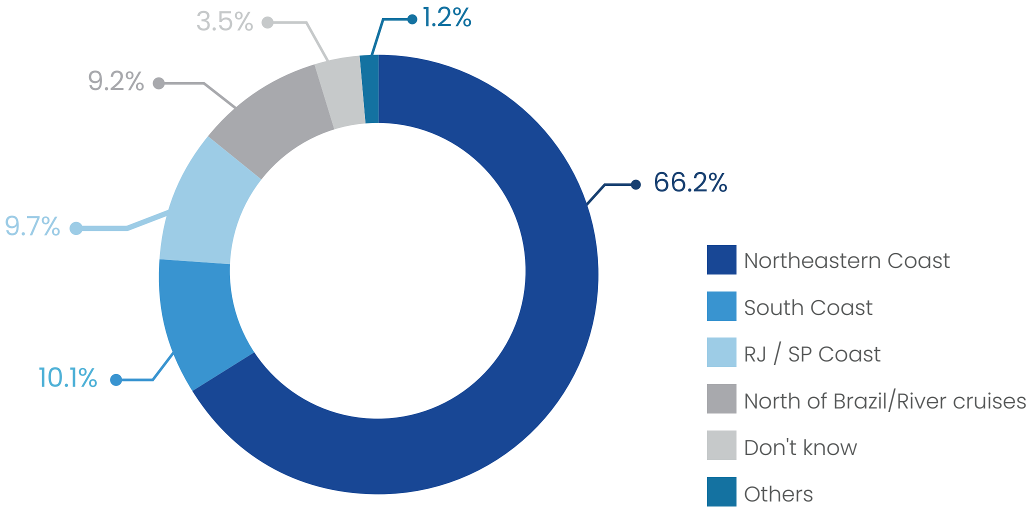
As stated at the opening of the chapter, 87.2% of the interviewees indicated a year to return to the destination(s) visited at leisure, which makes evident the positive exposure of the destinations during cruise trips.

Graph 8 | Desire to return to destination



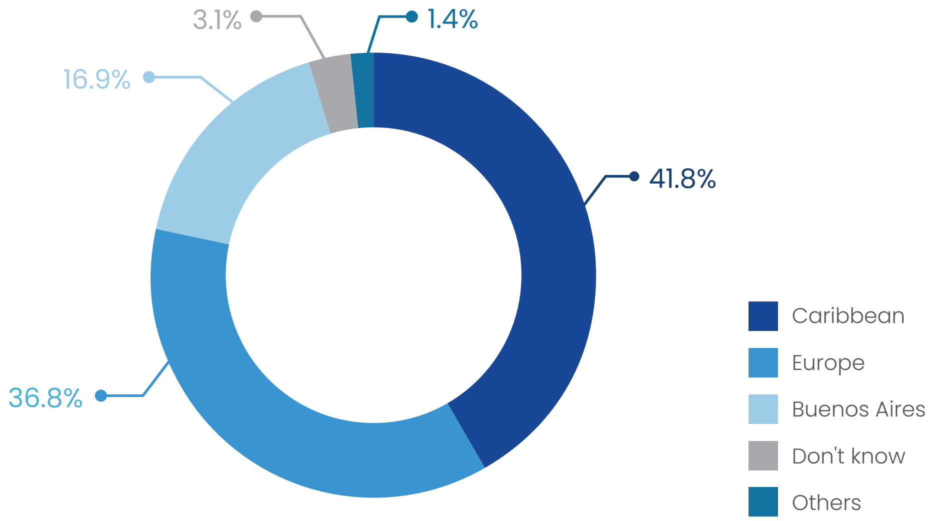
Sources: FGV / CLIA BRASIL.

Graph 9 | National destination of preference



Sources: FGV / CLIA BRASIL.

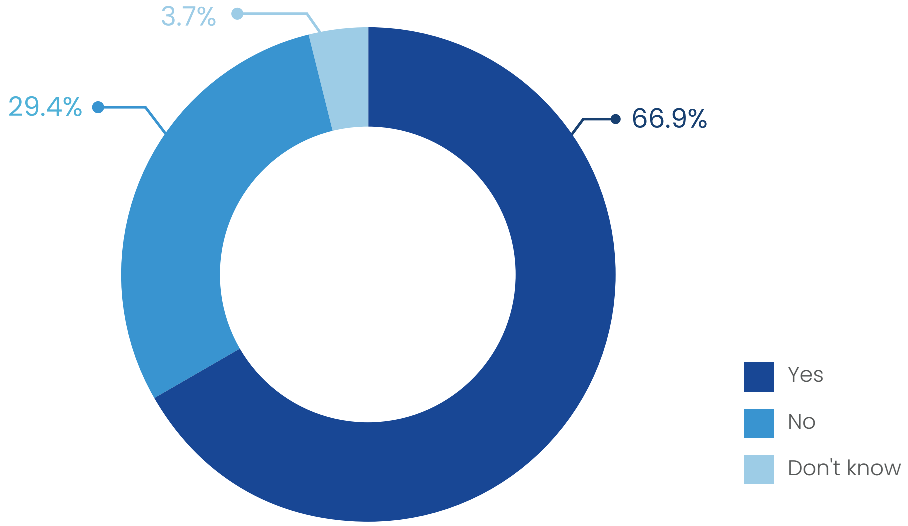
Graph 10 | International destination of preference



Sources: FGV / CLIA BRASIL.

