

# COCAINE INSIGHTS 4

Brazil in the regional and transatlantic cocaine supply chain:  
The impact of COVID-19



# Cocaine Insights

The cocaine market presents a clear threat at global level. Well-defined locations of production in South America and large consumer markets in the Americas and Europe lead to trafficking routes from a circumscribed origin to specific, even if far-flung, destinations. While some parts of the world play a crucial role as transit regions, the routes, modalities and networks employed by criminal actors continue to evolve, diversify and become more efficient. The increasingly globalized, interconnected, digitalized and technologically sophisticated nature of society, as well as a growing affluent demographic in some regions where cocaine use has traditionally been low, can potentially catalyse and accelerate the dynamism and expansion of the market.

The series *Cocaine Insights*, developed by UNODC in the framework of the CRIMJUST programme and in cooperation with partners and stakeholders at national, regional and international levels, delivers the latest knowledge and trends on issues related to cocaine markets in an accessible and informative format.

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## Disclaimer

This publication has not been formally edited. The content of this publication does not necessarily reflect the views or policies of UNODC or any contributory organization, nor does it imply any endorsement.

Comments on the report are welcome and can be sent to:  
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### Abbreviations

DMP	UNODC Drugs Monitoring Platform
DTO	Drug Trafficking Organization
EU	European Union
Ha	hectare(s)
Kg	kilogram(s)
PCC	Primeiro Comando da Capital
Q1	1st quarter of calendar year (January-March)
Q2	2nd quarter of calendar year (April-June)
Q3	3rd quarter of calendar year (July-September)
Q4	4th quarter of calendar year (October-December)
UNDP	United Nations Development Programme
UNODC	United Nations Office on Drugs and Crime
VIGIA	National Border Security Programme (Ministry of Justice and Public Security of Brazil)



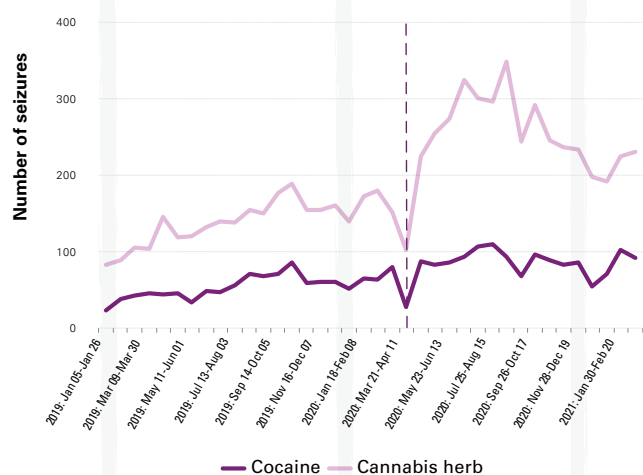
# Key findings

The onset of the global Covid-19 pandemic caused tangible changes in both the dynamics of drug trafficking into and through Brazil and in the operations of Brazilian law enforcement agencies, as well as how these two things impacted on each other. Data on cannabis and cocaine seizures in Brazil exhibit both similarities and differences across the two drugs during the period of interest; while the differences likely reflect distinct market dynamics (COVID-impact included), the similarities more likely reflect external factors, such as law enforcement activities, impacting the two drugs indiscriminately. Some of the observed changes were transient; others, representing intensifications of existing trends or shifts towards existing patterns, have the potential to persist.

## COVID-19 initially brought about short-term disruptions of law enforcement activity within Brazil

The impact of COVID-19 measures and the pandemic itself on law enforcement activities varied across different agencies and across states, with some reporting illness of personnel, others noting disruptions in their operations, and still others indicating that their activities were not affected in any meaningful way. However, a short-lived disruption in normal activities was a recurrent pattern, as in the case of the Federal Road Police and, to some extent, the Federal Police.

Number of seizures of cocaine and cannabis herb on federal highways in Brazil, 2019-March 2021 (3-week periods)



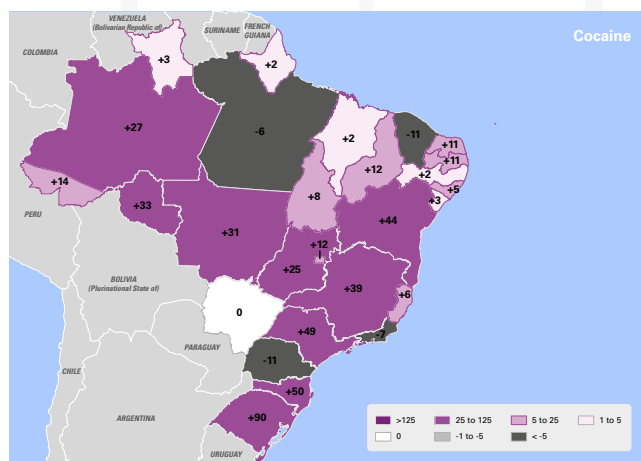
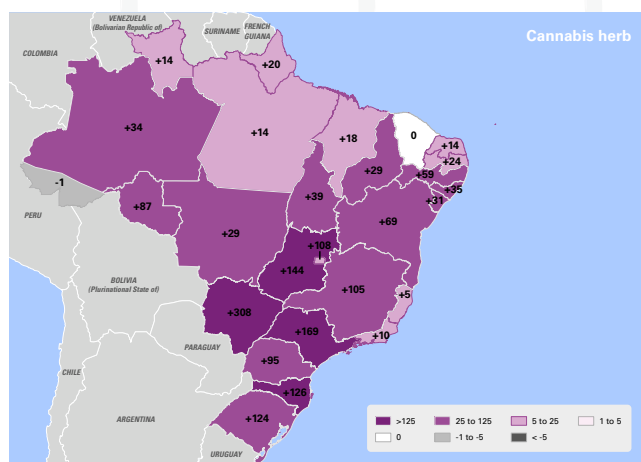
Source: *Polícia Rodoviária Federal*, Brazil

## COVID-related measures quickly created an environment which facilitated drug interdiction on roads

Following the initial short-lived disruptions in law enforcement activities, a decrease in circulation of vehicles due to lockdown measures liberated some patrol teams (who might be otherwise occupied with traffic accidents) and enabled

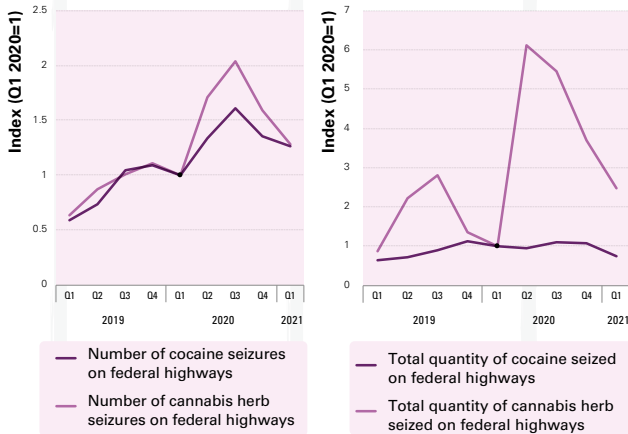
them to dedicate more resources to drug interdiction. In addition, as transit became lighter, it allowed police to arrive faster for emergencies and assist in the apprehension of suspects. Moreover, with reduced numbers of vehicles on the road, instances of trafficking would be more likely to be detected in any routine checks. Furthermore, a reallocation of resources allowed the authorities to increase the presence of the state in strategic points. These changes, which apply to cannabis and cocaine indiscriminately, were corroborated by trends in the *number* of cases in which cocaine and cannabis were seized by Federal Road Police, which both increased sharply, and in parallel, despite the fact that the total *quantity* of cocaine seized by the same agency across Brazil—likely reflecting supply—declined slightly in the second quarter of 2020, and followed a trend in stark contrast with cannabis. The distinct trends in seizure quantities likely reflect distinct dynamics in the cocaine and cannabis market, but also reinforce the evidence that the above changes related to law enforcement lie behind the similarity in trends in *numbers* of seizure cases.

Changes in number of seizures by Federal Road Police in Brazil, 12 months post-COVID versus 12 months pre-COVID, by federal unit



Note: Throughout this document, the beginning of the COVID period is considered to be April 1, 2020.  
Source: *Polícia Rodoviária Federal*, Brazil

Seizure of cocaine and cannabis herb on highways by Federal Road Police in Brazil, by quarter, Q1 2019-Q1 2021

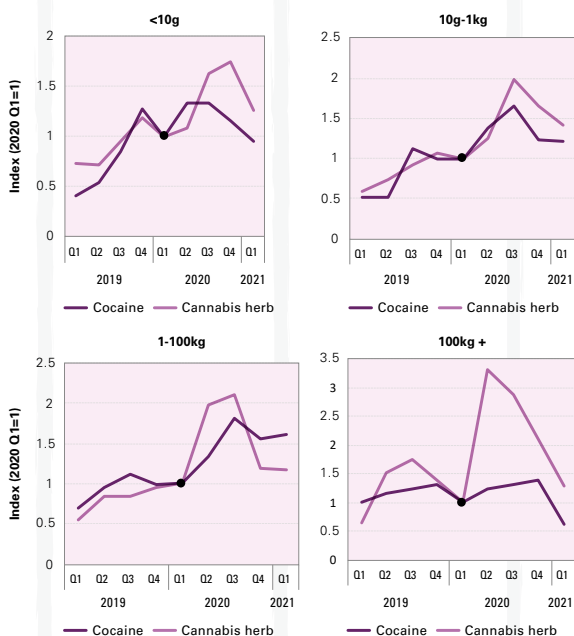


Source: *Polícia Rodoviária Federal*, Brazil

Seizures by Federal Road Police increased in number across almost the entire scale of seizure sizes—with one important exception

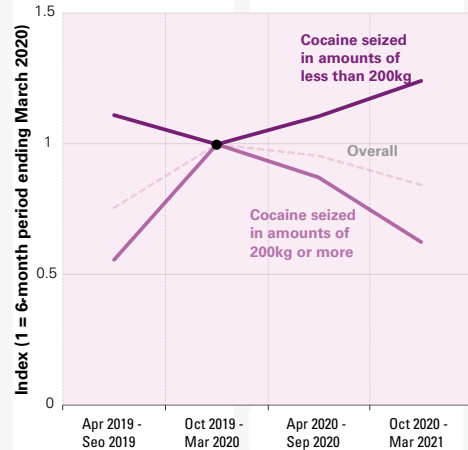
The changed circumstances affecting interdiction on roads together with the focusing of efforts by law enforcement resulted in increased numbers of cannabis herb seizures of all sizes, and of cocaine of almost all sizes, with the notable exception of very large seizures of cocaine. Such large seizures, which constitute a small but important minority of cases, remained relatively stable in number or became even rarer in the case of extremely large seizures, contrary to the predominant increasing trend. Moreover, they declined when measured in terms of total quantity seized (aggregated over all of Brazil), likely reflecting general availability across the country and determining the overall trend in the quantity of cocaine seized by Federal Road Police.

Number of seizures on federal highways in Brazil, comparison of cocaine and cannabis herb, by size of seizure, Q1 2019 - Q1 2021, indexed (Q1 2020=1)



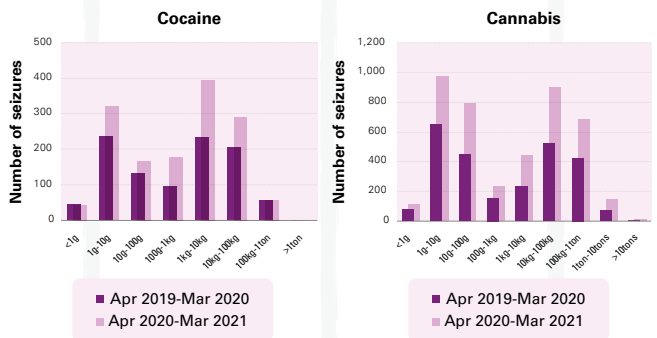
Source: *Polícia Rodoviária Federal*, Brazil

Quantities of cocaine seized on highways and recorded by Federal Road Police, separated into large and small seizures, indexed



Source: *Polícia Rodoviária Federal*, Brazil

Frequency distributions of size of individual drug seizures made by Brazilian Road Police on highways, comparisons between 12-month periods prior to and immediately following the onset of COVID-19

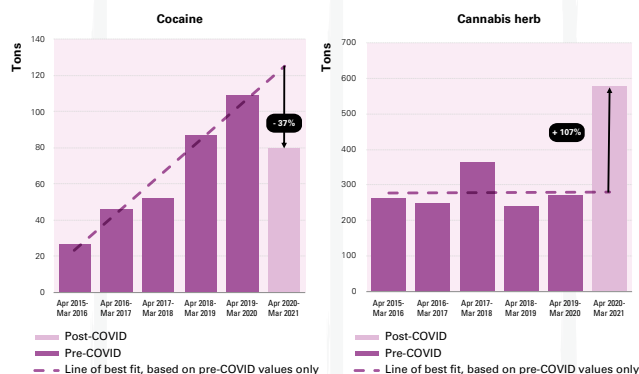


Source: *Polícia Rodoviária Federal*, Brazil

The cannabis and cocaine markets were impacted in very different ways

Seizure data suggest that significant changes in the dynamics of drug markets, especially trafficking into and out of Brazil, occurred around the onset of COVID-19. Starting from the second quarter of 2020, cannabis availability expanded progressively across Brazil, driven by flows from Paraguay, as borne out by increased quantities, in addition to numbers, of seizures. In contrast, cocaine seizures declined overall, with a varied impact on cocaine flows across federal units.

### Quantities of cocaine and cannabis herb seized in Brazil, April 2015-March 2021



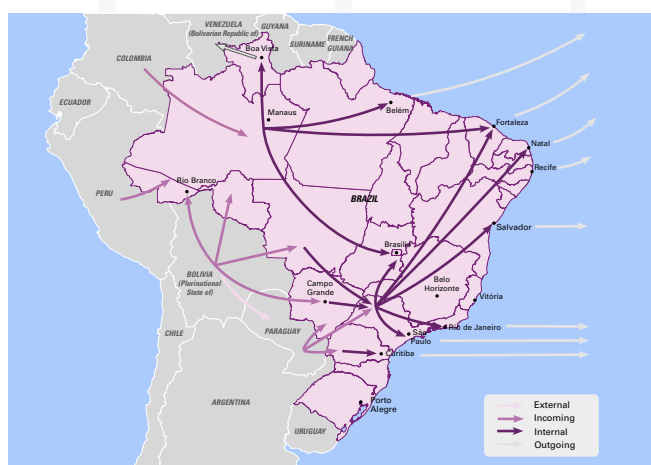
Source: *Polícia Federal*, Brazil

Note: The increase/decrease in percentage terms is based on the comparison between the actual quantities reported and the quantities expected by extrapolating the trend (assumed to be linear) prior to the onset of COVID-19.

### COVID-related measures brought about difficulties for organized crime groups to move imported cocaine internally towards exit ports and areas of consumption

Internal trafficking routes in Brazil appear to involve a certain degree of centralization, notably in the state of São Paulo. COVID-related measures appear to have impacted the internal consolidation, redistribution and management of cocaine stocks within the country. The reported use of small aircraft on flights within Brazil represents a departure from the more usual modalities for internal trafficking and may also reflect the difficulties encountered by organized crime groups in moving cocaine within the country using the more established modes of transportation.

### Main cocaine trafficking routes affecting Brazil

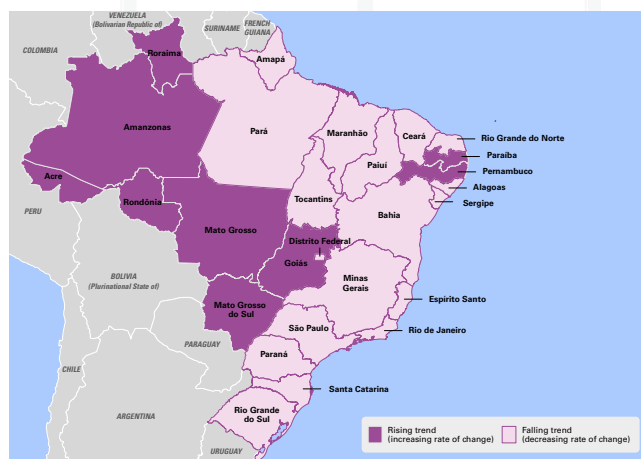


Note: This map, reproduced from a visualization by the Brazilian Federal Police, captures the main routes from the international perspective as well as the most important internal routes. A more detailed map can be found in: Centre of Excellence for Illicit Drug Supply Reduction, *COVID-19 and drug trafficking in Brazil: the adaptation of organized crime and the actions of polices during the pandemic*, December 2021. Available at: <https://www.cdebrasil.org.br/boletins/>  
 Source: Brazilian Federal Police, presentation at CRIMJUST Investigative Case Forum, Accra, Ghana, November 2021.

### Opposite effects on cocaine flows visible along east-west divide

Rising trends in seizures in the west, and declining trends in the east, suggest that the supply of cocaine entering the country was not hampered, and even increased, during the first few months of the pandemic, while distribution towards ports for onward trafficking was disrupted, resulting in declines in outgoing flows.

### Changing trends (rates of change) in cocaine seizures in Brazil following the onset of COVID-19



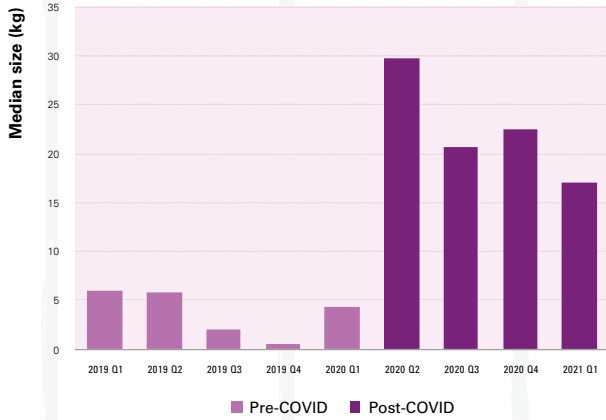
Note: The above map is based on 3 consecutive 6-month periods: April-September 2019 (Period A), October 2019- March 2020 (Period B), and April-September 2020 (period C, immediately following the onset of COVID), and the quantities *a*, *b*, *c* seized during periods A, B, C respectively. The rate of change is considered to be increasing (rising trend) if the ratio *c/b* is larger than *b/a*, decreasing (falling trend) if *c/b* is smaller than *b/a*.

Source: *Polícia Federal*, Brazil

### Restrictions on regular border crossings likely triggered an increased use of clandestine flights and led to a surge in cocaine flows into western border states, possibly further fuelled by COVID-related fluctuations in cocaine supply in source countries.

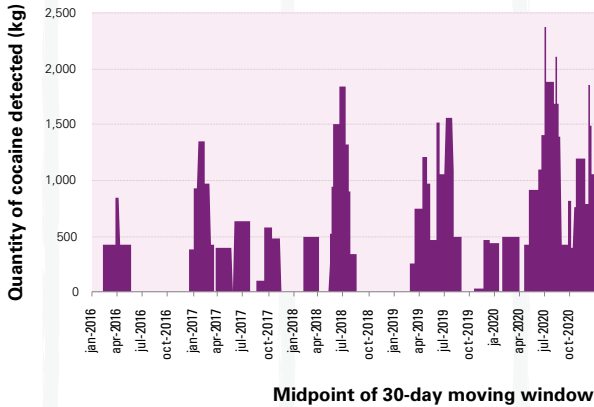
An increased flow of cocaine into the western border states shortly after the onset of COVID-19 seems to have been enabled, at least in part, by traffickers increasingly resorting to clandestine flights to transport cocaine into Brazil, likely in order to compensate for disruptions in established land-based or waterborne cross-border channels into Brazil or Paraguay. Moreover, COVID-19 impacted market dynamics in the source countries, notably Peru and the Plurinational State of Bolivia, and also brought about difficulties in law enforcement at multiple stages of the supply chain (including eradication), resulting in higher cultivation levels in 2020 (coming on the back of already high levels in 2019), but also temporary disruptions in the internal supply chains. Thus it is possible that the end-product (cocaine hydrochloride) was not only produced in a greater quantity overall, but also became available in a “rebound” surge, resulting in an abrupt accumulation of cocaine to be distributed relatively quickly from the source countries.

Median size of cocaine seizures by Federal Road Police on highways in Mato Grosso, by quarter, Q1 2019-Q1 2021



Source: *Polícia Rodoviária Federal*

Quantity of cocaine detected in aircraft-related trafficking incidents in Brazil captured in open-source monitoring, 2016-2020 (30-day moving window)

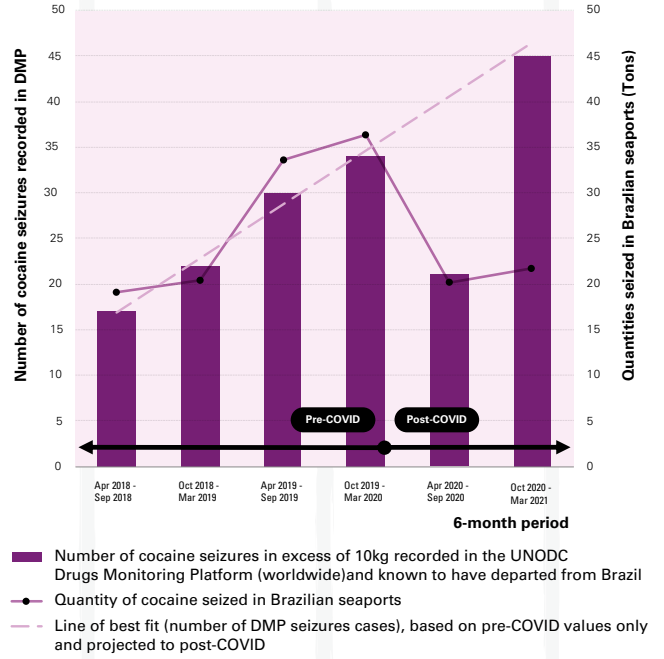


Source: Monitoring of media reports. See also UNODC, *Cocaine Insights 5, Cocaine Trafficking: The Paraná-Paraguay Waterway and the Airbridge Link*, forthcoming.

### Outgoing flows of cocaine from Brazilian seaports declined

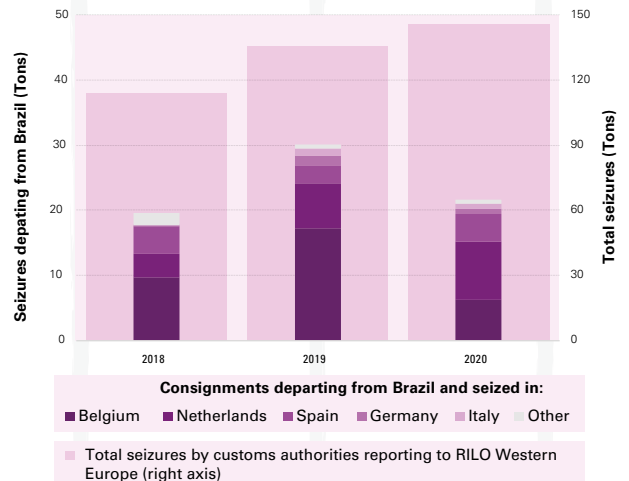
Shortly after the onset of COVID-19, a drop in cocaine seizures at Brazilian seaports occurred in parallel with declines in consignments known to have departed from Brazil and seized in destination countries. Seizures recorded by customs authorities of countries in Western and Central Europe departing from Brazil declined despite a continued increase in total cocaine seizures (independently of country of departure) by the same authorities. However, the disruption in flows from Brazil appears to have been temporary.

Seizure-based metrics of large-scale trafficking of cocaine from Brazil, April 2018-March 2021 (6-month periods)



Note: The acronym DMP stands for the UNODC Drugs Monitoring Platform. Seizures recorded in the DMP made in Brazil itself are excluded.  
Sources: *Polícia Federal*, Brazil; UNODC Drugs Monitoring Platform

Cocaine seizures by customs authorities in Western and Central Europe departing from Brazil, by seizing country, in comparison with total seizures by customs (any departure), 2018-2020



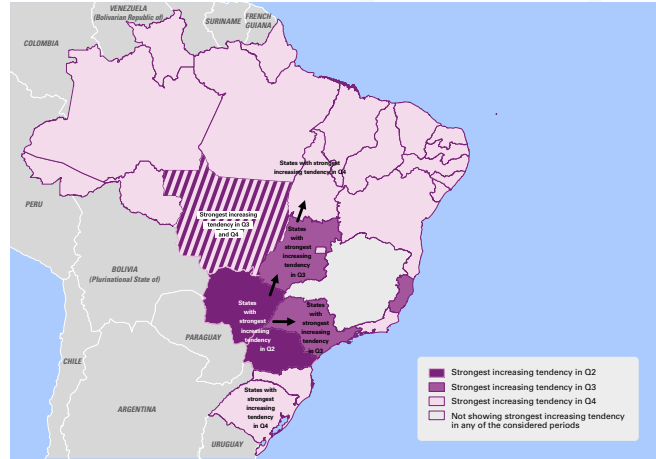
Sources: World Customs Organization, Regional Intelligence Liaison Office for Western Europe



**The flow of cannabis herb from Paraguay into Brazil increased dramatically, likely as a consequence of reduced eradication activities and difficulties in cross-border collaboration**

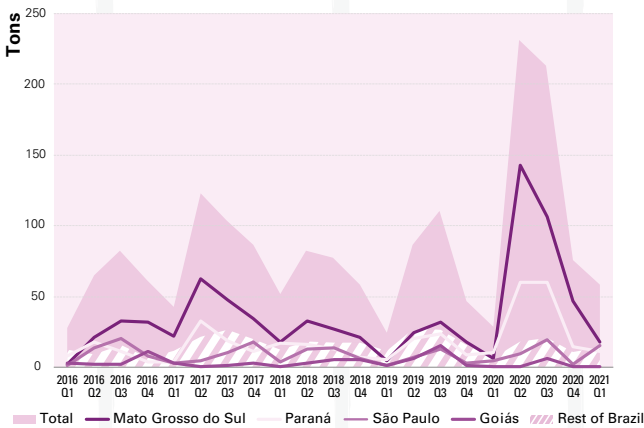
Data from the Brazilian Federal Police indicate a strong and abrupt expansion, beginning in the second quarter of 2020, of cannabis seizures at aggregate level. A similar picture also emerges from data on seizures from federal highways by Brazilian Road Police, showing increases in the quantity as well as the number of cannabis seizures, together with a larger size of seized shipments. Moreover, the increase in seizures appears to have occurred in a “ripple effect”, with the strongest increases registered first in the states of Mato Grosso do Sul and Paraná (the only two states bordering Paraguay) and subsequently in the adjacent states São Paulo and Goiás. These changes appear to be explained by unusually high levels of cannabis production in Paraguay, facilitated by difficulties in conducting cannabis eradication activities in collaboration with Brazilian forces, in the context of COVID-19.

Brazilian federal units with strongest increasing tendency in seizures of cannabis herb following the onset of COVID-19, by quarter, Q2-Q4 2020



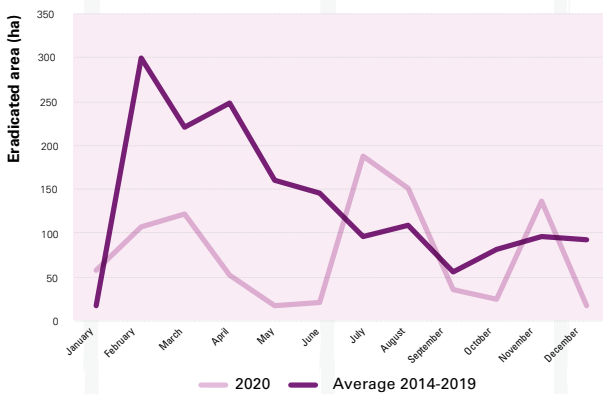
Note: The above is based on quarter-on-quarter increases in cannabis herb seizures recorded by Brazilian Federal Police. The federal units with the strongest increasing tendency are determined by standardizing the quarter-on-quarter increases (to obtain the “z-score”) and selecting all states above a fixed threshold, chosen to be the value of 0.2 (for all 3 quarters).  
Source: *Polícia Federal*, Brazil.

Seizures of cannabis herb in Brazil, total compared with states selected by proximity to Paraguay, by quarter, 2016 Q1-2021 Q1



Source: *Polícia Federal*, Brazil.

Cannabis eradication in Paraguay, by month, 2020 versus previous years (2014-19)

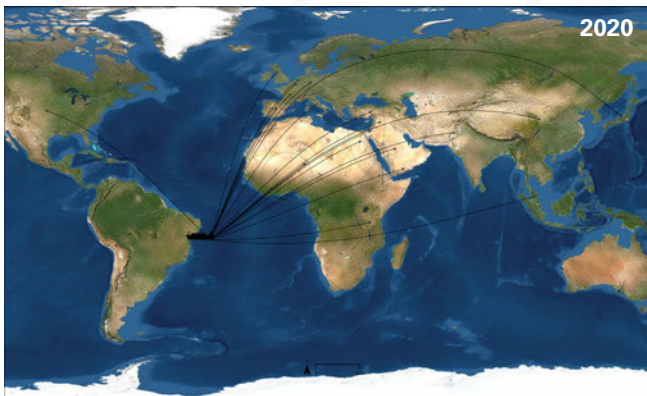
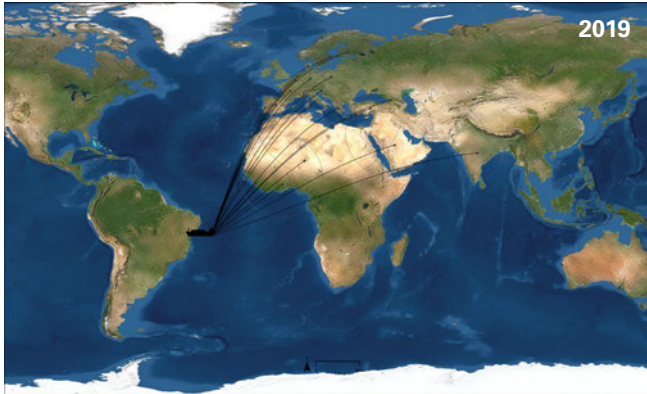


Source: *Secretaría Nacional Antidrogas*, Paraguay.

**Diversification of maritime routes exiting Brazil continued**

In recent years, Brazilian DTOs have diversified the routes and ports used for trafficking of cocaine through and out of Brazil beyond the long-standing use of large ports, seeking to exploit smaller ports on the northeastern and the southern coast of Brazil, where there is less capacity for inspection. The diversification had been observed before the pandemic but became particularly prominent during its course, and was especially visible in terms of the destination countries of cocaine trafficked from Brazilian ports.

## Identified destinations of cocaine seizures made in Brazilian seaports



Source: *Policia Federal*, Brazil

Adapted from: Centre of Excellence for Illicit Drug Supply Reduction, *COVID-19 and drug trafficking in Brazil: the adaptation of organized crime and the actions of police forces during the pandemic*, December 2021. Available at: <https://www.cdebrasil.org.br/boletins/>

### COVID-19 accelerated the ongoing evolution of drug markets

The diversification of ports of departure for cocaine shipments is one example of an existing tendency which may have intensified during the COVID-19 pandemic. Beyond this, novel, contactless methods of delivery of drugs to consumers continued to proliferate, especially via social media platforms. Moreover, the cocaine market, already dominated by a handful of actors with a far-reaching presence, showed signs of gravitating even more towards fewer, bigger players, as large criminal groups proved to be highly resilient to the effects of the pandemic, due to a well-established logistical infrastructure, and were able to continue or resume their activities. Smaller groups, however, reportedly faced bigger challenges to continue their operations.

## Conclusions and Policy Implications

The COVID-19 pandemic impacted drug trafficking affecting Brazil in different ways, depending on the drug and the geographic region. The cannabis market experienced a boom, perceptible in a ripple effect emanating from the shared border with Paraguay, and likely attributable to the impact of COVID-19 in this country, in particular the reduction of eradication activities in Paraguay and obstacles to cross-border cooperation between Paraguay and Brazil. The impact on the cocaine market was more nuanced, with *increasing* flows into the western states bordering the producer countries of Bolivia (Plurinational State of), Colombia and Peru – possibly linked to COVID-induced disruptions in existing cross-border channels and consequent shifts in modalities, as well as volatility in cocaine supply chains in the producer countries – combined with *decreasing* transatlantic flows out of the seaports, in addition to likely difficulties in the internal consolidation, redistribution and management of cocaine stocks within the country. The increasing flows into the western states appear to have been achieved at least in part by means of an expansion in the use of clandestine flights. In parallel, law enforcement agencies and their workforce were themselves impacted in different ways; in particular the Federal Road Police incurred an immediate but short-lived shock to its operations, followed by a period in which restrictions and reduced traffic created an environment which facilitated its work and led to higher numbers of seizures.

The above happened in a context of ongoing efforts to enhance and better integrate the work of law enforcement agencies operating at federal and state levels, especially in border states, as well as an ongoing observed diversification of trafficking routes used by organized crime groups in Brazil in an attempt to evade interdiction. Both of these dynamics started before, and independently of, the onset of COVID-19; the VIGIA programme<sup>1</sup> has continued to be implemented and to expand since then.

Drug markets are complex, and their development is intertwined with a variety of aspects related to logistics, geography, legitimate trade, cross-border ties and knock-on effects, socioeconomic realities with varying rural and urban dimensions, and law enforcement strategies and resource availability, in addition to demand for drugs. Most of these aspects do not usually change quickly; however COVID-19 represented a systemic shock which reverberated on virtually all aspects of society and governance. As far as drug trafficking is concerned, this extended in particular to

significant changes in cannabis and cocaine trafficking into and through Brazil. These changes included disruptions of established channels, which however appear to have been short-lived, as well as shifts towards, and increases in, the use of certain modalities, which have the potential to persist and to grow; in both cases these developments demonstrate the resilience and quick capacity of adaptation of drug markets and drug trafficking organizations. The pandemic illustrated the complex interplay of numerous factors and underscored the necessity to respond with a coordinated, measured, variegated and surgical approach, which can be progressively tailored as necessary as its impact unfolds, rather than any one-dimensional, blanket approaches.

In certain areas of intervention (such as illicit crop eradication), the activities of law enforcement have developed gradually and incrementally to exert regular, continued pressure on criminal organizations and thus successfully restrain their activities (such as illicit crop cultivation). When the activities of law enforcement are disrupted due to unforeseen impediments or resource demands, this can lead to consequential effects on the drug supply chain. Avoiding law enforcement disruptions that can benefit drug trafficking requires contingency planning, with a view to achieving sustainability and resilience in law enforcement operations.

Tight controls and regulations, or restrictions, on the legitimate flow of goods and people do hinder drug trafficking and can facilitate the work of law enforcement agencies. However, increased law enforcement activity does not necessarily translate into reduced supply, and stricter controls can push criminals to avoid typical modes of transportation in favour of entirely clandestine modalities to transport drugs. In the case of cross-border flows into Brazil this seems to have translated into an increased use of clandestine flights; in the case of cross-border flows out of Brazil, or into Europe, this could potentially translate into the use of submarines or clandestine flights.

Border control remains a critical area to counter drug trafficking, especially for countries with extensive borders flanked by remote areas. Clandestine flights in particular are especially attractive for criminals because they enable the fast movement of large loads while circumventing regulations altogether. Recent examples of successful investigations and interdiction efforts by law enforcement agencies in Brazil have shown that dedicated efforts and investments in technology to counter the use of clandestine flights can be effective in addressing drug trafficking. Like all types of organized crime flows, large-scale trafficking of drugs requires coordination and logistical organization; if these activities can be targeted and impaired, they can become the Achilles' heel in the drug supply chain.

<sup>1</sup> The National Border Security Programme, known as VIGIA, is one of the strategic projects of the Ministry of Justice and Public Security of Brazil. The programme aims to establish a permanent strategic operating model and, at the same time, to strengthen the integration of different police forces, expanding the exchange of information and enhancing investigations, in order to reduce fragmentation and lack of synchronization in police operations. Implementation was started by the secretariat of integrated operations (SEOPI) in April 2019 in Guaira (Paraná).

Seizure data can provide insights into both the impact of law enforcement and the dynamics of drug markets, but their usefulness is greatly enhanced if they are collected and consolidated in a systematic, comprehensive, case-by-case fashion and analyzed in depth across time, space and drug types. The value of these data would be even higher if they could be triangulated with other market indicators, including prices and purities, but also demand-side indicators, collected with equal coverage and systematicity. This warrants investment to strengthen data collection and data consolidation practices, including coordination needed in a federated structure such as in Brazil.

## Introduction

When the COVID-19 pandemic began spreading across the world in March 2020, it impacted not only legitimate activities but also the illicit ones. Effects of the pandemic on organized crime may be distinguished into direct (i.e., pertaining to the lockdown measures or infections, and the repercussions on the opportunity to commit crimes) and indirect (related to the resulting economic downturn, for example). Previous research finds that despite disrupting some illicit activities, the pandemic has created numerous opportunities for organized crime groups (OCGs) in terms of bolstering their illegal governance, opening new illicit markets, and creating avenues to infiltrate legal economies.<sup>2,3,4</sup>

As the logistics of producing, trafficking and distributing drugs rely heavily on the movement of people and licit goods, the drug supply chain has been inevitably affected by the pandemic-related measures introduced by governments to limit the spread of the virus.<sup>5</sup> Among the factors that may have caused a direct impact on drug markets during the pandemic are disruptions in the flows of goods and people, as well as changes in law enforcement activities. Analysing drug trafficking in the context of COVID-19 may shed light on the internal workings of the drug supply chain.

In recent years, Brazil has become an important gateway for cocaine destined to Europe or Africa for further transshipment to Europe.<sup>6</sup> The retail market for cocaine in the country also appears to be the largest one in South America.<sup>7</sup> In addition, during 2019-2020, two major developments might have affected trafficking of cocaine through Brazil: the already mentioned pandemic with its social distancing measures and border closures; and the implementation of new law enforcement strategies through the VIGIA programme.<sup>8</sup> This research looks at the dynamics

of cocaine trafficking to and from Brazil in the context of the COVID-19 pandemic, including comparisons with the cannabis market, and taking into account the possible impact of changes in the effectiveness of police activities.

Throughout this document, wherever the analysis required a cutoff date to distinguish between time periods before and after the onset of COVID, this was taken to be April 1, 2020, as long as data were available with a sufficiently granular timestamp (by calendar month or exact dates). In other cases, the nearest available approximation to this was taken (e.g. calendar year 2020).

2 UNODC, “The Impact of COVID-19 on Organized Crime,” July 13, 2020. Available at [https://www.unodc.org/documents/data-and-analysis/covid/RB\\_COVID\\_organized\\_crime\\_july13\\_web.pdf](https://www.unodc.org/documents/data-and-analysis/covid/RB_COVID_organized_crime_july13_web.pdf).

3 Alberto Aziani et al., “COVID-19 and Organized Crime: Strategies Employed by Criminal Groups to Increase Their Profits and Power in the First Months of the Pandemic,” *Trends in Organized Crime*, September 13, 2021. Available at <https://doi.org/10.1007/s12117-021-09434-x>.

4 Centre of Excellence for Illicit Drug Supply Reduction (CoE Brazil), “COVID-19 and Drug Trafficking in Brazil: The Adaptation of Organized Crime and the Actions of Polices during the Pandemic,” December 2021. Available at <https://www.cdebrasil.org.br/boletins/>.

5 UNODC, “COVID-19 and the Drug Supply Chain: From Production and Trafficking to Use,” May 2020.

6 UNODC, “Booklet 4, Drug Market Trends: Cocaine, Amphetamine-Type Stimulants,” in *World Drug Report 2021*, 2022. Available at <https://www.un-ilibrary.org/content/books/9789210058032>.

7 As of 2012, past-year prevalence of use of cocaine (including smoking of “crack”) among the population aged 15-59 was estimated at 2.2 per cent. See: Renata Rigacci Abdalla et al., “Prevalence of Cocaine Use in Brazil: Data from the II Brazilian National Alcohol and Drugs Survey (BNADS),” *Addictive Behaviors*, 39, no. 1 (January 2014), 297–301. Available at: <https://doi.org/10.1016/j.addbeh.2013.10.019>.

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## Research methods

This study draws on extensive data collection carried out by the UNODC Centre of Excellence for Illicit Drug Supply Reduction<sup>9</sup> from official agencies of Brazil that work at the national and state level. It relies on official data on drug seizures as well as on field research in the states of São Paulo, Paraná, and Mato Grosso do Sul. The research team conducted a total of 21 semi-structured interviews and 7 focus groups with public agencies that act directly in the fight against trafficking of substances. The information obtained through interviews and the focus groups have some limitations; in particular, they do not represent the view of the respective organizations and do not necessarily cover the entire national territory. The qualitative and quantitative information obtained were used in a complementary fashion to explain the changes that occurred in the local drug trafficking scenario.

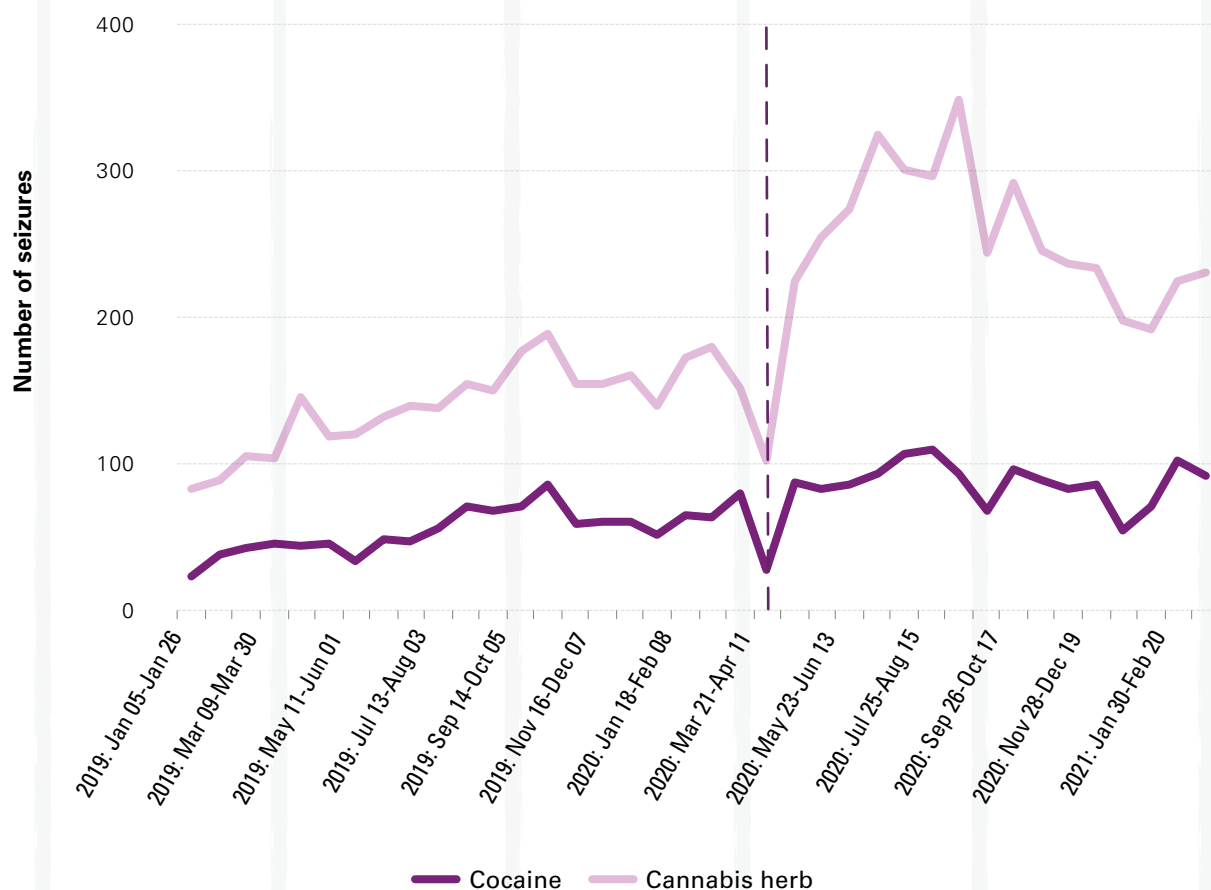
It is also important to emphasize that the extent to which the quantitative datasets obtained from different sources overlap is unknown. The Federal Police are responsible for the official drug seizure data commonly disseminated in Brazil, which aggregate most of the seizures from agencies at the federal level. The data from the Federal Road Police have the analytically useful characteristic that the information recorded on a case-by-case basis included exact dates and geospatial information, allowing a more in-depth analysis where appropriate.

Additionally, the study relies on responses to the Annual Report Questionnaire by Brazil and neighbouring countries, quantitative data from other official national and international bodies, and information available to UNODC through its illicit crop monitoring programme. Finally, these data are complemented by research reports and scholarly articles on the issue of cocaine trafficking in Brazil. Media sources have also been considered when providing additional details to facts established through more robust sources.

...  
<sup>9</sup> Centre of Excellence for Illicit Drug Supply Reduction (CoE Brazil), "COVID-19 and Drug Trafficking in Brazil: The Adaptation of Organized Crime and the Actions of Polices during the Pandemic," December 2021. Available at: <https://www.cdebrasil.org.br/boletins/>.

# Impact on law enforcement: Fighting drug trafficking during a pandemic

**FIG. 1** Number of seizures of cocaine and cannabis herb on federal highways in Brazil, 2019-March 2021 (3-week periods)



Sources: *Polícia Rodoviária Federal*, Brazil

In late March 2020, the government of Brazil introduced social distancing measures in most states, restricted land travel between states and imposed a temporary ban on foreign air travel to prevent the spread of COVID-19.<sup>10</sup> The impact of these measures and the pandemic itself varied across states and across different law enforcement agencies, with some reporting illness of personnel, others noting disruptions in their operations, and still others claiming that their activities were not affected in any meaningful way.

The most immediate impact of COVID-related measures could be seen in changes in law enforcement officials' personal life, which in some cases led to adjustments in their professional routine. As one interviewed port official explained, due to closures of schools, he had to modify his schedule to be able to stay at home with his child while his

wife was at work. As a result, he was present at the port during unusual hours which allowed him to take "a new look" at the port dynamics.<sup>11</sup>

More importantly, officials point out that some of their colleagues fell ill or died because of COVID-19, which resulted in shortages of personnel and a significant increase in workload.<sup>12</sup> For example, some interviewees reported a reduction in the capacity of their institutions.<sup>13,14</sup> In this sense, the health crisis exposed weaknesses related to staffing of some agencies, where many employees were in a high-risk group due to their age.<sup>15</sup>

In terms of law enforcement operations, the pandemic seems to have temporarily disrupted some routine activities

<sup>10</sup> Global Monitoring, *COVID-19 Pandemic - Brazil* (Global Monitoring, April 26, 2022). Available at: <https://global-monitoring.com/gm/page/events/epidemic-0001981.PDJ4eRFDiciT.html?lang=en>.

<sup>11</sup> Focus Group 1.