A large majority of respondents (78%) went down on at least one scale of the script. In addition, 66.9% of the interviewees reported being available to cruise along the Brazilian coast during the low season.

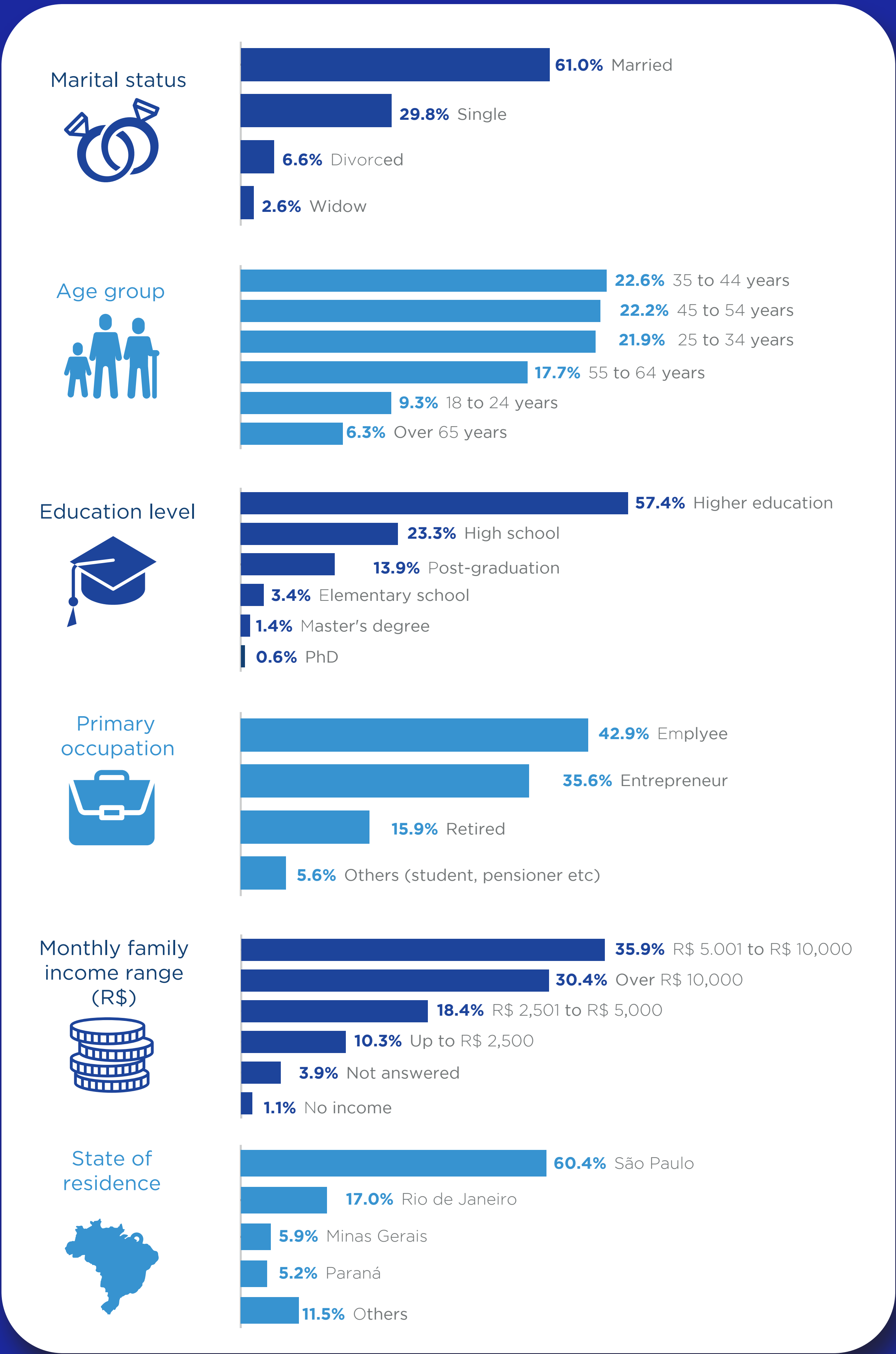
Graph 11 | Availability to cruise in low season