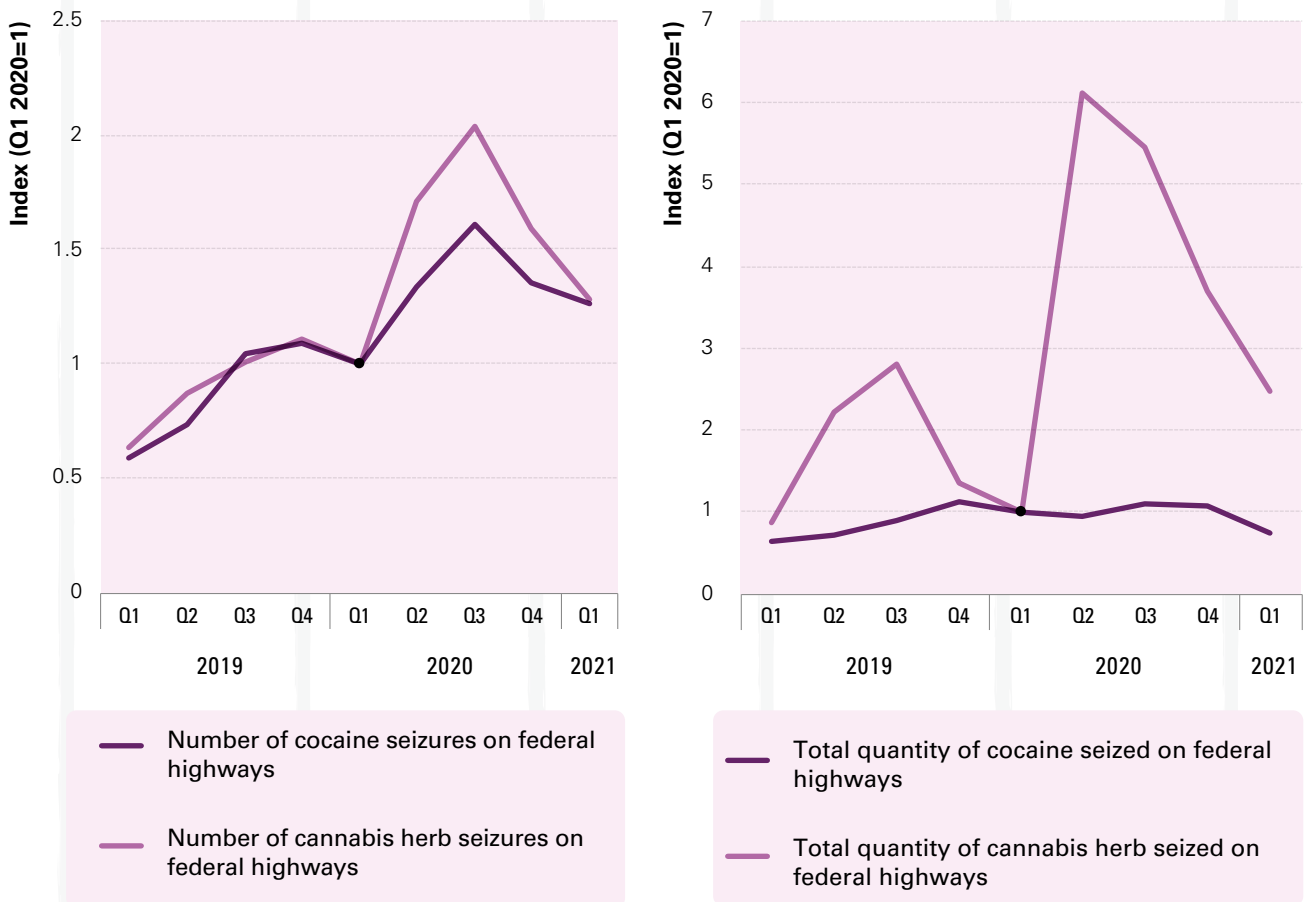
<sup>12</sup> Interview 12.

<sup>13</sup> Interview 11.

<sup>14</sup> Focus Group 1.

<sup>15</sup> Interview 10.

**FIG. 2** Seizure of cocaine and cannabis herb on highways by Federal Road Police in Brazil, by quarter, Q1 2019-Q1 2021 (indexed)



Source: *Polícia Rodoviária Federal*, Brazil

and negatively impacted the effectiveness of the interdiction efforts, especially in the early stages of the health crisis. For example, according to one interviewee, pandemic-related measures led to delays in training of drug-sniffing dogs that took place in a city away from the port. As a result, new dogs did not arrive at the port on time.<sup>16</sup>

The Federal Road Police also experienced some interruptions of routine vehicle inspections shortly after the onset of COVID-19.<sup>17</sup> This effect was however relatively short-lived (Fig. 1).<sup>18</sup> In the case of the Federal Police, some investigative activities involving face-to-face interaction on the street were also affected during the beginning of the COVID-19 pandemic.<sup>19</sup>

Not all types of law enforcement activity appear to have been affected in the same way. Federal Police units in charge of interdiction at the airports did not perceive major disruptions in their work because they were not charged with additional functions, such as monitoring COVID-related restrictions.<sup>20</sup> At the same time, other law enforcement activities, such as ongoing investigations and data analysis,

were conducted remotely, when possible.<sup>21,22</sup>

In some cases, the pandemic appears to have facilitated drug interdiction. For example, data from the Federal Road Police suggest that, due to lockdown measures, the volume of vehicles on federal highways fell abruptly by about one half in late March 2020, driven to a large extent by a sharp drop in the circulation of light vehicles (although circulation of heavy vehicles also exhibited a clear decline) and returned to the previous levels only gradually (throughout 2020);<sup>23</sup> this decrease liberated some patrol teams (who might be otherwise occupied by traffic accidents) and enabled them to dedicate more resources to drug interdiction. In addition, as transit became lighter, it allowed police to arrive faster for emergencies and assist in apprehension of suspects through intelligence work.<sup>24,25</sup> In some cases, night patrols increased in order to curb crimes such as burglaries and looting.<sup>26</sup> Moreover, with reduced numbers of vehicles on the road, instances of trafficking would be more likely to be detected in any routine checks.

16 Focus Group 1.

17 Interview 5.

18 Interview 5.

19 Interview 2.

20 Interview 2.

21 Interview 1.

22 Interview 2.

23 Brazilian Federal Police, presentation at "International Dialogues on Justice and Public Security: The Impact of the Pandemic on Drug Trafficking in Brazil," (February 3, 2021).

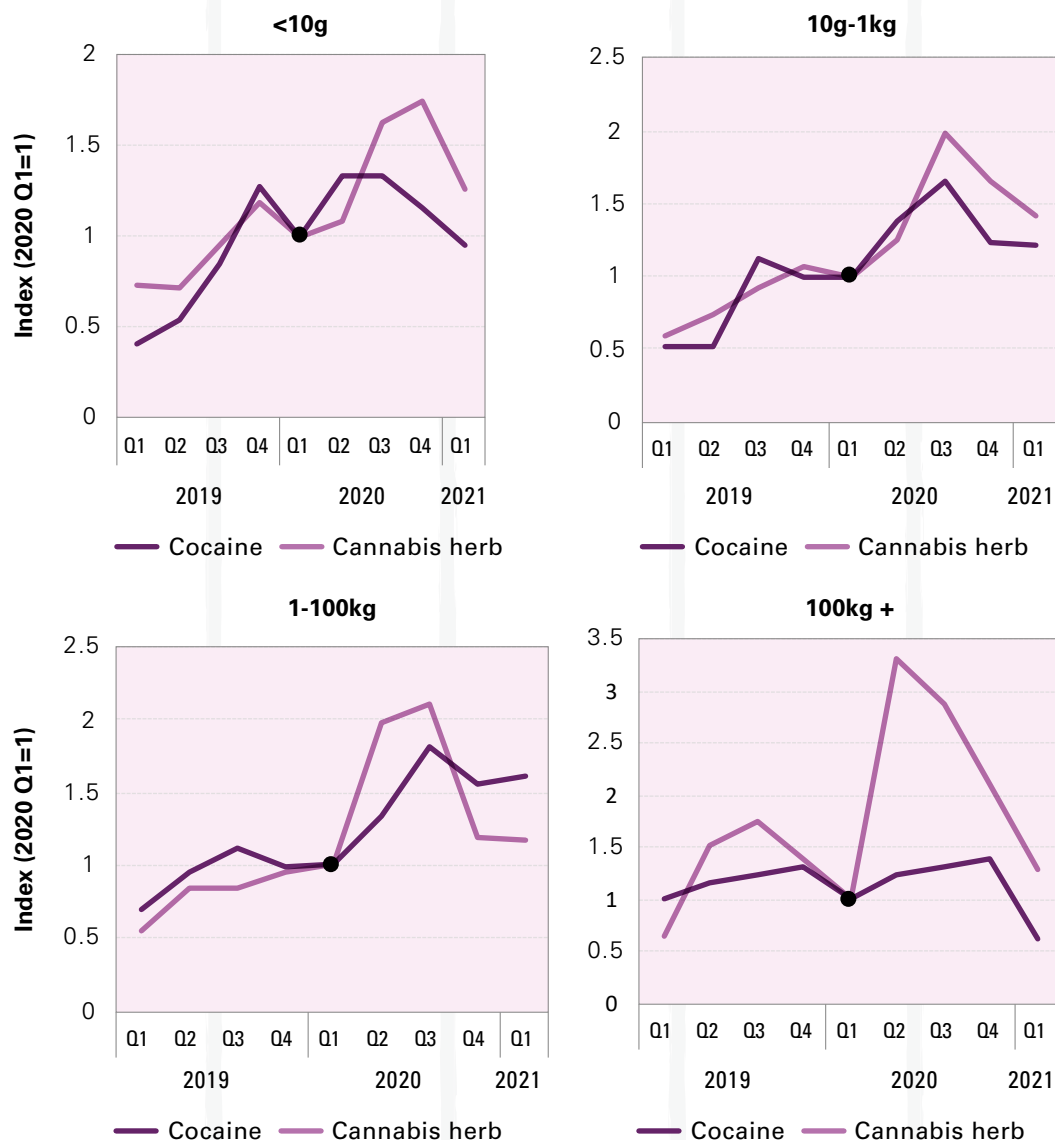
24 Interview 6.

25 Interview 5.

26 Interview 12.



**FIG. 3** Number of seizures by Federal Road Police on highways in Brazil, comparison of cocaine and cannabis herb, by size of seizure, Q1 2019-Q1 2021, indexed (Q1 2020=1)



Source: *Polícia Rodoviária Federal*, Brazil

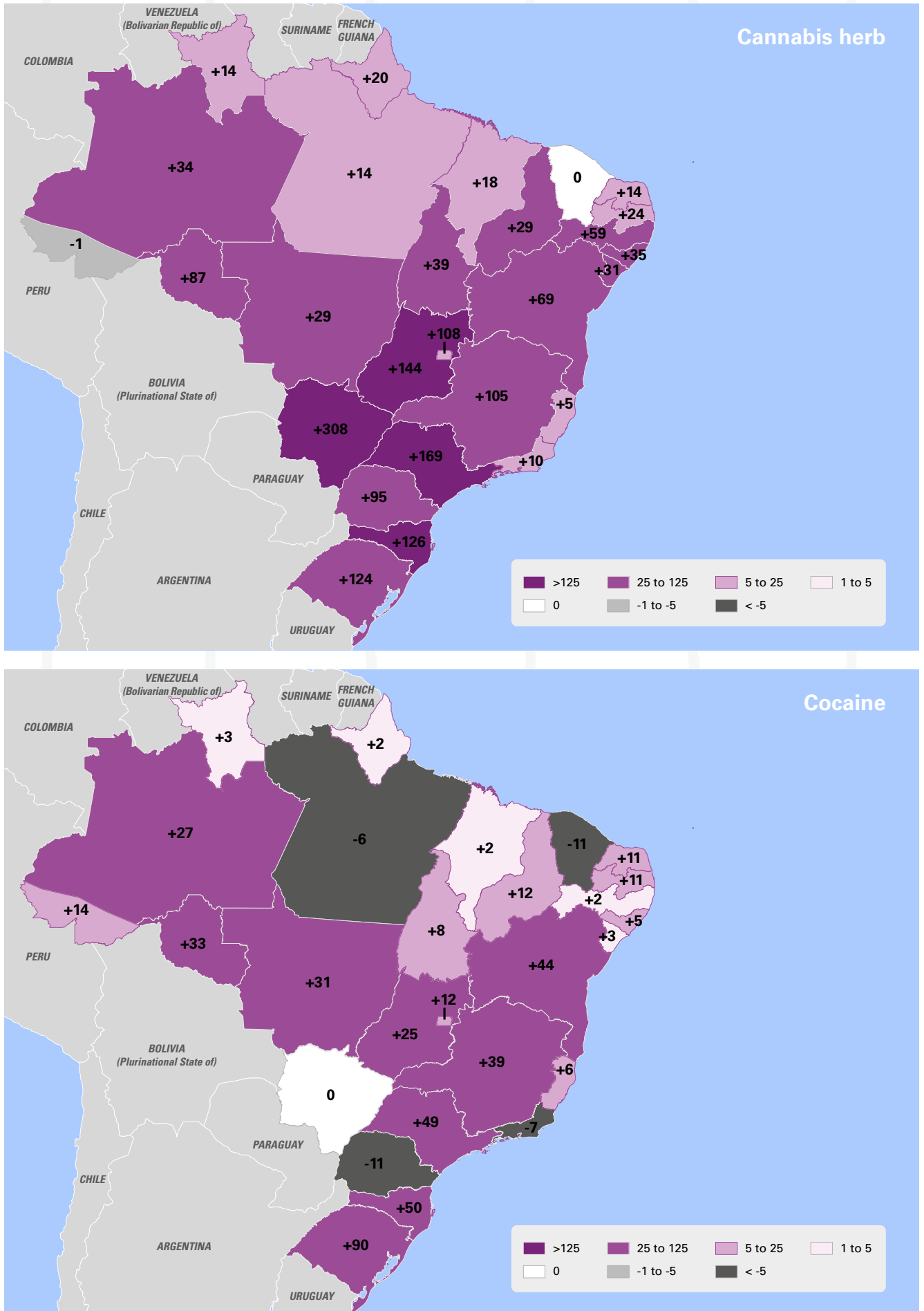
Data from the Federal Road Police suggest that interdiction on highways was facilitated following the onset of COVID-19. Indeed, the number of instances in which cocaine and cannabis were seized on Brazilian federal highways increased sharply in both cases, and in parallel, as of the second quarter of 2020, despite the fact that the total quantity of cocaine seized generally followed a relatively stable trend, in stark contrast with cannabis (Fig. 2), and even registered a slight decline in the second quarter – likely reflecting the availability of cocaine more than law enforcement efficacy.

The rates at which the number of seizures of cannabis and of cocaine increased were remarkably similar, even when the instances are categorized according to the quantity seized – with the important exception of very large seizures (Fig. 3). These common trends likely reflect law enforcement activity in the new context shaped by the

pandemic and appear to be to a large degree independent of the actual developments in supply and market dynamics, given that these presented stark differences between cocaine and cannabis, as shown by the total quantities seized and as discussed in later sections.

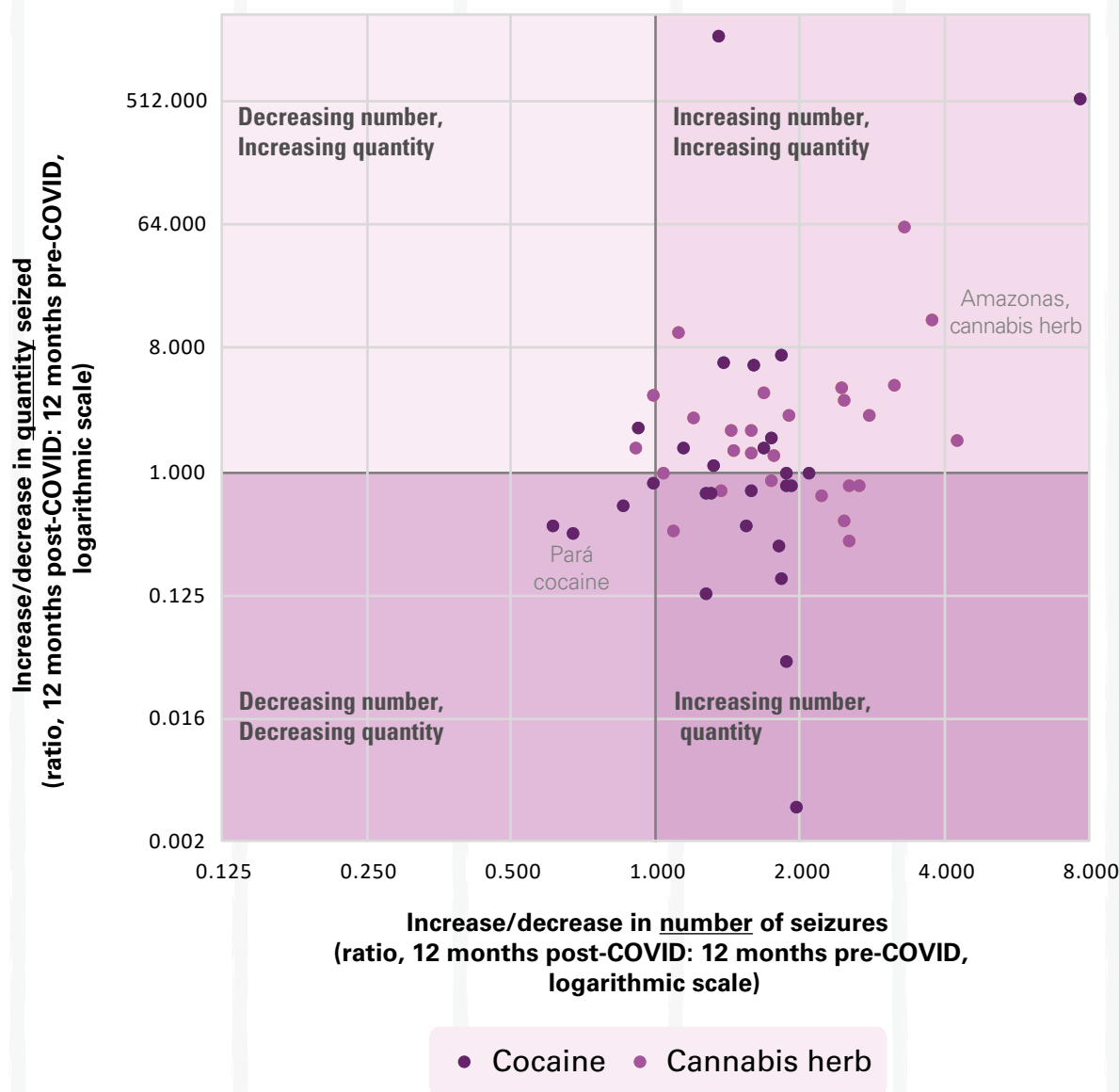
Thus, these trends suggest that the COVID-19 pandemic created circumstances which were conducive to certain types of interdiction—at least interdiction on roads. This is reinforced by the fact that the increases in federal highway seizures were almost ubiquitous across the federal units of Brazil: 25 out of 27 federal units recorded an increase in cannabis herb seizures in the 12 months following the onset of COVID-19 (compared with the previous 12 months), and a similar pattern holds for cocaine (22 out of 27). Despite this, several states recorded declines in the total quantity of cannabis (9 out of 27) and cocaine (17 out of 27) seized (Figs. 4,5).

**FIG. 4** Changes in number of seizures by Federal Road Police on highways in Brazil, 12 months post-COVID versus 12 months pre-COVID, by federal unit



Source: Polícia Rodoviária Federal, Brazil

**FIG. 5** Changes in quantities of drugs seized by Federal Road Police on highways versus number of seizures, based on 12 month-periods before and after the onset of COVID-19, by federal unit



Source: *Polícia Rodoviária Federal*, Brazil

The implementation of the VIGIA programme in 15 Brazilian states also brought an intensification of law enforcement efforts and may have resulted in increased interdiction, especially in terms of the number of operations and seizures.<sup>27</sup> However, the implementation of the VIGIA programme started prior to the pandemic, developed progressively and continued into 2021, while the number of seizures began to increase rather abruptly around the time of the onset of COVID-19 and then declined in the fourth quarter of 2020 and first quarter of 2021. On the other hand, the VIGIA programme may have received a boost in terms of funding due to a reallocation of resources shortly after the onset of COVID-19.<sup>28</sup> It is unclear how long the impact

of this resource boost may have lasted; in any case, the fact that the increasing number of seizures was nearly ubiquitous across Brazilian states (including those where the VIGIA programme has not yet been implemented), suggests that the implementation of VIGIA does not fully explain the increases in the frequency of interdiction, and that external factors, such as reduced traffic, played a crucial role.

<sup>27</sup> For example, one wide-ranging operation (“Operation Horus”) conducted with the framework of VIGIA resulted in the seizure of 688 tons of drugs in 2020 alone, in addition to many other types of law enforcement interventions.

<sup>28</sup> Brazilian Federal Police, presentation at “International Dialogues on Justice and Public Security: The Impact of the Pandemic on Drug Trafficking in Brazil” (February 3, 2021).



# Drug trafficking into, out of and through Brazil during COVID-19

Seizure data suggest that significant changes in the dynamics of drug markets, especially trafficking into and out of Brazil, occurred around the onset of COVID-19 (Fig. 6). Seizure data are however also influenced by law enforcement activities, which are themselves susceptible to impacts brought about by shocks such as the COVID-19 pandemic. This analysis attempts to disentangle the two types of impact – on drug supply and on law enforcement – in order to elucidate changes in drug markets during this period. One technique that will be used is to compare data for cannabis herb and for cocaine, taking into account that certain type of impacts on law enforcement are unlikely to differ across the two types of drugs.

## Cannabis market

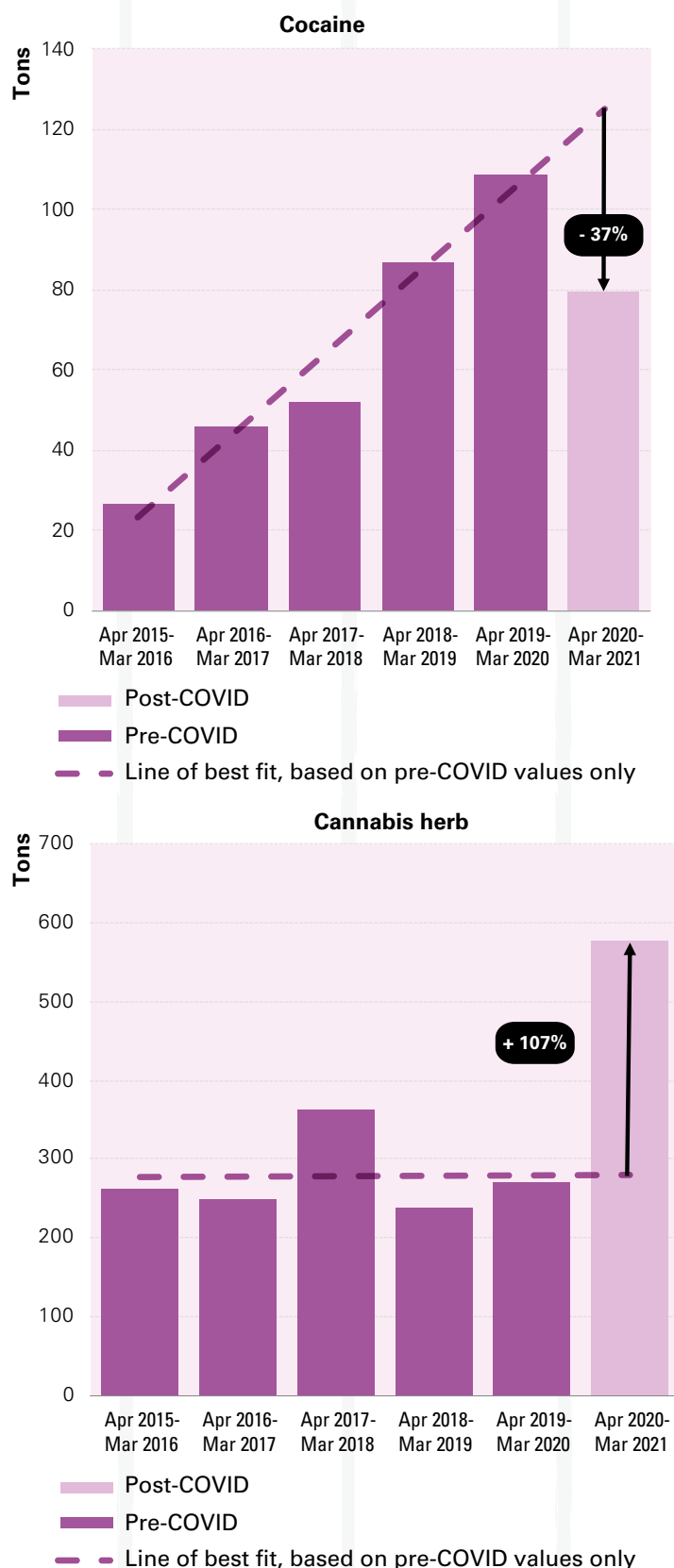
Data from the Brazilian Federal Police indicate a strong and abrupt expansion of cannabis seizures at aggregate level (Fig. 6). A similar, and more detailed, picture also emerges from data on seizures from highways by Federal Road Police. Not only did the quantity of cannabis seized on highways increase sharply, but also the number of instances in which these quantities were seized; however, the growth in the quantity outpaced the growth in the number of instances, implying that in general seizures became on average larger (Fig. 2). Moreover, the increase in seizures appears to have occurred in a “ripple effect”, with the strongest increases registered first in the states of Mato Grosso do Sul and Paraná (the only two states bordering Paraguay) and subsequently in the adjacent states São Paulo and Goiás (Fig. 7).

It should be borne in mind that cannabis seizures in Brazil follow a seasonal pattern, with a peak usually occurring in the second or third quarter of the year (Fig. 8).

Although cannabis cultivation does occur in Brazil, notably in the north and northeast, the majority of cannabis (specifically cannabis herb) in Brazil originates in Paraguay.<sup>29,30</sup> The seasonality of cannabis herb seizures likely reflects an annual cycle in cultivation practices in Paraguay and possibly in eradication activities by law enforcement agencies, and would suggest a prevalent practice in Paraguay of cultivation of one main harvest per year.

Based on information from the *Secretaría Nacional Antidrogas* of Paraguay, provided to UNODC, cannabis cultivation in Paraguay is mainly rainfed, and is thus subject to annual climate patterns. Although the crop can be grown

**FIG. 6** Quantities of cocaine and cannabis herb seized in Brazil, April 2015-March 2021



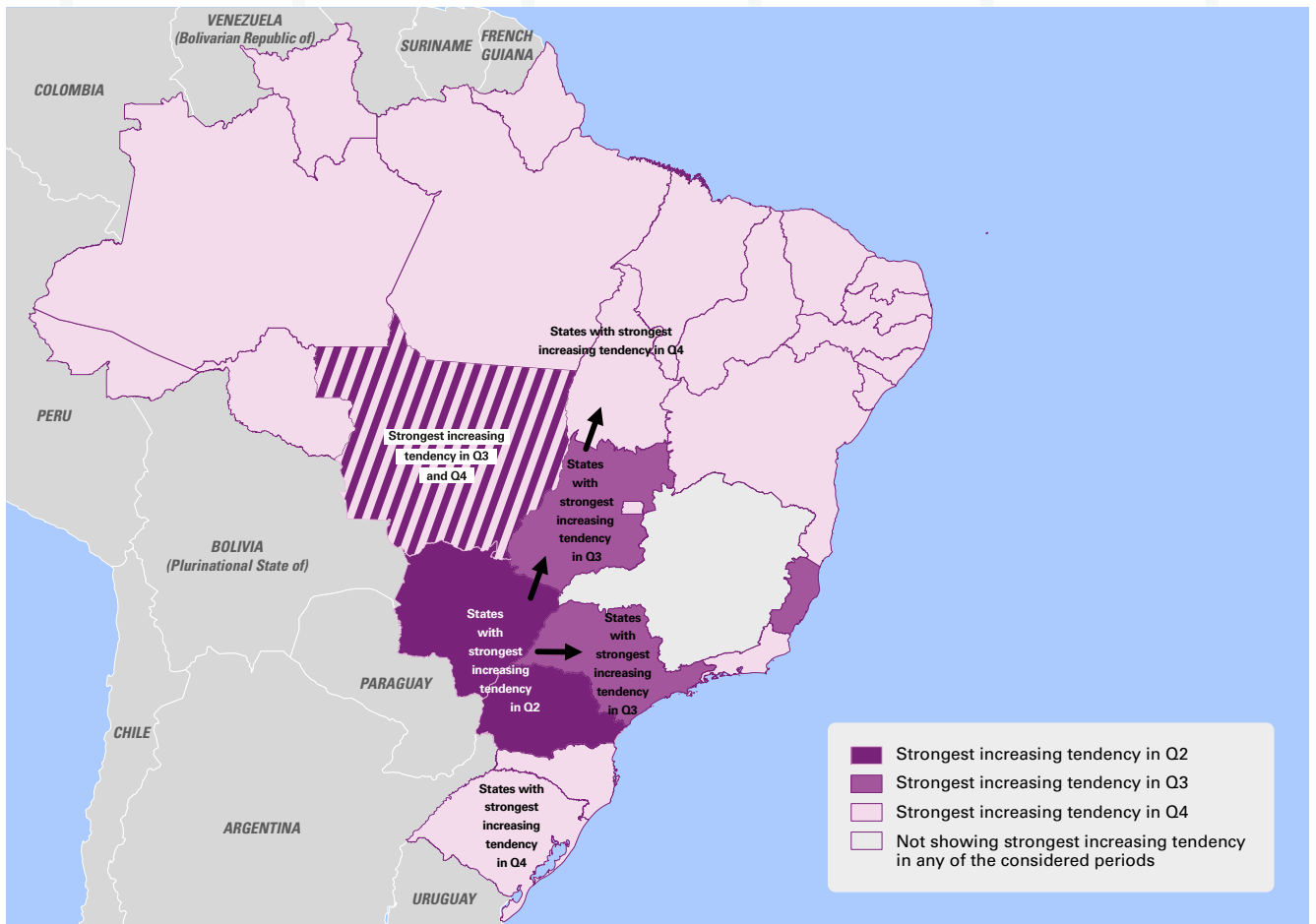
Source: *Polícia Rodoviária Federal*, Brazil

Note: The increase/decrease in percentage terms is based on the comparison between the actual quantities reported and the quantities expected by extrapolating the trend (assumed to be linear) prior to the onset of COVID-19.

29 UNODC Annual Report Questionnaire, response from Brazil for 2019.

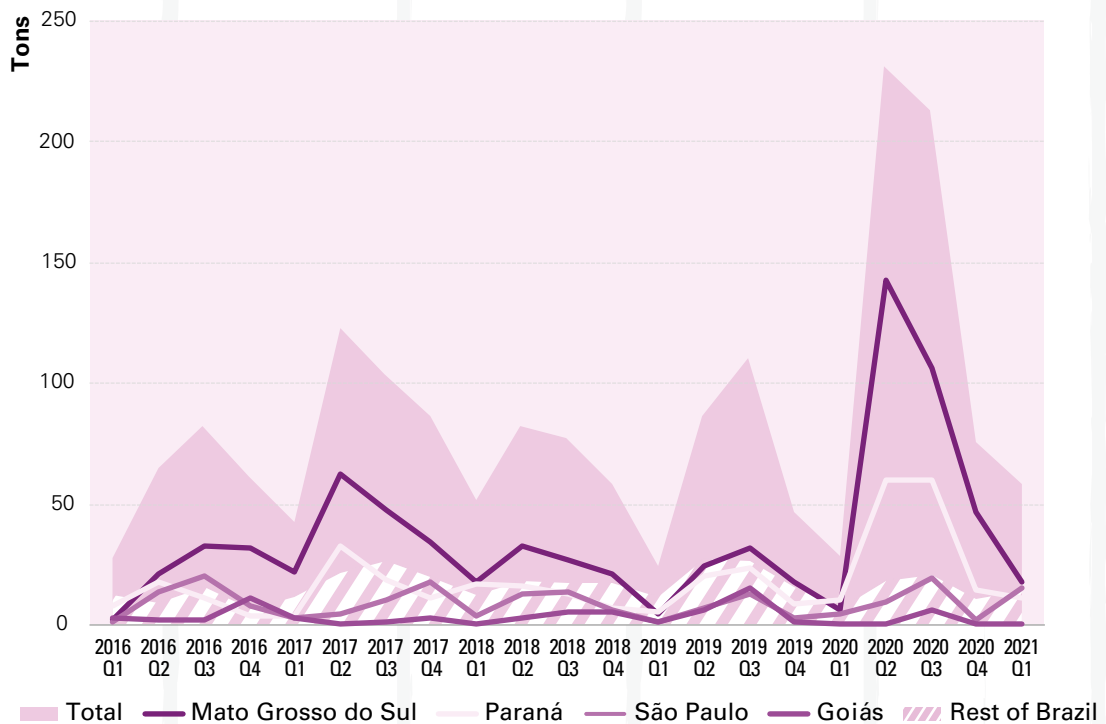
30 One Brazilian interviewee assessed that about 80% of Paraguayan cannabis is produced for the Brazilian market (Interview 7).

**FIG. 7** Brazilian federal units with strongest increasing tendency in seizures of cannabis herb following the onset of COVID, by quarter, Q2-Q4 2020



Note: The above is based on quarter-on-quarter increases in cannabis herb seizures recorded by Brazilian Federal Police. The federal units with the strongest increasing tendency are determined by standardizing the quarter-on-quarter increases (to obtain the “z-score”) and selecting all states above a fixed threshold, chosen to be the value of 0.2 (for all 3 quarters).  
 Source: *Polícia Federal, Brazil*

**FIG. 8** Seizures of cannabis herb in Brazil, total compared with states selected by proximity to Paraguay, by quarter, 2016 Q1-2021 Q1



Source: *Polícia Federal, Brazil*

throughout the year and lacks a fixed crop calendar,<sup>31,32</sup> as of 2009 there was a main season starting in September-October followed by harvests in January-February. This period coincided with the cultivation of sesame and maize; these crops and also pastures were used to hide the cannabis plantations. If eradication took place, the farmer immediately replanted the site, which would become productive in April-June.<sup>33</sup> Given the additional time it may also take to process and transport cannabis herb, the above cycle is consistent with a peak in supply of cannabis herb in Brazil after the first quarter of the calendar year.

More recently, Paraguayan officials have indicated that cannabis cultivation and harvesting in Paraguay depend on the specific area, the conditions of the land and the available technological and logistical resources.<sup>34</sup> They also confirmed the period of October-February as the peak period during the year, mainly due to the climate but also the target of meeting supply in Brazil during key festivities such as carnival; the number of harvests may vary between 1 and 3 a year,<sup>35</sup> with 2 being the typical number.<sup>36</sup> Outdoor cultivation is concentrated in departments such as San Pedro, Concepción, Amambay, Caaguazú and Canindeyú, especially the first three.<sup>37</sup> One interviewed Brazilian official suggested that the peak harvest time may be around May or June and also indicated that two crops a year are the norm.<sup>38</sup> Moreover, indoor cultivation of cannabis also occurs in Paraguay in urban areas such as the city of Asunción as well as the Central Department in general.<sup>39</sup>

Independently of the dynamics driving the seasonality, it is clear that the first few months after the onset of COVID-19 also coincided with the usual “surge” period in cannabis herb seizures in Brazil. Nevertheless, the extremely high seizures in the second and third quarter of 2020 were exceptional also in comparison with the same period in previous years and cannot be attributed solely to the seasonal variation (Fig. 9).

According to interviewed officials, during the course of the pandemic in 2020, cannabis eradication efforts in Paraguay were reduced,<sup>40</sup> which could have resulted in the increase in the available supply of cannabis. At the same time, the

31 UNODC, consultations with *Secretaría Nacional Antidrogas* of Paraguay, 2009.

32 UNODC, consultations with *Secretaría Nacional Antidrogas* of Paraguay, 2022.

33 UNODC, consultations with *Secretaría Nacional Antidrogas* of Paraguay, 2009.

34 UNODC, consultations with *Secretaría Nacional Antidrogas* of Paraguay, 2022.

35 UNODC, consultations with *Secretaría Nacional Antidrogas* of Paraguay, 2022.

36 UNODC Annual Report Questionnaire, responses from Paraguay for 2017 and 2019.

37 UNODC, consultations with *Secretaría Nacional Antidrogas* of Paraguay, 2022.

38 Interview 7.

39 UNODC Annual Report Questionnaire, response from Paraguay for 2020.

40 Interview 7.

efficiency of cannabis cultivation increased, with harvest now possible more than twice per year. In relation to the higher production, experts refer to a so-called “super harvest” of cannabis in 2020.<sup>41</sup> Paraguayan officials confirmed the connection between increased seizures in Brazil and difficulties in Paraguay in carrying out eradication operations, and linked the latter to the loss of funds usually derived from the financial resources of the Brazilian Federal police but reallocated in 2020 in the context of the COVID-19 pandemic. The collaboration of the Brazilian forces in the eradication activities in Paraguay is of vital importance and extends beyond financing to include support on logistics and air transport, essential for entry into forested areas.<sup>42</sup> Brazilian interviewees noted that this type of cross-border collaboration was especially hampered during this period.

Paraguayan officials also confirmed that weather conditions in cannabis cultivation areas in Paraguay were optimal in 2020, but assessed that the impact of this particular aspect on cannabis supply was marginal. Another hypothesis was that the negative impact of COVID-19 on the informal sector of the Paraguayan economy may have spurred workers to move from urban to rural areas, where they could engage in agricultural activities, including cannabis cultivation, taking advantage of food, shelter and security (in addition to payment) provided by criminal organizations managing cannabis cultivation.<sup>43</sup>

Data on eradication activities from Paraguayan authorities confirm the decline in eradication in 2020 and corroborate the hypothesis that this may have had an impact in enabling a greater supply of cannabis herb. Total eradication of the cannabis crop in Paraguay ranged between 1,298 ha and 1,966 ha annually during 2014-2019, but amounted to only 925 ha in 2020.<sup>44</sup> The decline was mainly driven by significant shortfalls during the months of February-June 2020, which in previous years accounted (on average) for the highest levels during the year (Fig. 10). Cannabis herb seizures in Brazil, on the other hand, may have been impacted with a delay of 2-3 months, as during 2020 they first exceeded the historical average in April (Figs. 11,12). The “deficit” in eradication in Paraguay during February-June amounted to 756 ha; although translating the impact of this area precisely into cannabis herb production is not possible, the “excess” seizures of cannabis herb in Brazil during the period April-August (244 tons) appear to fall comfortably within the plausible maximum, even taking into account that only a share of production is actually seized.<sup>45</sup>

41 Interview 7.

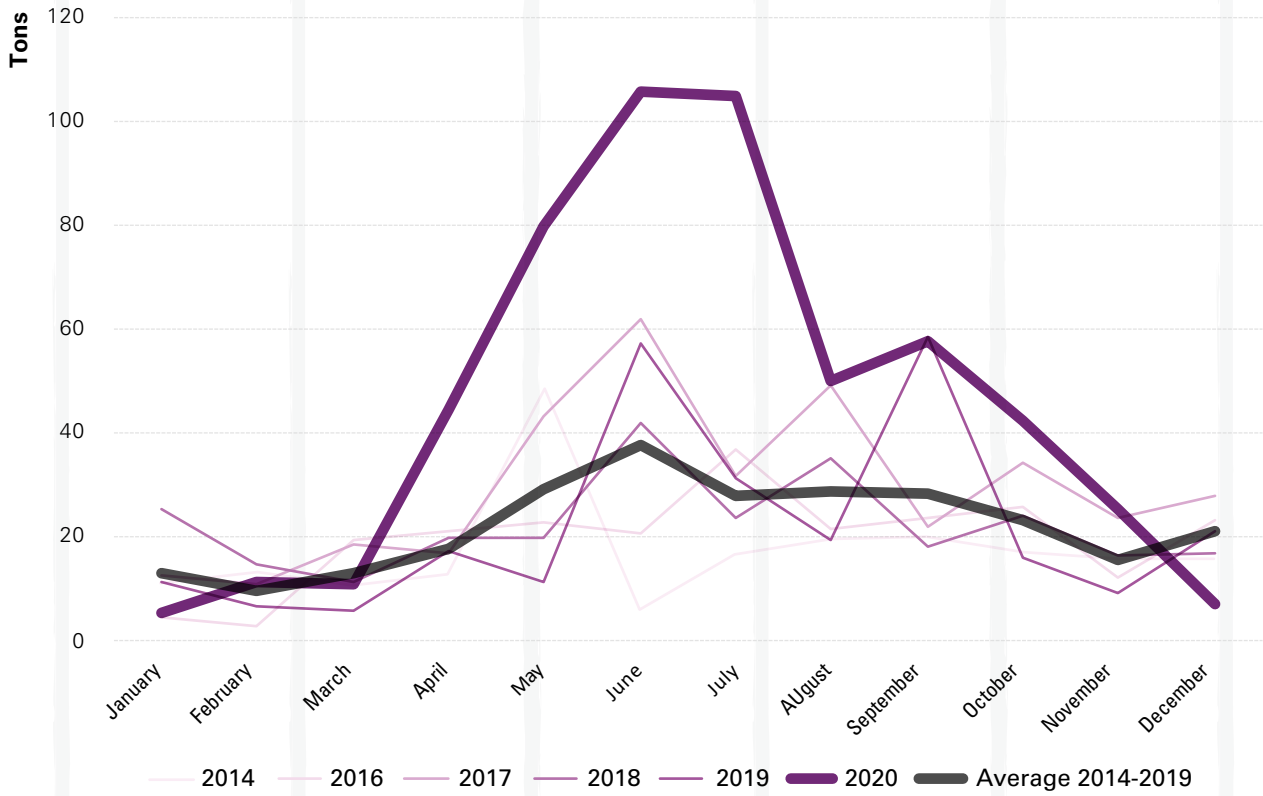
42 UNODC, consultations with *Secretaría Nacional Antidrogas* of Paraguay, 2022.

43 UNODC, consultations with *Secretaría Nacional Antidrogas* of Paraguay, 2022.

44 *Secretaría Nacional Antidrogas*, Paraguay, “Estadísticas Reducción de la Oferta”, accessed June 2, 2022, <http://www.senad.gov.py/pagina/45-estadistica-reduccion-de-la-oferta.html>.

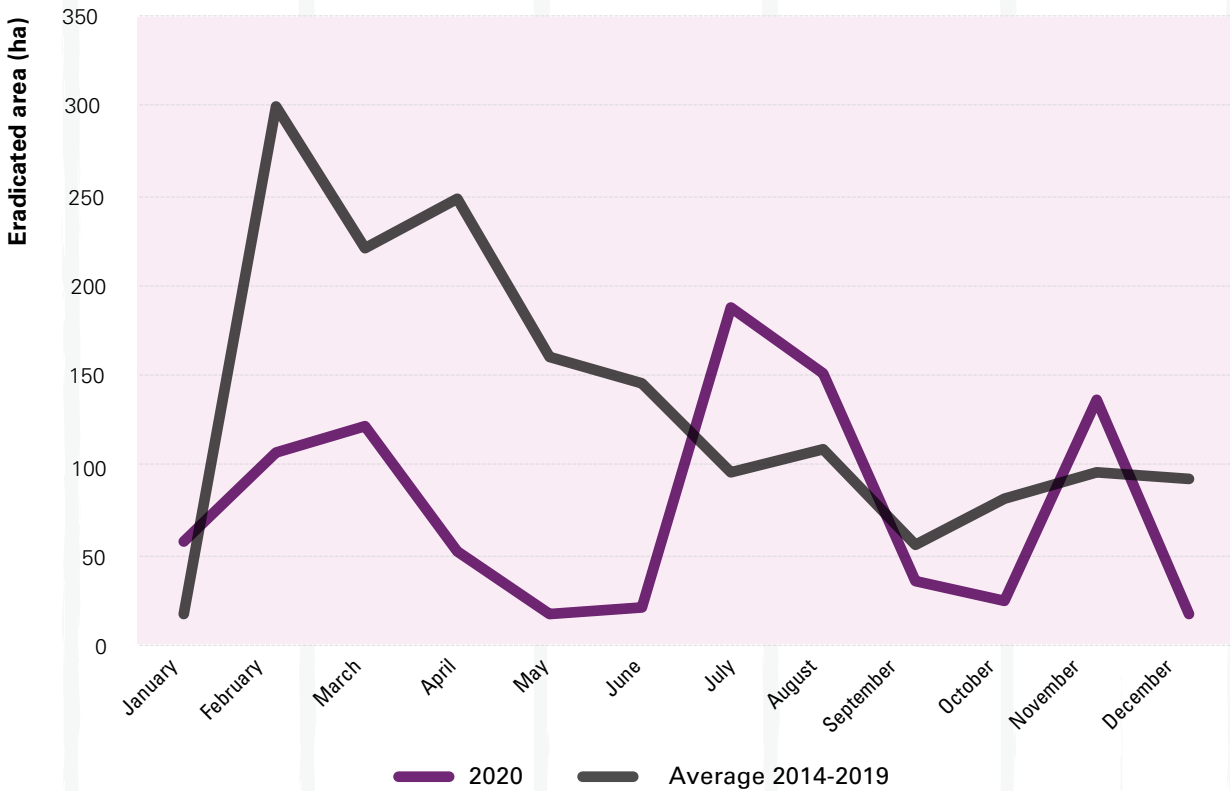
45 In its response to the UNODC Annual Report Questionnaire for 2019, Paraguay estimated cannabis herb yield at 3000 kg/ha per harvest.

**FIG. 9** Quantities of cannabis herb seized by Brazilian Federal Police, by month, 2020 in comparison with 2014-2019



Note: For 2015, a breakdown by month was not available.  
Source: *Polícia Federal*, Brazil

**FIG. 10** Cannabis eradication in Paraguay, by month, 2020 versus previous years (2014-19)



Source: *Secretaría Nacional Antidrogas*, Paraguay

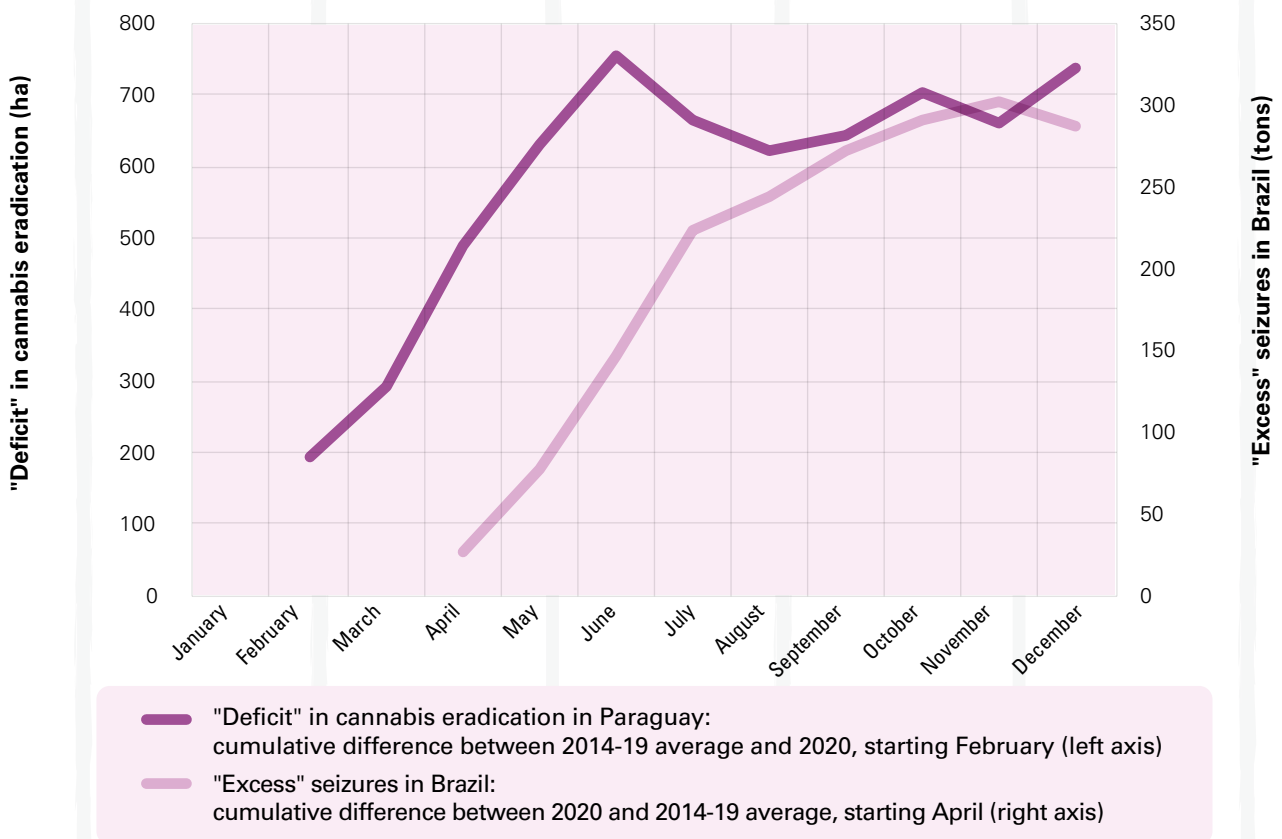


**FIG. 11** "Deficit" in cannabis eradication in Paraguay versus "excess" cannabis herb seizures in Brazil, by month, 2020



Note: The "deficit" at a particular month is calculated as the difference between the average value for that month in the years 2014-19 and the value for that month in 2020. The "excess" at a particular month is calculated as the difference between the value for that month in 2020 and the average value for that month in the years 2014-19 (excluding 2015, for which a breakdown by month was not available).  
Sources: *Secretaría Nacional Antidrogas*, Paraguay; *Polícia Federal*, Brazil.