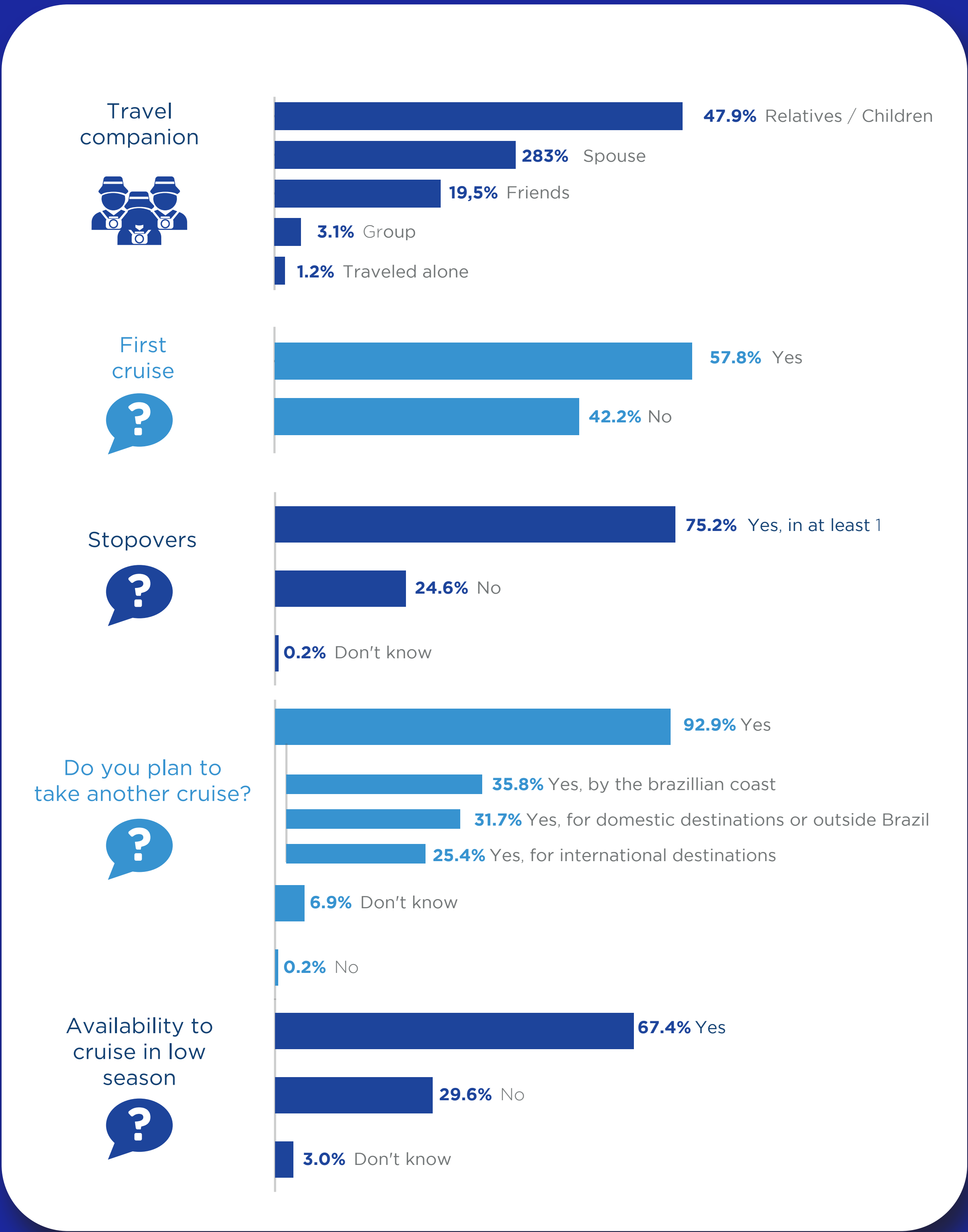


Sources: FGV / CLIA BRASIL.

BRAZILLIANS

As already highlighted, the majority of tourists who traveled on sea cruises in the 2019/2020 season are Brazilians, representing 87.5% of those surveyed. Due to the great importance of Brazilians for the sector, the results of the research on profile of this audience are presented below.


Marital status
61.0% Married
29.8% Single
6.6% Divorced
2.6% Widow
Age group
22.6% 35 to 44 years
22.2% 45 to 54 years
21.9% 25 to 34 years
17.7% 55 to 64 years
9.3% 18 to 24 years
6.3% Over 65 years
Education level
57.4% Higher education
23.3% High school
13.9% Post-graduation
3.4% Elementary school
1.4% Master's degree
0.6% PhD
Primary occupation
42.9% Emplyee
35.6% Entrepreneur
15.9% Retired
5.6% Others (student, pensioner etc)
Monthly family income range (R$)
35.9% R$ 5.001 to R$ 10,000
30.4% Over R$ 10,000
18.4% R$ 2,501 to R$ 5,000
10.3% Up to R$ 2,500
3.9% Not answered
1.1% No income
State of residence
60.4% São Paulo
17.0% Rio de Janeiro
5.9% Minas Gerais
5.2% Paraná
11.5% Others


Travel companion
47.9% Relatives / Children
283% Spouse
19,5% Friends
3.1% Group
1.2% Traveled alone
First cruise
57.8% Yes
42.2% No
Stopovers
75.2% Yes, in at least 1
24.6% No
0.2% Don't know
Do you plan to take another cruise?
92.9% Yes
35.8% Yes, by the brazillian coast
31.7% Yes, for domestic destinations or outside Brazil
25.4% Yes, for international destinations
6.9% Don't know
0.2% No
Availability to cruise in low season
67.4% Yes
29.6% No
3.0% Don't know

TECHNICAL

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CLIA BRASIL & FGV

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