**FIG. 12** Cumulative "deficit" (February onwards) in cannabis eradication in Paraguay versus cumulative "excess" cannabis herb seizures (April onwards) in Brazil, by month, 2020



Sources: *Secretaría Nacional Antidrogas*, Paraguay; *Polícia Federal*, Brazil.

It should also be noted that the pandemic roughly coincided with the beginning of Operation Horus,<sup>46</sup> which led to an increased presence of law enforcement on the border with Paraguay, higher numbers of police officers on roads and stepped-up police attention to large trucks transporting big quantities of cannabis, and thus may have contributed to higher seizures.

Another potential explanation for the high levels of of cannabis seizures, which emerges from some of the interviews conducted for this study,<sup>47</sup> is that, when the border with Paraguay was closed (in the beginning of the pandemic), legal trade declined significantly, leading more people to exploit illicit opportunities (such as drug trafficking) for income.

## Cocaine market

Overall seizures of cocaine in Brazil declined sharply following the onset of COVID-19. However, this trend appears to be the net result of various dynamics affecting different regions of the country, and also different types of seizures, in different, and sometimes divergent, ways. Indeed, divergent trends were observed both across different types of seizures as well as in geographic terms. Moreover, these trends may also be influenced by changes in law enforcement activity, itself potentially impacted by the COVID-19 pandemic, and this needs to be taken into account in the interpretation.

The general trend in cocaine seizures in Brazil has for years been driven to a large extent by quantities seized at seaports, and this applies in particular to the recent decline (Fig. 13). These quantities reflect cocaine flows exiting Brazil to destinations such as Europe and Africa, but could, in of themselves, also be impacted by numerous other factors, such as the efficacy of law enforcement in detecting and interdicting such consignments as well the efficacy of criminals in evading law enforcement measures, including through diversifying the ports used.

However, consolidated data on cocaine seized in destination countries, having departed from Brazil, reveal a similar decline around the period of interest. This makes it less likely that the changes were driven by less successful interdiction and more likely that they reflect declines in actual flows of cocaine out of Brazil.

For example, based on data from customs authorities in Europe, even as total seizures in countries reporting to the World Customs Organization Regional Intelligence Liaison Office for Western Europe increased in 2020, the seized quantity arriving from Brazil declined (Fig. 15). Data from the UNODC Drugs Monitoring Platform,

with a more diverse coverage of destination countries, also corroborate the decline, with seizures falling in line with the drop at seaports in Brazil itself in the six-month period immediately following the onset of COVID-19 in Brazil, but also suggest that the drop was transitory, returning to the pre-COVID trend already in the following six-month period (Fig. 14).

These data, when taken together, suggest that indeed the flow of cocaine out of Brazil via large maritime shipments was disrupted following the onset of COVID-19. However, it cannot be entirely ruled out that changes in modalities and routes used by traffickers (whether as a reaction to the circumstances brought about by COVID-19 or even as a continuation of independent ongoing efforts to diversify and evade the attention of law enforcement), coupled with challenges to law enforcement activity, may have led to a decreased efficacy in interdiction within Brazil as well as intelligence gathering and sharing with foreign counterparts. The latter interpretation however is rather unlikely, also in view of the fact that, with respect to other types of interdiction, such as seizures on federal highways, the efficacy of law enforcement during the period of interest appears to have been enhanced, rather than hampered (as discussed in the previous section).

Despite the temporary disruptions, interviewed experts agreed that large criminal groups proved to be highly resilient to the effects of the pandemic due to a well-established logistical infrastructure and were able to continue or resume their activities. Smaller groups, however, reportedly faced bigger challenges to continue their operations.

**FIG. 13 Cocaine seized in Brazil by Federal Police, breakdown into seaport seizures and others**

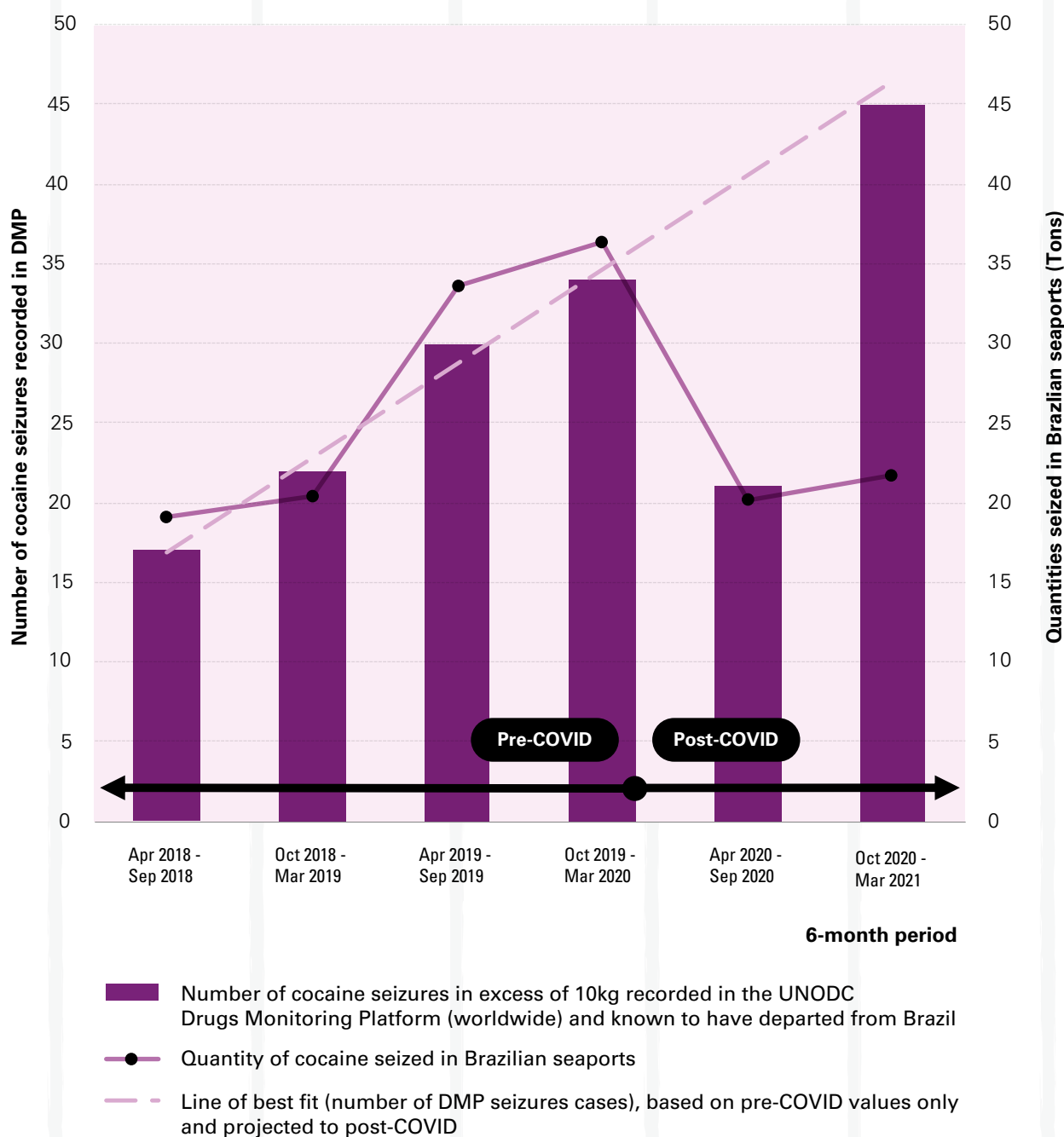


Source: *Polícia Federal*, Brazil.

<sup>46</sup> *Ministério da Justiça e Segurança Pública*, “Operação Hórus: Ministério da Justiça e Segurança Pública fortalece combate ao contrabando na região de fronteira,” July 15, 2019. Available at: <https://www.justica.gov.br/news/collective-nitf-content-1563214823.69>.

<sup>47</sup> Interview 7.

**FIG. 14** Seizure-based metrics of large-scale trafficking of cocaine from Brazil, April 2018-March 2021 (6-month periods)



Note: The acronym DMP stands for the UNODC Drugs Monitoring Platform. Seizures recorded in the DMP made in Brazil itself are excluded. Sources: *Polícia Federal* (Brazil), UNODC Drugs Monitoring Platform

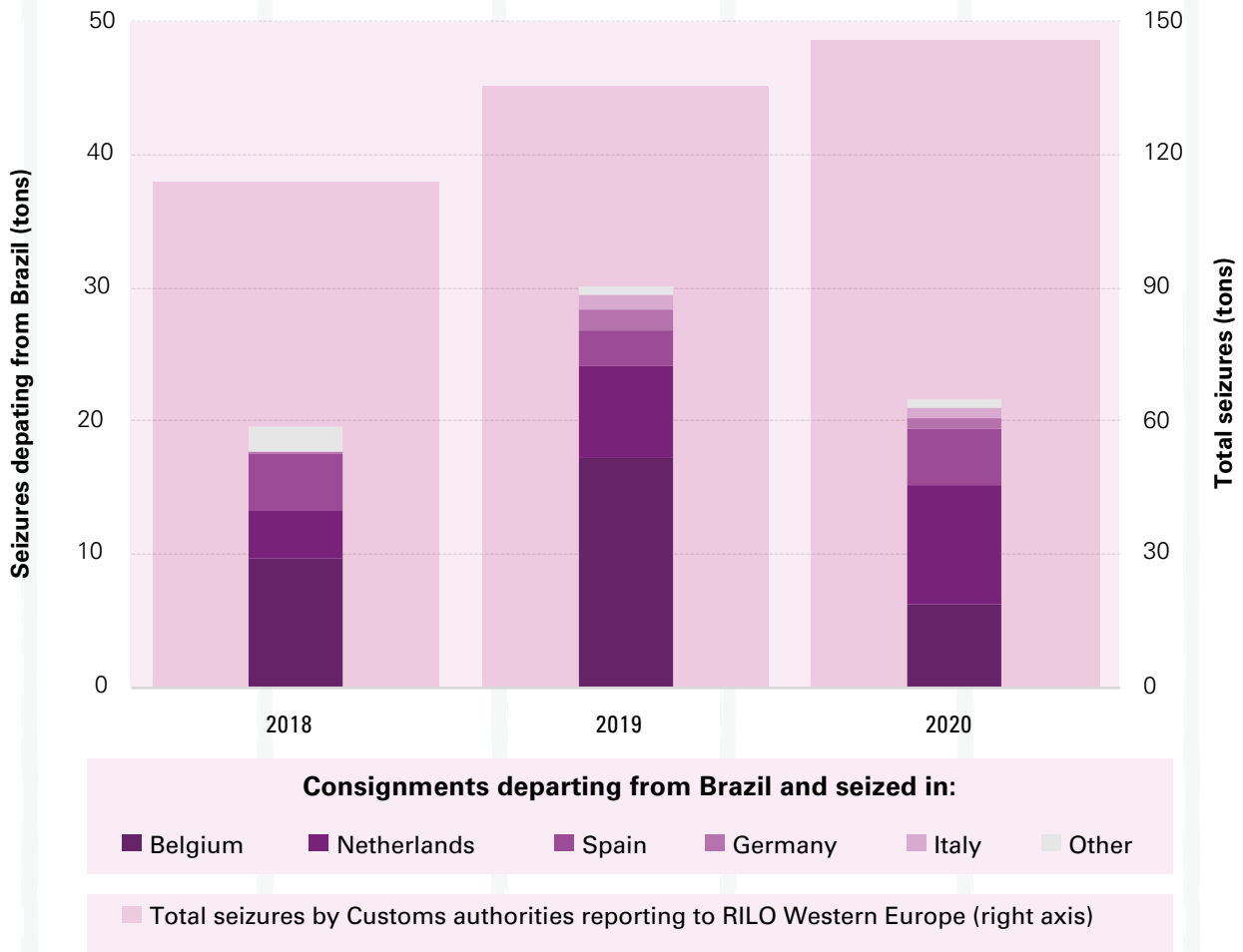
The declining trend observed in seaport seizures is not representative of cocaine seizures in Brazil across the board. Indeed, it appears that a distinction can be drawn between large-scale and small-scale seizures. Case-by-case data on seizures by Federal Road Police on federal highways indicate a clear divergence in the trends followed by the total quantities seized in large consignments (in excess of 200kg) and in smaller consignments (Fig. 16). Similarly, separating the quantities seized by Federal Police into seaport seizures (which tend to be among the largest)

and the remainder suggests that a similar pattern holds for these seizures as well.<sup>48</sup>

While the number of seizures made on highways by Federal Road Police increased,—reflecting a greater efficacy of road police in interdiction—these seizures did not translate into an increase in the overall quantities seized; instead, the average size of each seizure decreased (Fig. 17, left).

<sup>48</sup> A case-by-case breakdown of aggregate seizures reported by the Federal Police was not available.

**FIG. 15 Cocaine seizures by customs authorities in Western and Central Europe departing from Brazil, by seizing country, in comparison with total seizures by customs (any departure), 2018-2020**



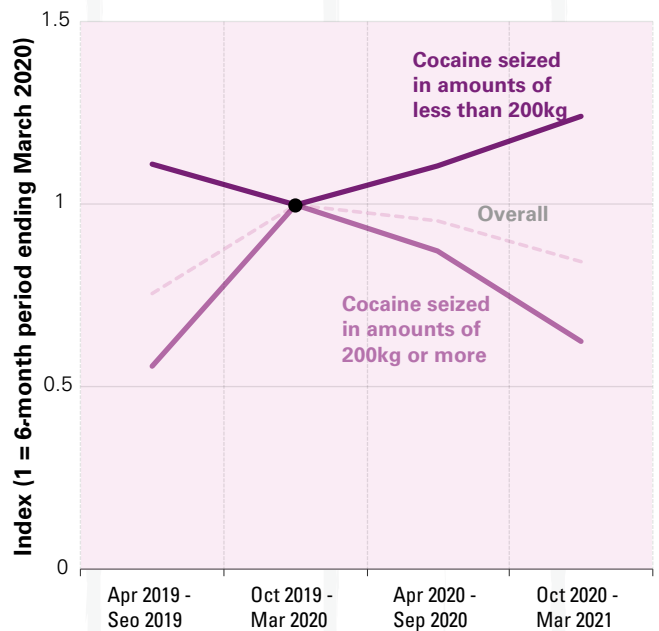
Sources: World Customs Organization, Regional Intelligence Liaison Office for Western Europe

More precisely, the number of seizures on federal highways actually increased over almost the entire scale of seizure sizes – from extremely small to the relatively large – with the important exception of the largest seizures of all (Fig. 18, left). This exception was the crucial difference in comparison with seizures of cannabis herb, which registered increases even through to the categories of seizures in excess of 1 ton (Fig. 18, right). An increase in quantities of cocaine seized can only be observed if the largest seizures are discounted (Fig. 17, right).

Thus, it appears that the increasing numbers of cocaine seizures reflect increased law enforcement activity or success rates in interdiction, and the increasing total quantities seized in the smaller categories of consignments are quite likely a consequence of this. These increases do not necessarily reflect increased supply and are in fact compatible with an overall decline suggested by seizure totals recorded by Federal Police.

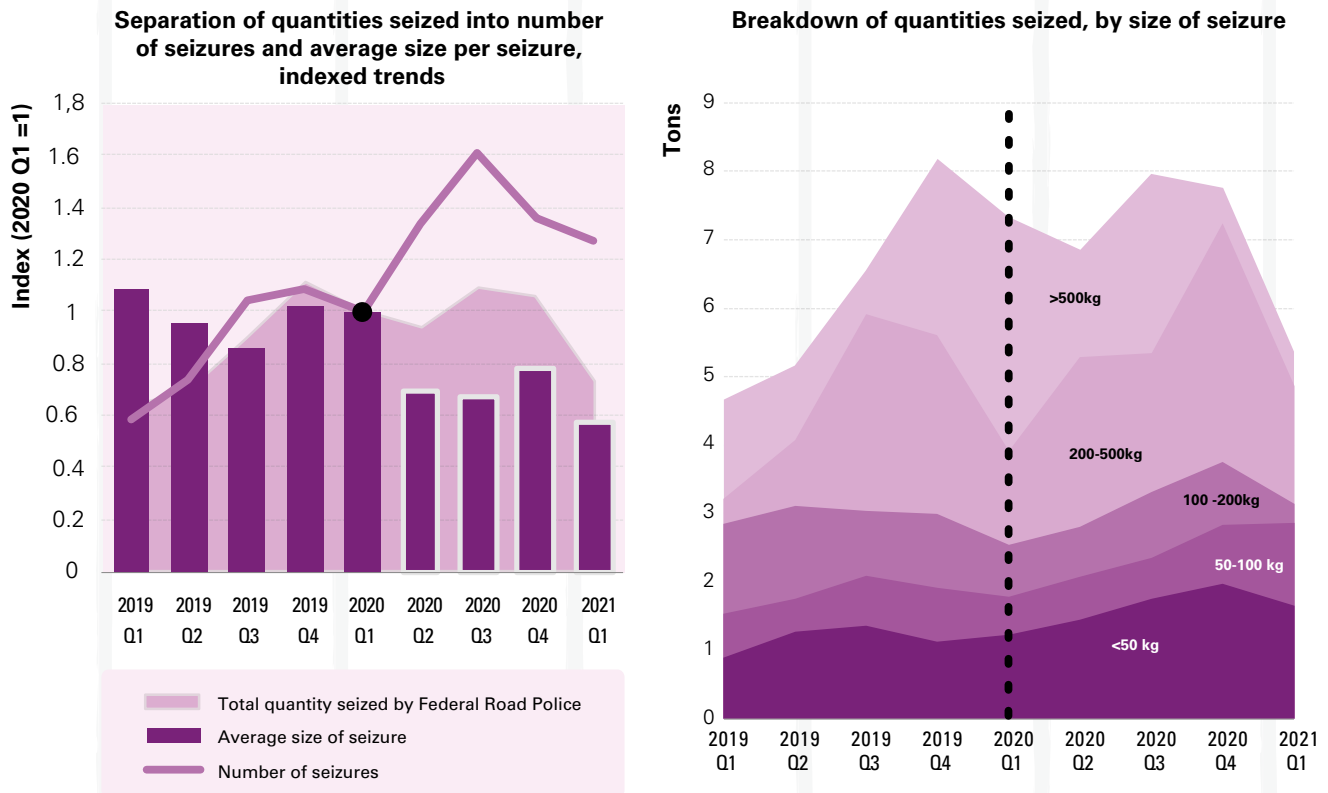
There were also important regional differences in the dynamics of cocaine markets during the period of interest. Indeed, a simple comparison of quantities seized before and after

**FIG. 16 Quantities of cocaine seized on highways and recorded by Federal Road Police, separated into large and small seizures, indexed**



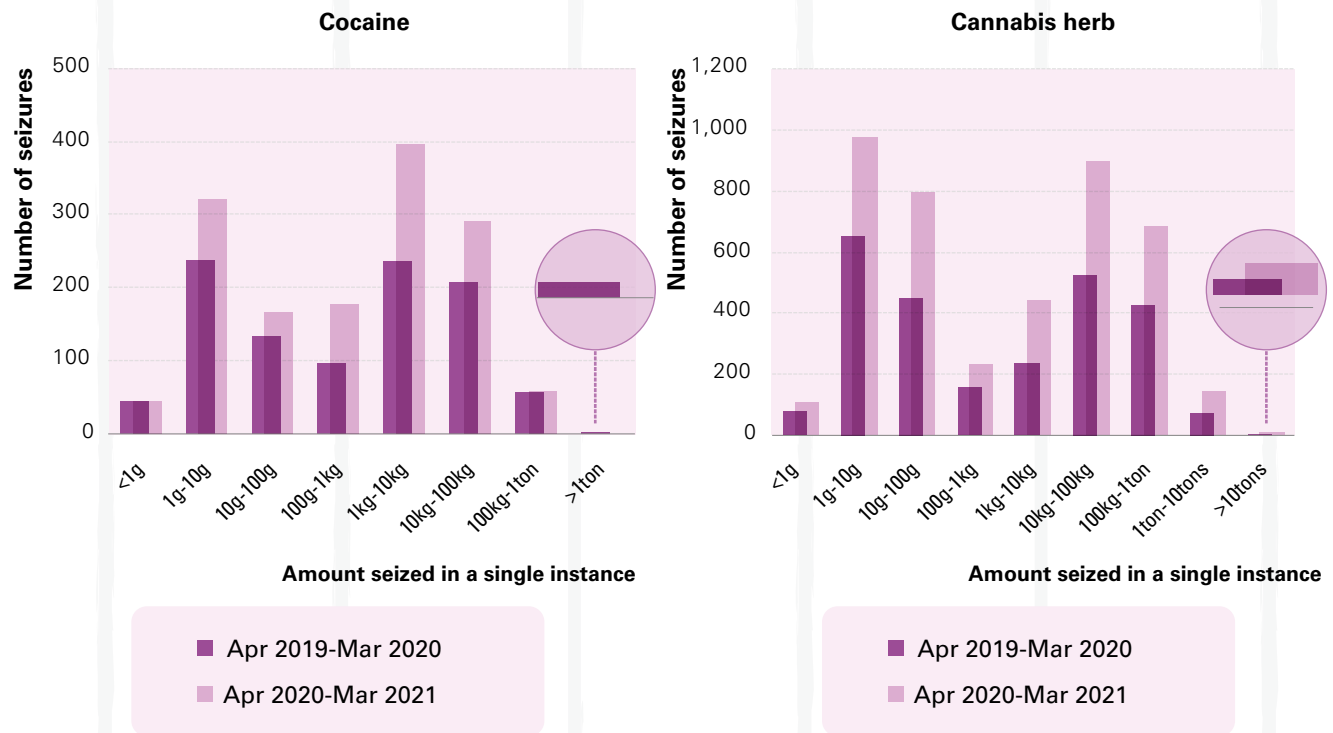
Source: Polícia Federal, Brazil.

**FIG. 17** Overview of cocaine seizures made on highways by Federal Road Police in Brazil, Q1 2019–Q1 2021



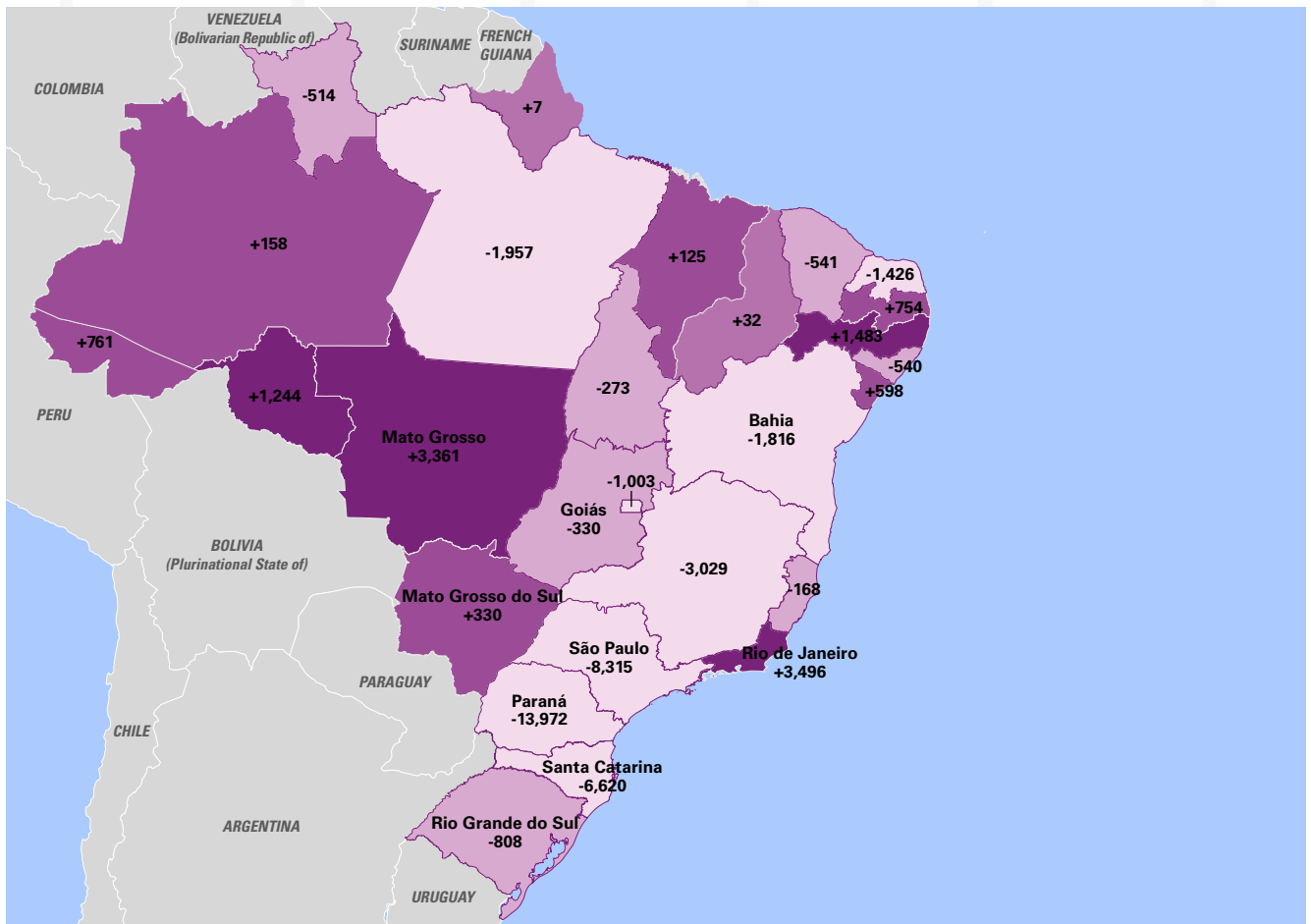
Sources: *Polícia Rodoviária Federal*, Brazil

**FIG. 18** Frequency distributions of size of individual drug seizures made by Brazilian Road Police on highways, comparisons between 12-month periods prior to and immediately following the onset of COVID-19



Sources: *Polícia Rodoviária Federal*, Brazil

**FIG. 19** Changes in the quantity of cocaine seized, 12 months post-COVID versus 12 months pre-COVID, by federal unit (kg)



Sources: *Polícia Rodoviária Federal, Brazil*

the onset of COVID-19 yields a picture of states registering increases as well as decreases, with an east-west divide corresponding roughly to increases in the western states sharing a border with one of the source countries of Bolivia (Plurinational State of), Colombia and Peru and decreases in the rest of the country (with some exceptions), especially the states with access to the Atlantic Ocean.

However, in some regions, the declines seen in the aftermath of the onset of COVID-19 appear to have started *prior* to the period of interest, and thus were likely triggered by dynamics entirely separate from the consequences of COVID-19 – even if the pandemic may have reinforced these trends.

Such dynamics need to be recognized in particular in the two neighbouring states of São Paulo and Paraná. São Paulo has long accounted for the largest quantities of seized cocaine among the 27 Brazilian federal units, and Paraná also became very important (in second place) in recent years. In 2019, these two states collectively accounted for 58 per cent of total cocaine seizures recorded by Federal Police (including seizures in the respective ports of Santos and Paranaguá). Paraná shares a border with Paraguay, while São Paulo is also within range of clandestine flights from Paraguay and may thus receive cocaine directly from this

country.<sup>49</sup> São Paulo is also the heartland of the organized crime group *Primeiro Comando da Capital* (PCC),<sup>50</sup> which operates also in many other parts of Brazil (notably Paraná and neighbouring Mato Grosso do Sul)<sup>51</sup> as well countries upstream in the cocaine supply chain, such as Paraguay,<sup>52</sup> and in addition maintains extensive ties to counterparts in destination countries. Brazilian authorities assessed that, as of 2019, the PCC dominated many of the international cocaine trafficking routes from Brazil to Europe and Africa.<sup>53</sup> A mapping of trafficking routes by Brazilian authorities, including routes within Brazil, suggests that São Paulo acts as a distribution hub for cocaine coming in from the western border states and being redirected towards the ports, including the relatively distant ports in the north-eastern parts of the country.<sup>54,55</sup>

49 Interview 2.

50 UNODC Annual Report Questionnaire, response from Brazil for 2019.

51 Insight Crime, “Paraná, Brazil,” March 4, 2021. Available at: <https://insightcrime.org/brazil-organized-crime-news/parana-brazil/>.

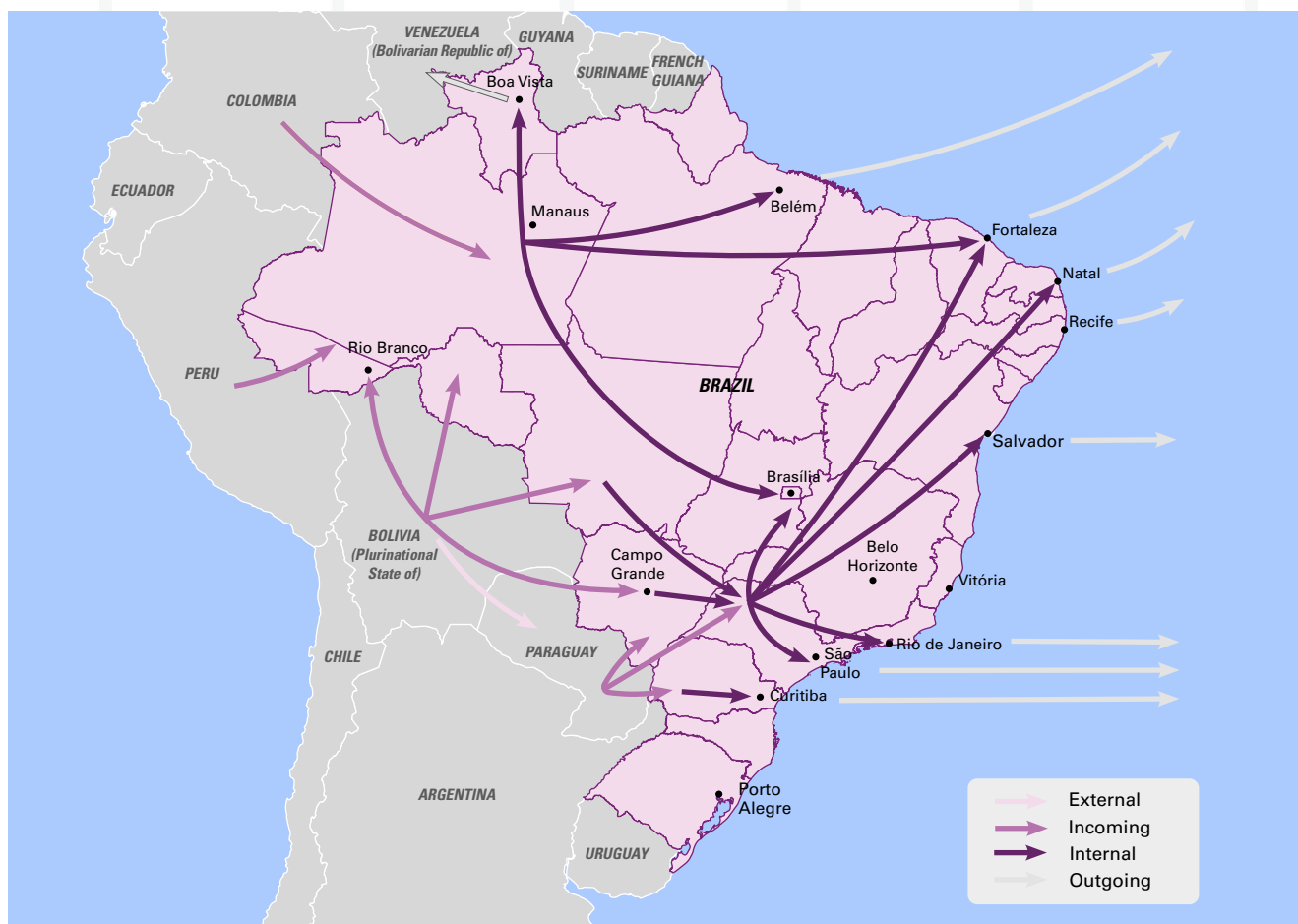
52 Insight Crime, “First Capital Command - PCC,” March 9, 2020. Available at <https://insightcrime.org/brazil-organized-crime-news/first-capital-command-pcc-profile/>.

53 UNODC Annual Report Questionnaire, response from Brazil for 2019.

54 Presentation by Brazil at CRIMJUST Investigative Case Forum, Accra, Ghana, November 2021.

55 Centre of Excellence for Illicit Drug Supply Reduction (CoE Brazil), “COVID-19 and Drug Trafficking in Brazil: The Adaptation of Organized Crime and the Actions of Polices during the Pandemic,” December 2021.

**FIG. 20** Main cocaine trafficking routes affecting Brazil



Note: This map, reproduced from a visualization by the Brazilian Federal Police, captures the main routes from the international perspective as well as the most important internal routes. A more detailed map can be found in: Centre of Excellence for Illicit Drug Supply Reduction, *COVID-19 and drug trafficking in Brazil: the adaptation of organized crime and the actions of police forces during the pandemic*, December 2021. Available at: <https://www.cdebrasil.org.br/boletins/>  
Source: Brazilian Federal Police, presentation at CRIMJUST Investigative Case Forum, Accra, Ghana, November 2021.

Cocaine seizures in the three contiguous states of São Paulo, Paraná and Minas Gerais peaked around the middle of 2019 – *before* the onset of COVID-19. Thus, the declines in these states seen after the onset of COVID-19 may have been, to some extent, a continuation of ongoing trends rather than a consequence of COVID-19. In the period prior to the onset of COVID-19, this declining trend was also mirrored in the adjacent state of Mato Grosso do Sul, bordering Paraguay and the Plurinational State of Bolivia and likely also a major point of entry into Brazil, itself feeding flows into São Paulo and Paraná; seizures in Mato Grosso do Sul fell steadily every quarter between the first quarter of 2019 and the first quarter of 2020. Finally, in the period immediately preceding the onset of COVID-19, declines were also registered, albeit in more erratic fashion, in the neighbouring state of Mato Grosso.

One potential driver of these trends may have been a process of diversification of trafficking routes chosen by criminals, away from the more established routes and ports and towards alternatives in Brazil, possibly by way of reaction

to improved law enforcement awareness and procedures in the port of Santos in the state of São Paulo<sup>56,57</sup> and Paraná in the state of Paraná.<sup>58</sup> This hypothesis appears to be corroborated by the fact that, comparing the consecutive six-month periods of April-September 2019 and October 2019-March 2020, significant declines in several states – mainly in the six contiguous states of Paraná, Mato Grosso do Sul, São Paulo, Goiás, Minas Gerais and Mato Grosso – were largely offset by increasing seizures in states with a less “established” role in cocaine trafficking, most notably Bahia and Santa Catarina (Figs. 21, 22). Brazilian authorities highlighted large seizures in locations such as the Port of Pecém and the Port of Vila do Conde as an illustration of the diversification of the use of existing port infrastructure, to avoid better control and surveillance capacity in southern Brazil.<sup>59</sup>

... 56 Interview 1.

57 Focus Group 1.

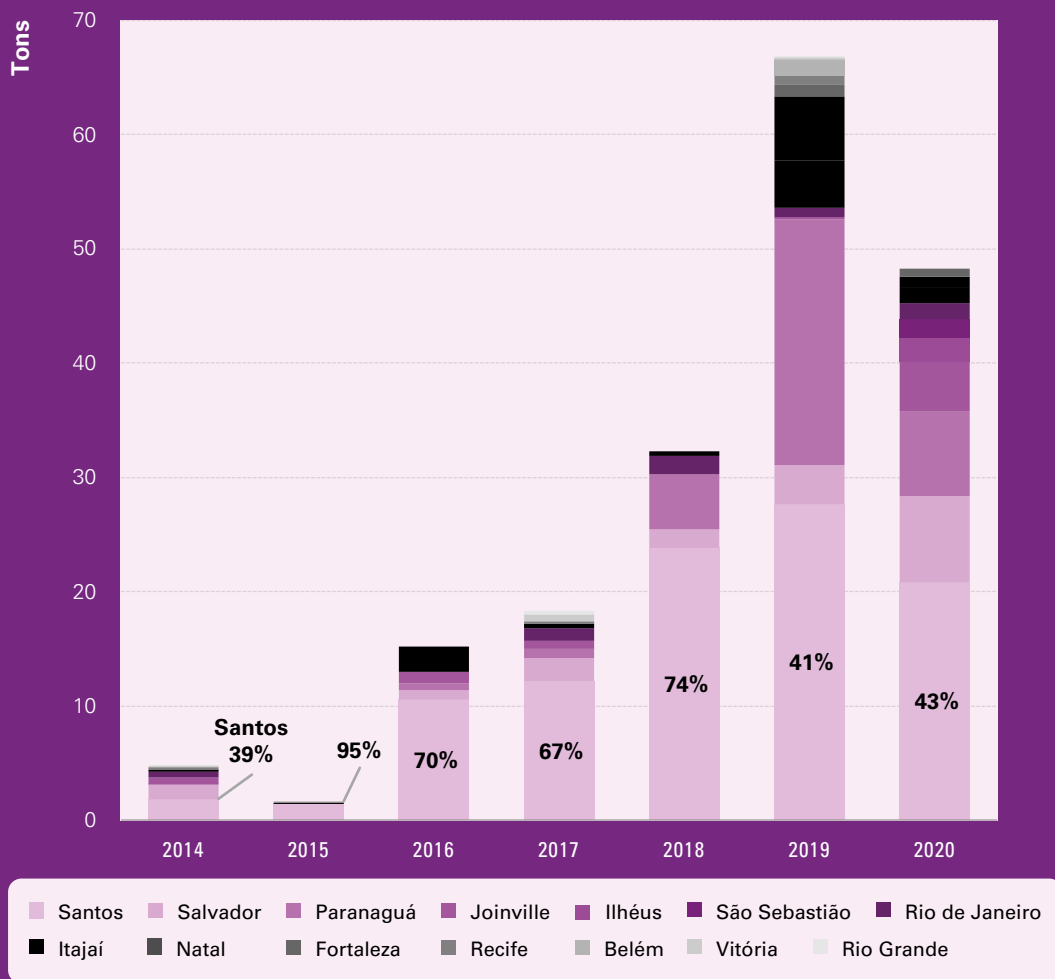
58 Interview 2.

59 UNODC Annual Report Questionnaire, response from Brazil for 2020.

... Available at: <https://www.cdebrasil.org.br/boletins/>.

## Diversification of cocaine trafficking through Brazilian ports

Quantities of cocaine seized at seaports in Brazil, 2014-2020



Source: *Polícia Federal*, Brazil.

São Paulo, one of the states hardest hit by the pandemic,<sup>60</sup> is home to the largest Latin American container port, Santos, responsible for handling of over 40 per cent of Brazil's containers.<sup>61</sup> From there, the bulk of cocaine is shipped to Europe and Africa. Over 2015-19, the port of Santos saw a dramatic increase in seizures of cocaine.

Drug trafficking routes, including maritime routes, often shift over time in response to interdiction efforts. In recent years, DTOs sought to use smaller north-eastern and southern ports of Brazil, where there is less capacity for inspection, such as São Sebastião, Vila do Conde,<sup>62</sup> and Ilheus.<sup>63</sup> The diversification of maritime ports used to traffic cocaine

from Brazil had been observed before the pandemic but became especially prominent during its course.

The diversification was also visible in terms of the destination of cocaine trafficked from Brazilian ports; the number of known destination countries identified from seizures in Brazilian ports grew from 7 in 2018 to 20 in 2019 and 21 in 2020. The main destinations for the drug in 2019 and 2020 were Belgium and Netherlands, followed by Spain.<sup>64</sup> This was confirmed by some interviewed officials, who also noted that destination ports also shift over time. For example, Italy was an important destination several years ago, while nowadays, Antwerp (Belgium), Rotterdam (Netherlands) and the Spanish ports of Valencia, Las Palmas and Algeciras are frequently used.<sup>65</sup> France, Nigeria (in 2019), Germany and Italy (in 2020) also featured among the top 5 destination countries (in terms of quantities seized in Brazilian ports).<sup>66</sup>

60 Tamires D.A. Serdan et al., "COVID-19 in Brazil: Historical Cases, Disease Milestones, and Estimated Outbreak Peak," *Travel Medicine and Infectious Disease*, 38 (November 2020). Available at: <https://doi.org/10.1016/j.tmaid.2020.101733>.

61 The Journal of Commerce online, "Port of Santos," May 25, 2022. Available at: <https://www.joc.com/port-news/south-american-ports/port-santos>.

62 Interview 2.

63 Based on seizure data from *Polícia Federal*.

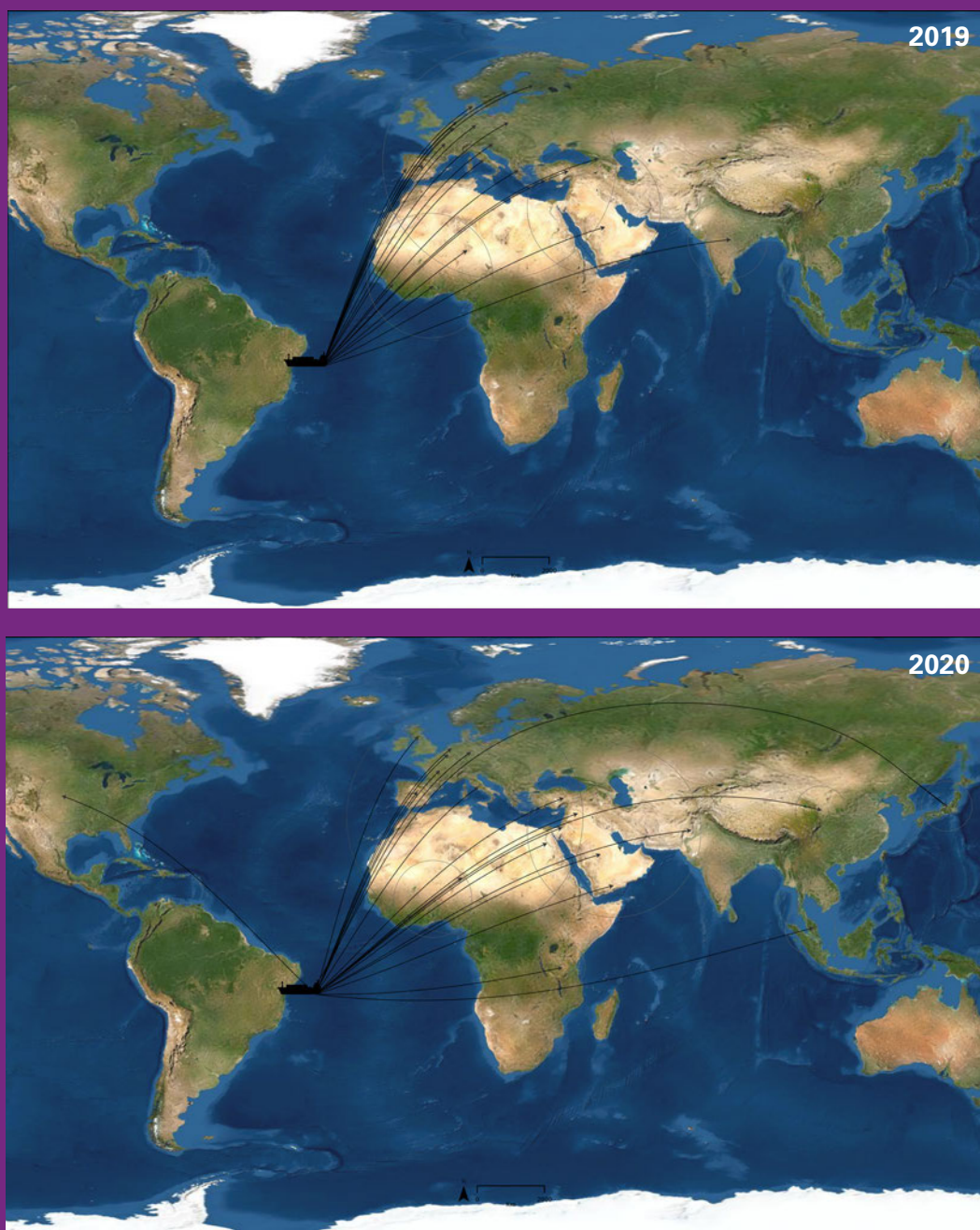
64 Data from *Polícia Federal*, Brazil.

65 Focus Group 1.

66 Data from *Polícia Federal*, Brazil.



## Identified destinations of cocaine seizures made in Brazilian seaports



Source: *Policia Federal, Brazil*

Adapted from: Centre of Excellence for Illicit Drug Supply Reduction, *COVID-19 and drug trafficking in Brazil: the adaptation of organized crime and the actions of police forces during the pandemic*, December 2021. Available at: <https://www.cdebrasil.org.br/boletins/>

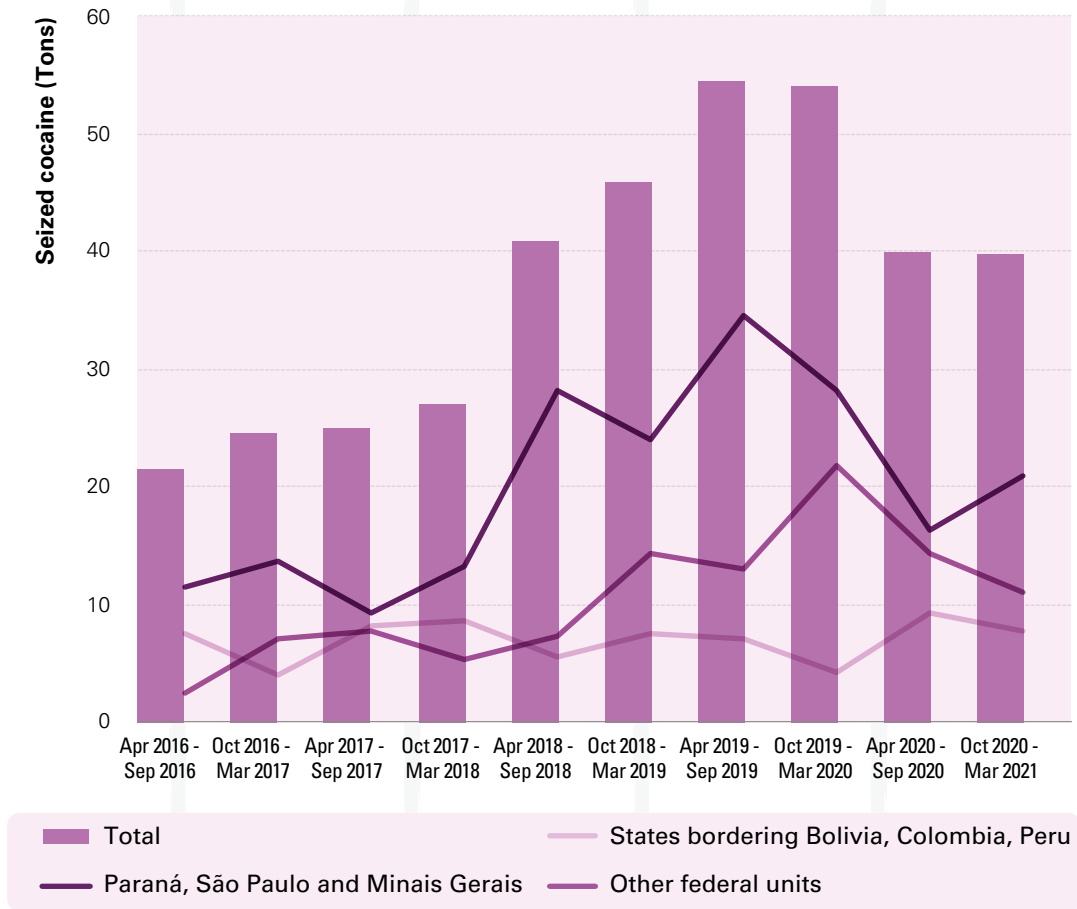
On the other hand, interviewed Brazilian customs officials noted that due to the acquired experience in identifying contaminated containers, different customs agencies often transfer personnel to other ports to facilitate the sharing of expertise and use of technology. Thus, for example, an increase in quantities of cocaine seized in the port of Salvador, in the northeast of Brazil, during 2019 and 2020 may reflect an improvement in interdiction efforts rather than the spread of trafficking routes to smaller ports.<sup>67</sup> Similarly, fluctuations in cocaine seizures

in the port of Santos itself may be indicative of both heightened controls by law enforcement and an increase in the use of the port by traffickers. According to interviewed officials, in 2012 and 2013, Federal Police were conducting active operations in the port and seizures increased, while in 2015, there was a decrease in quantities seized. In 2016, quantities of cocaine seized started increasing again due to a general increase in the supply of cocaine, which in turn prompted customs to direct more resources to drug interdiction.<sup>68</sup>

<sup>67</sup> Interview 10.

<sup>68</sup> Focus Group 1.

**FIG. 21** Breakdown of cocaine seizure quantities recorded by Brazilian Federal Police, April 2016 - March 2021 (6-month periods)



Sources: *Policia Rodoviária Federal*, Brazil

Aside from changes purely within Brazil, given that cocaine reaches São Paulo and Paraná mainly from the Plurinational State of Bolivia and Paraguay, alternative routes could also potentially include a “diversion” avoiding Brazil altogether, whereby some of the cocaine supply in the Plurinational State of Bolivia or Paraguay is trafficked southward to reach the Atlantic through the River Plate estuary (close to Buenos Aires, Argentina and Montevideo, Uruguay). This route uses a combination of clandestine flights and waterborne trafficking along the Paraná-Paraguay waterway; the exploitation of this channel has expanded recently.<sup>69</sup>

In any case, in order to understand the trends in the cocaine market in the period of interest and the potential impact of COVID-19, it is helpful to take into account the trend prior to the onset of COVID-19 and to distinguish between the various regions.

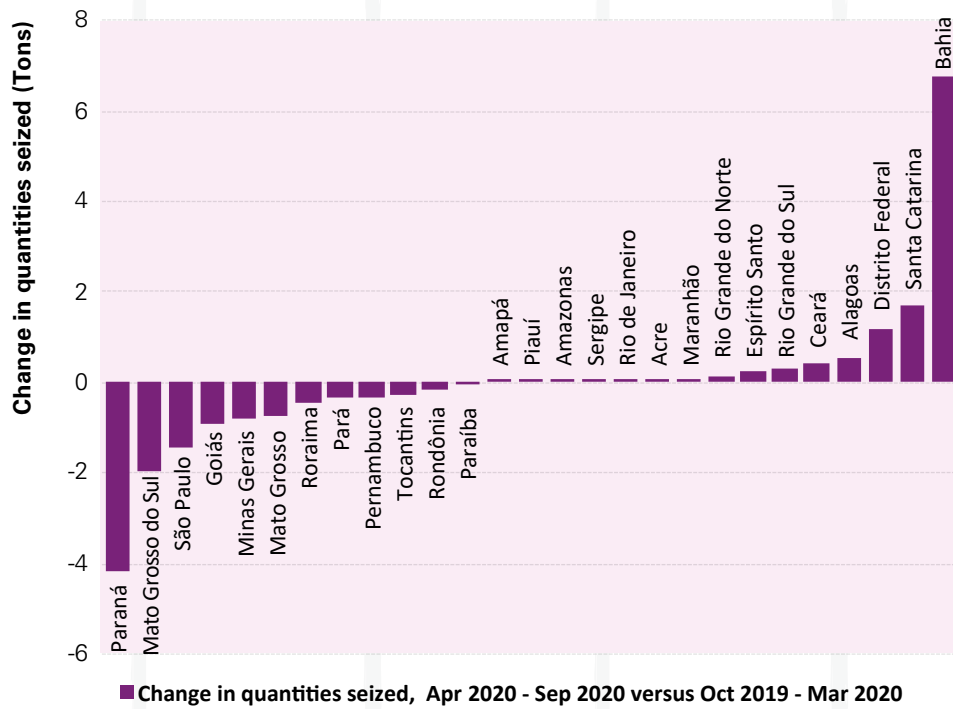
A more refined analysis which takes into account the trend prior to COVID-19 confirms and crystallizes the general pattern of an “upturn” in the western states bordering the source countries of Bolivia (Plurinational State of),

Colombia and Peru, and a “downturn” in most other states (Fig. 23). In the case of the border states of Mato Grosso and Mato Grosso do Sul, it appears that the most significant changes occurring right after the onset of COVID-19 were a reversal of the previously declining trend. In the case of São Paulo, Paraná and Minas Gerais, the “downturn” appears to have accelerated an already declining trend, while the general effect on other federal units (mainly those with access to the Atlantic Ocean) appears to have been to reverse the previously increasing trend (Fig. 21).

Data from Federal Road Police on seizures made on highways also show a clear geographic divergence, within Brazil, in cocaine seizure trends (Fig. 25). In the five states bordering the source countries of Bolivia (Plurinational State of), Colombia and Peru (taken as a whole), total quantities seized by the Federal Road Police increased (very much in line with the figures recorded by Federal Police, Fig. 24), driven in part by an abrupt increase in the average size of seizures in the first quarter after the onset of COVID-19, in addition to an increase in the number of seizures in the following quarter. The increases were most clearly visible in Mato Grosso (Figs. 26, 27). On the other hand, in the states with access to the Atlantic, the average size of cocaine seizures fell abruptly in parallel with an increase

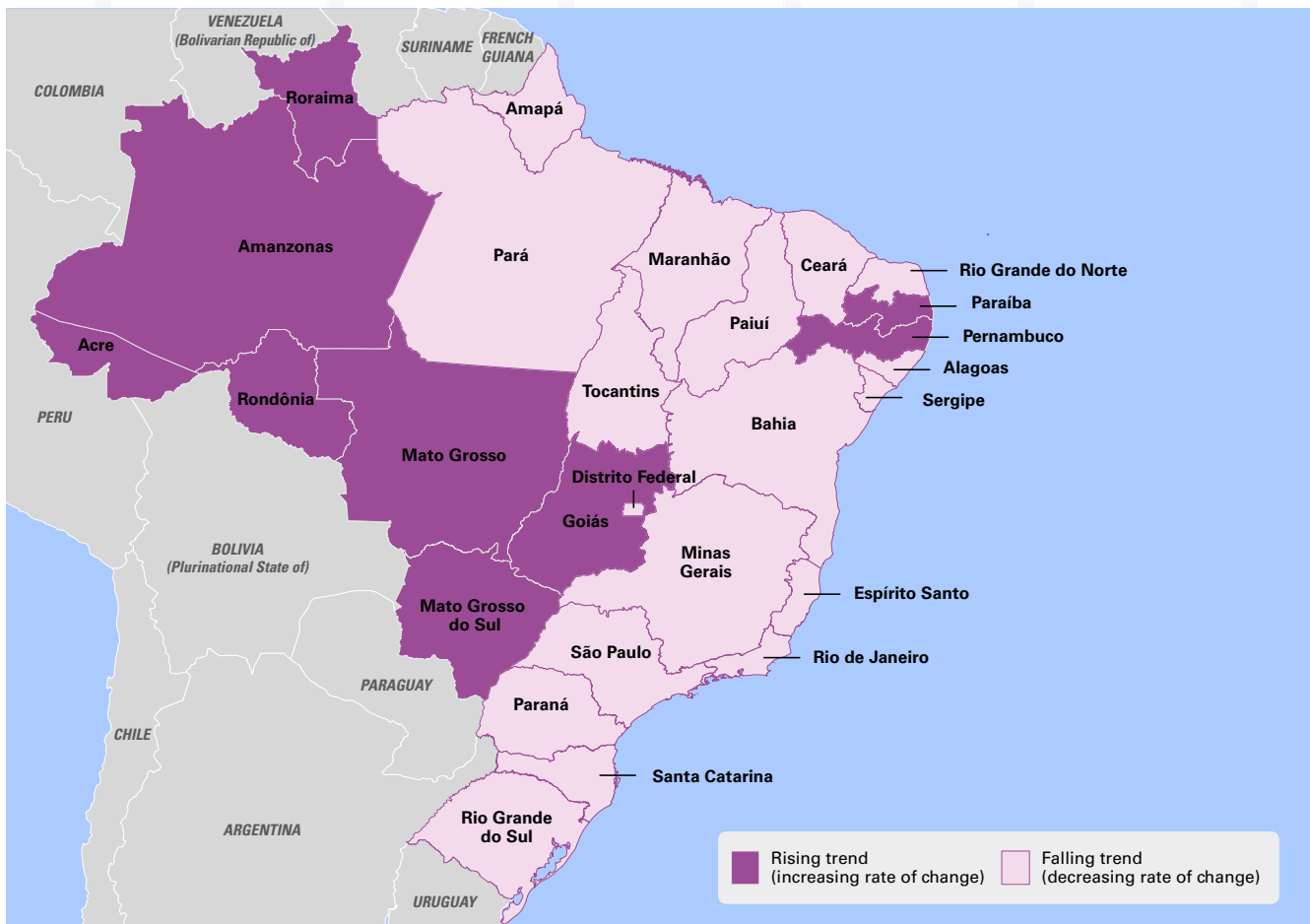
<sup>69</sup> UNODC, Cocaine Insights 5, “Cocaine Trafficking: The Paraná-Paraguay Waterway and the Airbridge Link”, forthcoming.

**FIG. 22** Trends in quantities of seized cocaine *prior* to the onset of COVID-19 in Brazil, by federal unit



Sources: *Polícia Rodoviária Federal*, Brazil

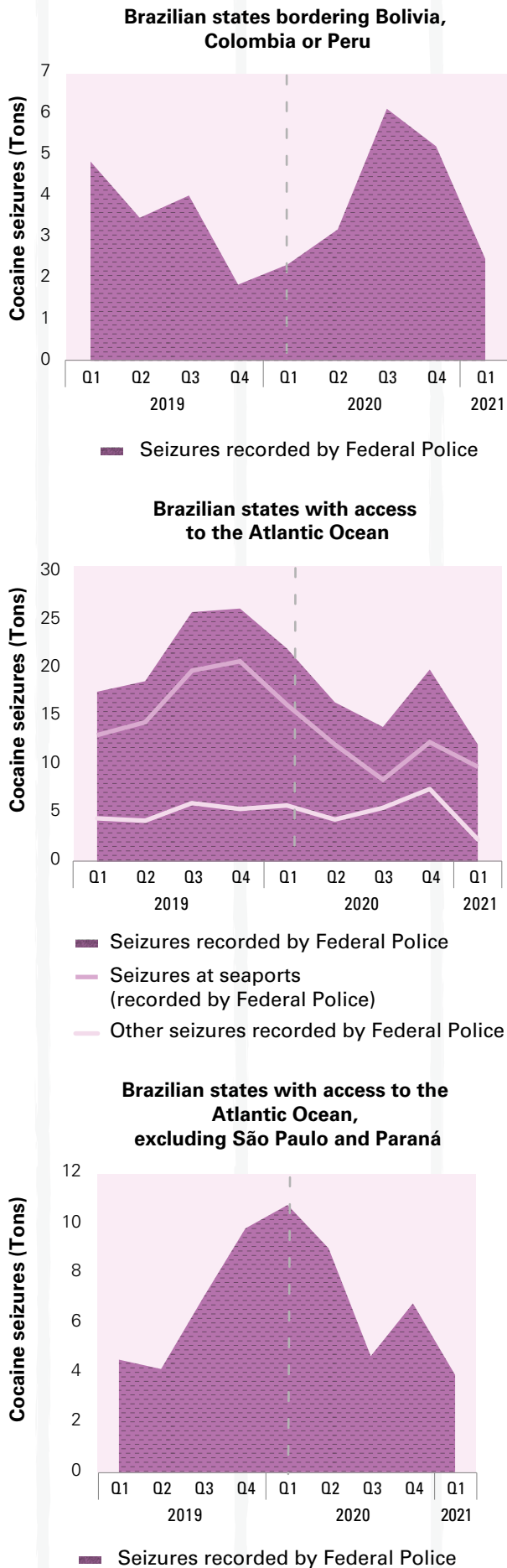
**FIG. 23** Changing trends (rates of change) in cocaine seizures in Brazil following the onset of COVID



Note: The above map is based on 3 consecutive 6-month periods: April-September 2019 (Period A), October 2019- March 2020 (Period B), and April-September 2020 (period C, immediately following the onset of COVID-19), and the quantities *a*, *b*, *c* seized during periods A, B, C respectively. The rate of change is considered to be increasing (rising trend) if the ratio *c/b* is larger than *b/a*, decreasing (falling trend) if *c/b* is smaller than *b/a*.

Sources: *Polícia Rodoviária Federal*, Brazil

**FIG. 24** Quantities of seized cocaine in selected parts of Brazil, by quarter, Q1 2019-Q1 2021



Sources: *Polícia Federal*.

in the number of seizures, resulting in a relatively stable quantity seized (Fig. 25).

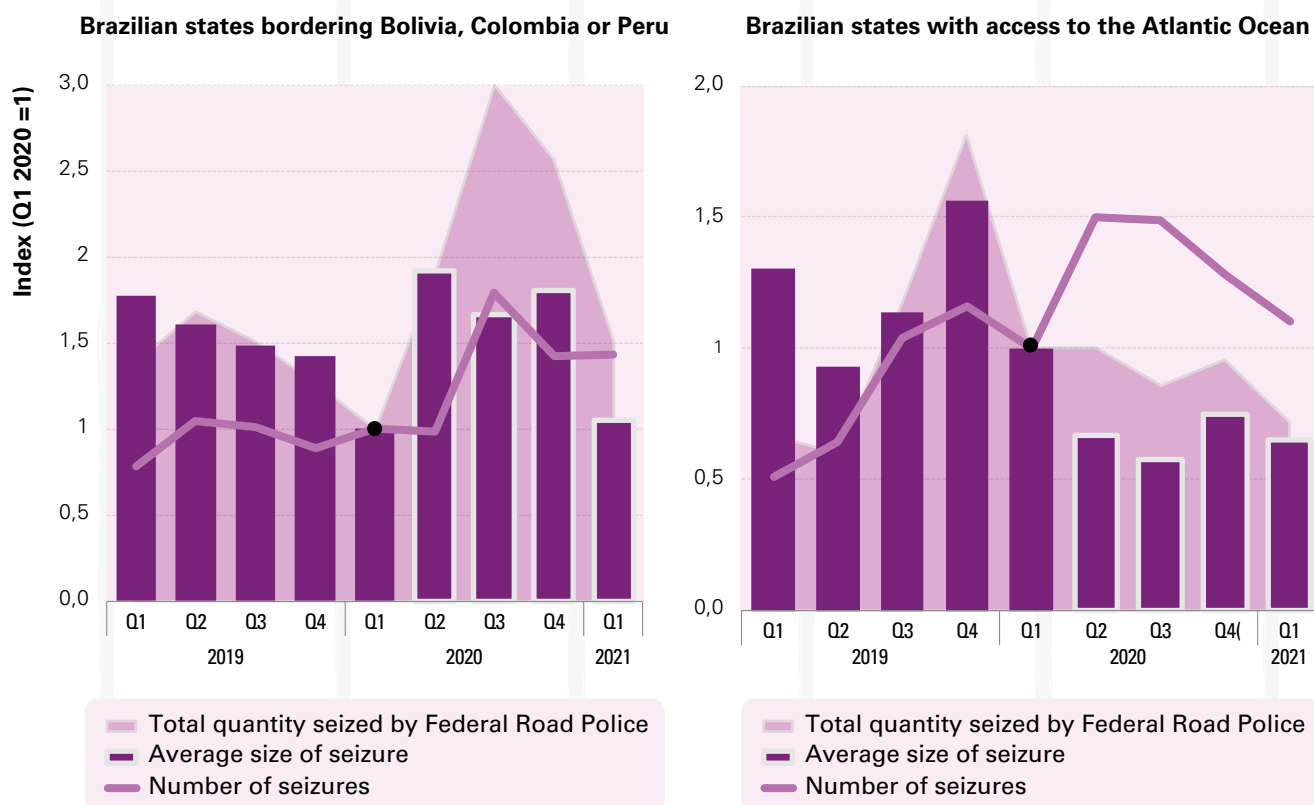
Together with the previously discussed evidence, these patterns in seizure-based statistics strongly suggest clearly divergent dynamics across Brazil in terms of the cocaine market, specifically availability of cocaine in Brazil and flows into and out of Brazil. It appears that states bordering the source countries of Bolivia (Plurinational State of), Colombia and Peru, notably Mato Grosso and Mato Grosso do Sul, experienced a resurgence of incoming cocaine flows, or at least a change of trafficking modalities which made larger seizures more likely. It is possible, for example, that cross-border restrictions on freedom of movement or disruptions in legitimate trade created difficulties for some of the established trafficking channels from the Plurinational State of Bolivia into Brazil or Paraguay, and thus rendered clandestine flights into Mato Grosso and Mato Grosso do Sul a more viable alternative for traffickers. Land-based trafficking in particular, which may have quite plausibly been hit by restrictions on movement, is an established modality for cocaine trafficking both into Brazil<sup>70</sup> as well as across the Bolivia-Paraguay border.<sup>71</sup>

One Brazilian interviewee described how the closure of official points of entry at the land border triggered irregular border crossings for the purposes of trafficking.<sup>72,73</sup> Paraguayan officials, despite not having observed changes in cross-border trafficking after the onset of COVID-19, confirmed that trafficking by land into Paraguay includes cocaine introduced through official checkpoints (in addition to irregular border crossings) and that cross-border flows of private vehicles were impacted.<sup>74</sup> Moreover, restrictions in freedom of movement may also hinder the ability of drug traffickers to meet their contacts in order to organize and orchestrate shipments.

Officials of the Federal Police observed that traffickers encountered difficulties in land-based trafficking by small vehicles and resorted to small airplanes as an alternative.<sup>75,76</sup> An increase in the interception of small aircrafts entering Brazil was registered.<sup>77</sup> This is corroborated by increases observed in aircraft-related incidents reported by media (Figs. 28,29), and may have been part of a broader pattern affecting countries in the region, as an increase in the use

70 UNODC Annual Report Questionnaire, response from Brazil for 2019.  
 71 UNODC Annual Report Questionnaire, response from Paraguay for 2019.  
 72 Interview 7.  
 73 Although this was with reference to cannabis trafficking from Paraguay and resulted most notably in waterborne clandestine crossings across lakes, it is plausible that similar disruptions may have occurred for cocaine trafficking from the Plurinational State of Bolivia or Paraguay, resulting in clandestine crossings using the most viable modality.  
 74 UNODC Global Cocaine Market Report 2022 (forthcoming), Interview 6.  
 75 Brazilian Federal Police, presentation at “International Seminar on Illicit Drug Supply Reduction,” (December 7, 2021).  
 76 Brazilian Federal Police, presentation at “International Dialogues on Justice and Public Security: The Impact of the Pandemic on Drug Trafficking in Brazil” (March 2, 2021).  
 77 Brazilian Federal Police, presentation at “International Seminar on Illicit Drug Supply Reduction” (December 7, 2021).

**FIG. 25 Cocaine seizures made on highways by Federal Road Police in selected parts of Brazil: quantities, number of instances and average size, by quarter, Q1 2019 to Q1 2021, indexed (Q1 2020=1)**



Sources: *Polícia Rodoviária Federal*, Brazil

of private aircraft was observed not only by Brazil but also in Colombia, Ecuador and Panama.<sup>78</sup>

Clandestine flights departing mainly from the Plurinational State of Bolivia and Paraguay are an established modality for cross-border trafficking of cocaine in the region, including into Brazil.<sup>79,80</sup> Already in their reporting on the 2019 reference year, Brazilian authorities indicated a widespread use of stolen airplanes for drug trafficking, and noted that air transport has a series of advantages for traffickers, such as swiftness, large load capacity and greater facility to avoid monitoring. Small aircraft fly at low altitude, dropping drugs or landing in clandestine airstrips or approved highways.<sup>81</sup> According to Brazilian Federal Police, over the period 2014 to August 2021, 65 per cent of incoming clandestine flights (carrying drugs) detected in Brazil originated in the Plurinational State of Bolivia, followed by Paraguay (17 per cent).<sup>82</sup> As noted by some interviewed experts,<sup>83</sup> such flights are clearly not affected by regulations restricting movement of people and goods as they are undeclared

and can operate regardless of any COVID-related measures introduced by authorities. Aircraft used include helicopters; since 2018, nine such incidents were detected, of which 5 originated in Paraguay and most were headed to Paraná or São Paulo (4 and 3 respectively).<sup>84</sup>

It is relevant to point out that several states registering increases in cocaine seizures, such as Mato Grosso and Mato Grosso do Sul, were among 15 states where the VIGIA programme was implemented; thus intensified law enforcement efforts could in principle have contributed to the increases. However, the implementation of the VIGIA programme started prior to the pandemic and continued progressively since then, while the increases in the western border states began around the time of the onset of COVID-19 (in the first semester of 2020) and were largely reversed by the first quarter of 2021. For example, in Mato Grosso, the first seizure attributed to the VIGIA programme was registered in mid-2019,<sup>85</sup> while the increases in seizures on federal highways occurred rather abruptly in the second and third quarter of 2020 (Figs. 26, 27) and the quantity seized then declined in the following two quarters (Fig. 26). Seizures recorded by Federal Police followed a similar trend, with a sharp increase in the third quarter of 2020 which was then reversed by the first quarter of 2021.

78 UNODC, *World Drug Report 2021*, 2022. Available at: <https://www.unilibrary.org/content/books/9789210058032>.

79 UNODC Annual Report Questionnaire, response from Brazil for 2019.

80 UNODC, *Cocaine Insights 5*, "Cocaine Trafficking: The Paraná-Paraguay Waterway and the Airbridge Link", forthcoming.

81 UNODC Annual Report Questionnaire, response from Brazil for 2019.

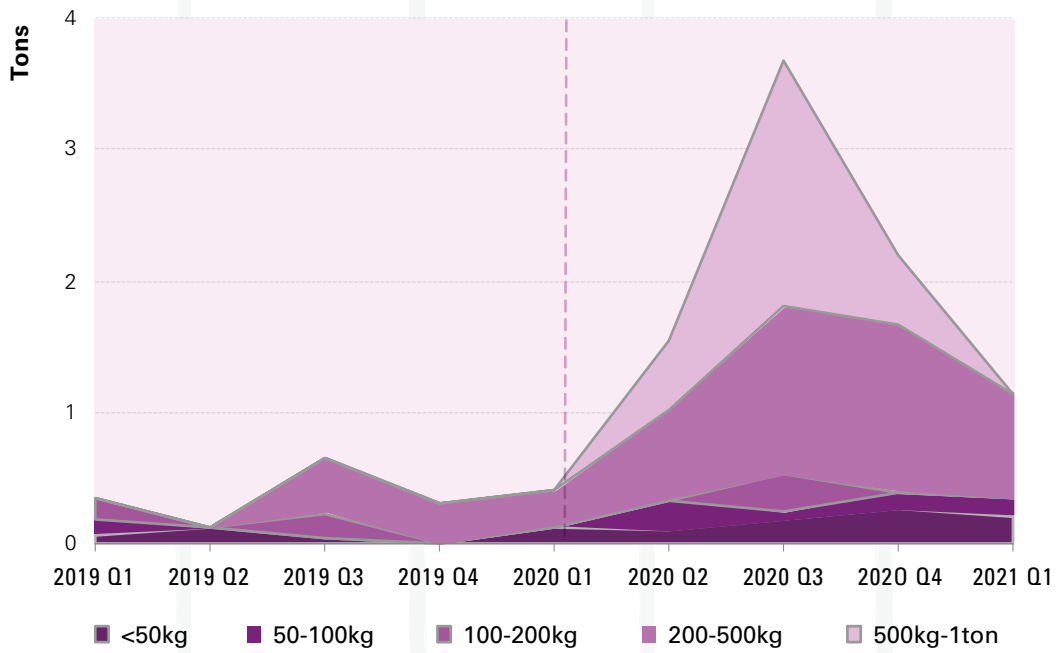
82 Data from *Polícia Federal*, Brazil. UNODC Meeting of Strategic Analysts on Cocaine Trafficking and Markets, Girardot, Colombia, 11-12 November 2021.

83 Interviews 2, 13.

84 Data from *Polícia Federal*, Brazil. UNODC Meeting of Strategic Analysts on Cocaine Trafficking and Markets, Girardot, Colombia, 11-12 November 2021.

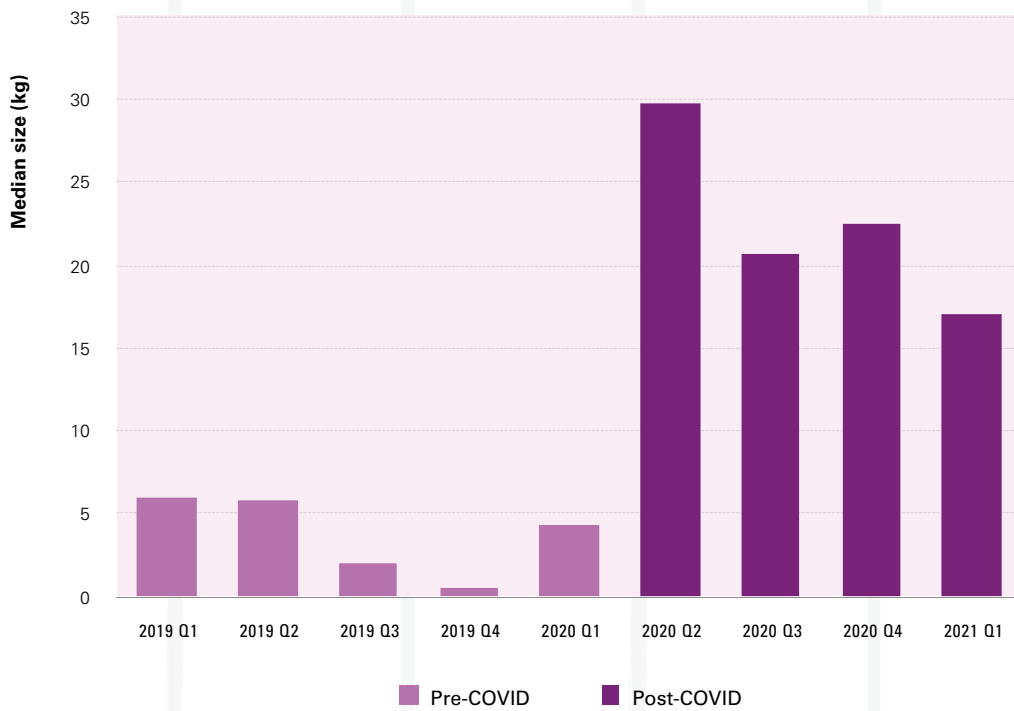
85 Between 15th June and 15th July 2019.

**FIG. 26** Total quantity of cocaine seized by Federal Road Police on highways in Mato Grosso, by size of seizure, Q1 2019-Q1 2021



Sources: *Polícia Rodoviária Federal*, Brazil

**FIG. 27** Median size of cocaine seizures by Federal Road Police on highways in Mato Grosso, by quarter, Q1 2019-Q1 2021



Sources: *Polícia Rodoviária Federal*, Brazil

While the injection of financial resources into the VIGIA programme shortly following the onset of COVID-19<sup>86</sup> could go some way towards explaining this discrepancy, there were several other states where the VIGIA programme was implemented which experienced a *falling* trend in overall cocaine seizures around the time of the onset of the pandemic (Fig. 23 in addition to Fig.19). These included Paraná (where the VIGIA programme was initiated as a pilot project in April 2019), Santa Catarina (where the implementation of VIGIA began in April 2020<sup>87</sup>) and Rio Grande do Sul (where the implementation of VIGIA began in July 2020<sup>88</sup>).<sup>89,90</sup>

Moreover, it is important to note that the increases in seizures by Federal Road Police in the western border states were driven by an abrupt change in the average size of the seizures, in addition to a slightly delayed hike in the number of seizures, in contrast with states with access to the Atlantic Ocean (Fig.25). Indeed, a more detailed analysis (Fig. 30) points to a certain gravitation of cocaine consignments seized in the western border states towards the range of 400kg-550kg per seizure, and a roughly opposite dynamic, accompanied with a general shift towards smaller seizures, in the states with access to the Atlantic Ocean. These shifts likely reflect changes in actual quantities of trafficked cocaine and in trafficking modalities, rather than changes in law enforcement activities.

The above, coupled with the evidence on increasing clandestine flights as well as the relatively neat east-west separation between “rising” and “falling” trends (Fig. 23), suggests that law enforcement initiatives cannot be the primary factor accounting for the increases in the western states, which rather reflect to a large extent real changes in market dynamics.

In contrast with the “upswing” in the western Brazilian states bordering the source countries of Bolivia (Plurinational State of), Colombia or Peru, it appears that the impact of COVID-19 in other parts of the country, including the states with access to the Atlantic, was a reduction in the availability of cocaine. One plausible explanation for this is that restrictions on movement created difficulties for organized groups to move cocaine within the country, from the border areas to the points of exit. The logistics of the cocaine supply chain within Brazil appear to involve a process of centralization, consolidation, storage and redistribution to the ports (Fig. 20); it is plausible that this process, which normally relies to a large extent on land

transportation, was severely disrupted by restrictions on movement. Brazilian authorities confirm that land transportation, predominantly cargo trucks, is used (along with air modalities) for internal distribution of cocaine and for transportation towards seaports and airports, and also suggest (as mentioned previously) that the state of São Paulo is an important distribution hub in the network of internal trafficking routes.<sup>91,92</sup>

According to Brazilian officials, during the COVID-19 period, the use of small aircraft was observed not only to introduce cocaine into Brazil, but also for internal movements towards storage places or places of consumption.<sup>93</sup> The need to resort to such methods suggests that traffickers indeed encountered serious difficulties to move cocaine internally using the more usual conveyance by cargo trucks.

However, some interviewees were of the opinion that, as large quantities of cocaine are typically hidden in legal goods, drug trafficking across and from Brazil did not seem to be affected significantly by restrictions on interstate and foreign travel.<sup>94</sup>

A detailed analysis of seizures by Federal Road Police gives more insight into the dichotomy between “incoming” and “outgoing” cocaine flows. First, it confirms a general shift towards less cocaine being seized, and a shift towards cocaine being seized in smaller quantities, in the states with access to the Atlantic, with an opposite tendency for more cocaine being seized, and a shift towards cocaine being seized in larger quantities, in the border states. Secondly, it suggests that the diverging trends were driven to a large extent by cocaine seized in consignments in the region of 400-550kg (Fig. 30).

It is notable that this range corresponds to the typical quantity carried on clandestine flights, corresponding roughly to the maximum load capacity of the small single-engined aircraft that are typically used (Fig. 31). While seizures on highways are clearly made from land vehicles, once cocaine crosses the border into Brazil – whether via clandestine flights or otherwise – it will typically be further relayed to its next destination within Brazil via land transportation. Thus, it is not to be excluded that the size of seizures on federal highways also reflects the size of the consignments in the previous step of the trafficking chain – including any trafficked on clandestine flights into (or even within) Brazil. Hence, these data provide further corroboration, albeit indirectly, that the increases observed in Mato Grosso and Mato Grosso do Sul may be linked to the use of clandestine flights. The opposite dynamic may have occurred, in line with the general declining trend, in other states, such as São Paulo and Paraná.

...  
86 Brazilian Federal Police, presentation at “International Dialogues on Justice and Public Security: The Impact of the Pandemic on Drug Trafficking in Brazil” (March 2, 2021).

87 Between 15th May and 15th June.

88 Between 15th July and 15th August.

89 VIGIA Programme, CORTEX System.

90 While seizures attributable to the VIGIA programme may have contributed to reported totals, the trends mentioned in this paragraph refer to the data from the Brazilian Federal Police and the Federal Road Police (as discussed in previous paragraphs).

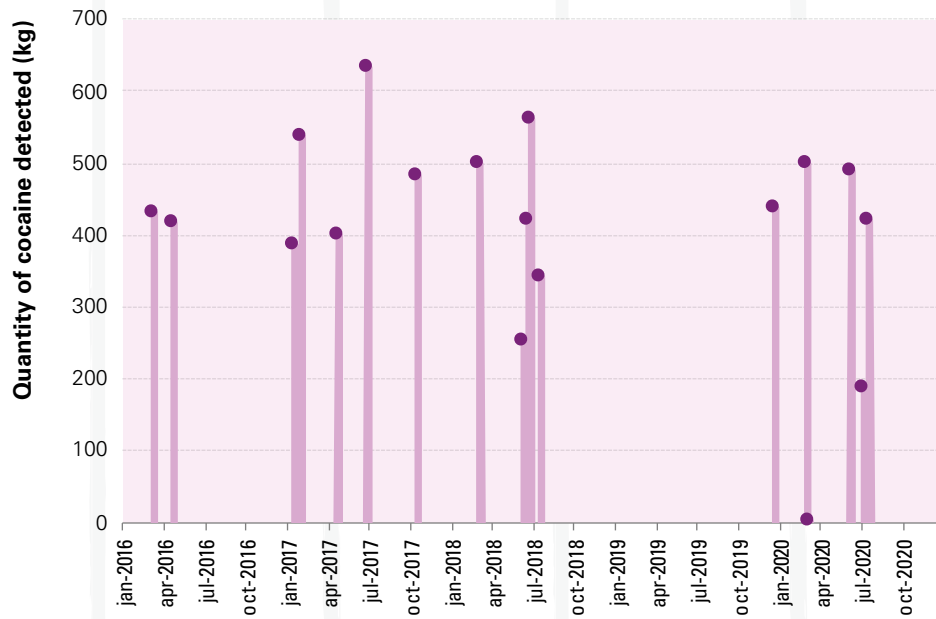
...  
91 Brazilian Federal Police, presentation at “International Seminar on Illicit Drug Supply Reduction” (December 7, 2021).

92 Brazilian Federal Police, presentation at CRIMJUST Investigative Case Forum, Accra, Ghana (November 2021).

93 Brazilian Federal Police, presentation at “International Seminar on Illicit Drug Supply Reduction” (December 7, 2021).

94 Interview 13.

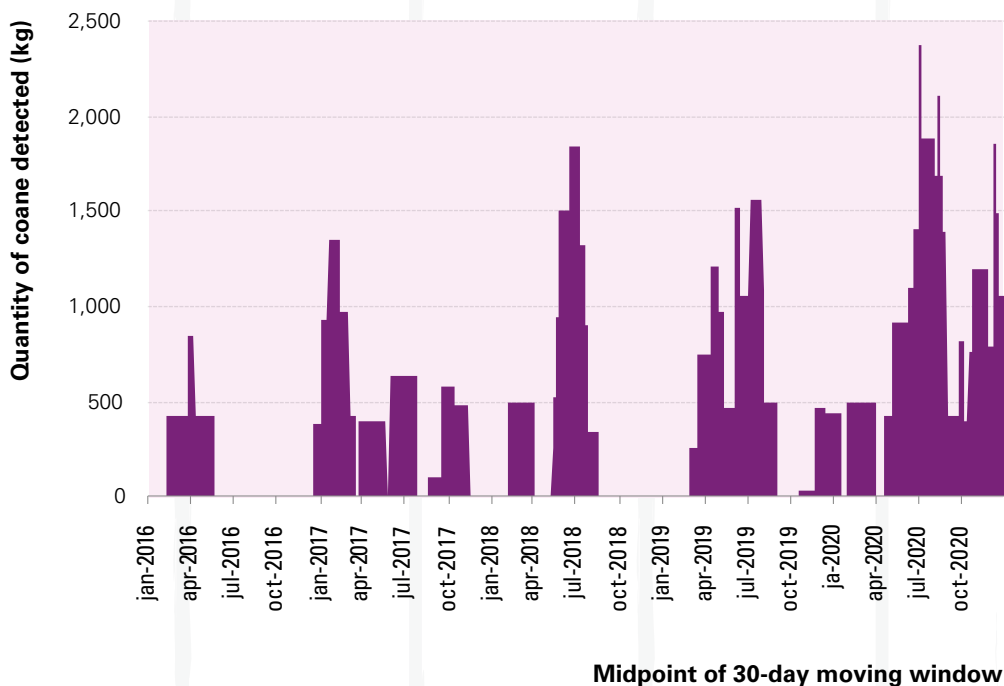
**FIG. 28** Timeline of aircraft-related trafficking incidents captured in open-source monitoring in Mato Grosso, Brazil, 2016-2020



Note: Aircraft-related incidents linked to cocaine trafficking include incidents in which the circumstances indicate that, at the moment of detection, the drug had just been, was about to be, or was being transported on an aeroplane. These circumstances typically involve a combination of factors, and may include a seizure of cocaine, the detection of an airstrip, the presence of aviation fuel, or the arrest of an individual. Not every incident involves the physical detection of an aeroplane or the seizure of cocaine.

Sources: Monitoring of media reports. See also UNODC, *Cocaine Insights 5, Cocaine Trafficking: The Paraná-Paraguay Waterway and the Airbridge Link*, forthcoming.

**FIG. 29** Quantity of cocaine detected in aircraft-related trafficking incidents in Brazil captured in open-source monitoring, 2016-2020 (30-day moving window)

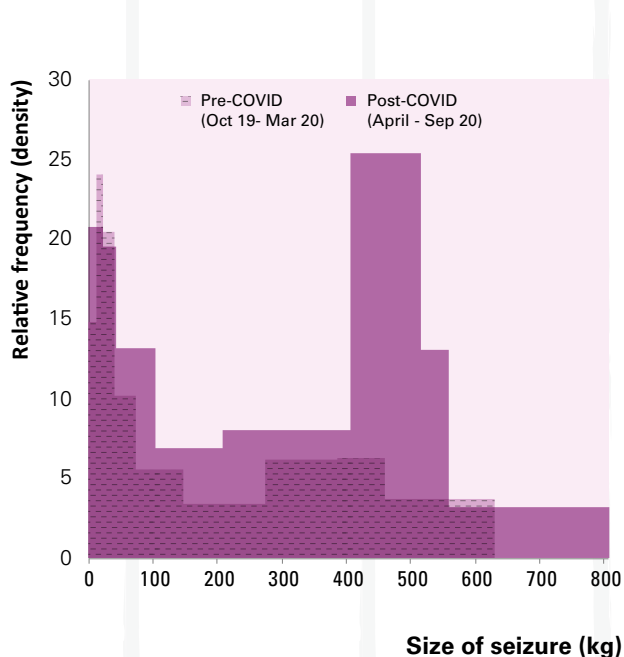


Sources: Monitoring of media reports. See also UNODC, *Cocaine Insights 5, Cocaine Trafficking: The Paraná-Paraguay Waterway and the Airbridge Link* *Cocaine Insights 5*, forthcoming.

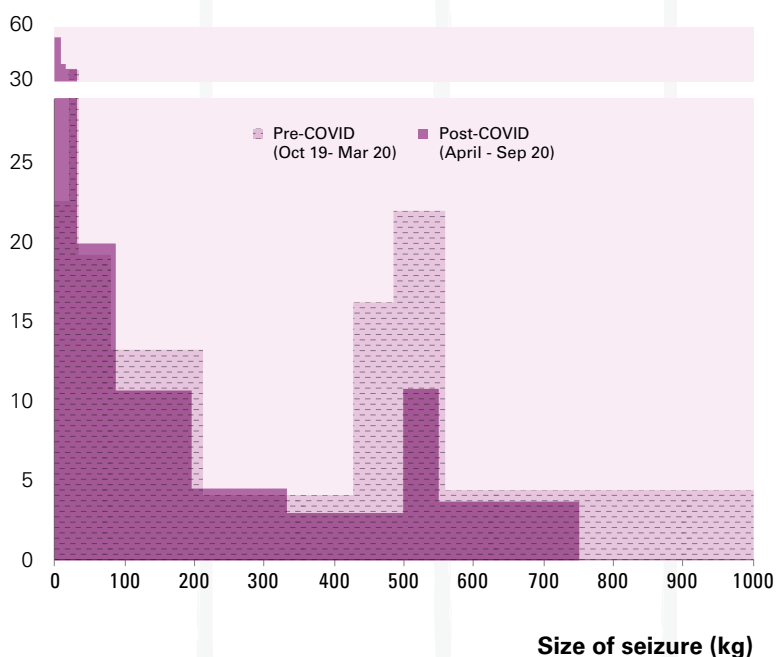


**FIG. 30 Modelled distribution of cocaine seized on highways by Federal Road Police, by size of seizure, in selected parts of Brazil**

**Brazilian states bordering Bolivia, Colombia or Peru:  
Acre, Amazonas, Mato Grosso, Mato Grosso do Sul  
and Rondônia**



**Brazilian states with access to the Atlantic Ocean**



Source: *Polícia Rodoviária Federal*, Brazil.

In view of the fact that the Brazilian states of Mato Grosso and Mato Grosso do Sul are adjacent to the Plurinational State of Bolivia, it should be borne in mind that, in 2019 (prior to the pandemic) coca bush cultivation in the Plurinational State of Bolivia had reached its highest levels (25,500 ha) since 2011, and rose by a further 15 per cent in 2020 (29,400 ha). This occurred in parallel with a sharp drop in eradication activities,<sup>95</sup> which were suspended during April-July 2020 due to COVID-19 restrictions. Moreover, these restrictions also led to the temporary closure of authorized coca leaf markets. Furthermore, restrictions on mobility between rural and urban areas were conducive to farmers dedicating more efforts to cultivation and management of their crops, thereby facilitating the production of coca leaf itself. All of these factors led to a general accumulation of coca leaf in the Plurinational State of Bolivia in 2020 and a drop in prices of coca leaf available in authorized markets, which fell by 22 per cent between 2019 and 2020 (expressed in US dollar terms).<sup>96</sup>

However, an increase in the availability of coca leaf does not immediately and automatically translate into an elevated supply of cocaine. According to Brazilian officials, due to border closures in the beginning of the pandemic, traffickers in countries where cocaine is produced (mainly in Peru and the Plurinational State of Bolivia) had difficulties to

obtain precursor chemicals that they usually import from Brazil to extract alkaloid from coca leaves.<sup>97,98</sup> According to one interviewee, the effect was felt less in Colombia because it has a more developed industrial infrastructure from which precursor chemicals are diverted. The limited supply of precursor chemicals initially created a situation of oversupply of coca leaf in these countries. In the Plurinational State of Bolivia, the restrictions on circulation of people also led to a drop in the number of potential buyers of authorized coca leaf products, further compounding the oversupply of coca leaf. Thus, when access to chemicals returned, traffickers had a combination of oversupply of cheap labour and low coca leaf prices,<sup>99</sup> possibly leading to an abrupt rebound in the availability of cocaine.

It is unclear exactly at what point (if at all) during 2020 the COVID-related impacts on coca leaf production in the Plurinational State of Bolivia translated into an increase in cocaine availability in this country (and thus increased supply for trafficking into the neighbouring Brazilian states), but it should be borne in mind that such an increase may already have occurred on the back of high levels of cultivation in 2019. As some Brazilian experts note, during the first months of the pandemic the supply was likely to come from already available stashes of cocaine (stored in Brazil or outside).<sup>100</sup>

<sup>95</sup> The total area for “rationalization” in Authorized Production Zones and eradication in Non-authorized Zones fell by 76 per cent between 2019 and 2020 (from 9,205 ha to 2,177 ha).

<sup>96</sup> Plurinational State of Bolivia and UNODC, “Bolivia - Monitoreo de Cultivos de Coca 2020,” August 2021.

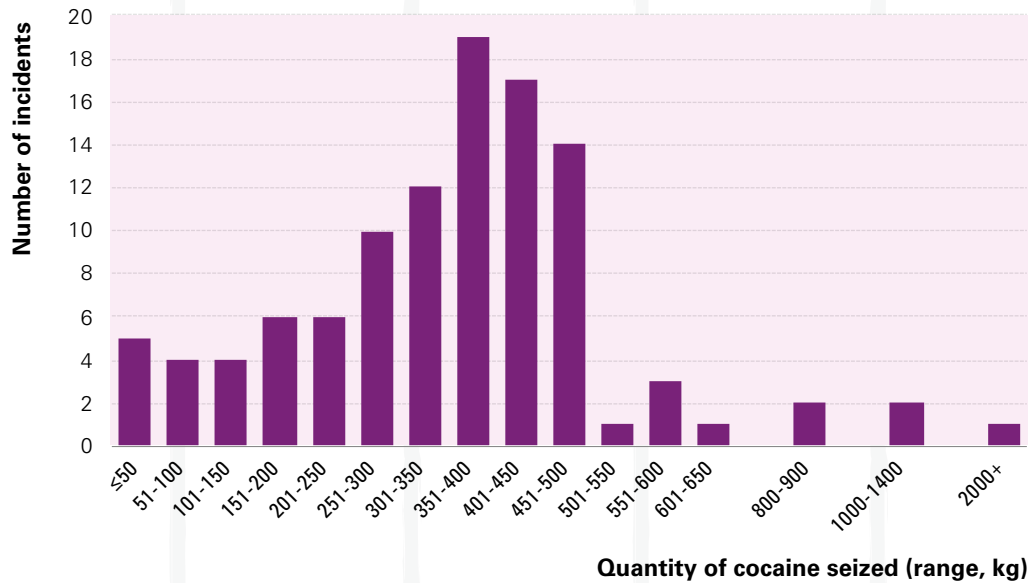
<sup>97</sup> Interview 2.

<sup>98</sup> Brazilian Federal Police, presentation at “International Seminar on Illicit Drug Supply Reduction” (December 7, 2021).

<sup>99</sup> Interview 2.

<sup>100</sup> Interview 2.

**FIG. 31** Frequency distribution of quantities of cocaine seized in aircraft-related incidents captured in open-source monitoring, 2011-February 2021



Reproduced from: UNODC, *Cocaine Insights 5, Cocaine Trafficking: The Paraná-Paraguay Waterway and the Airbridge Link*, forthcoming. Source: Monitoring of media reporting.

Another important factor to consider is that the supply of cocaine within the Plurinational State of Bolivia is in part fuelled by the production chain in Peru. Aside from cocaine originating from coca bush cultivation in the Plurinational State of Bolivia itself, Bolivian authorities assessed that, in recent years, Peru was a major source country for cocaine salts present on Bolivian territory.<sup>101</sup> It appears that some of this cocaine is trafficked in the form of coca paste (*pasta básica de cocaína*), via clandestine flights as well as land trafficking routes, into the Plurinational State of Bolivia, where it is processed into cocaine hydrochloride.<sup>102,103</sup>

In Peru, coca leaf production for the illicit market in 2019 was already estimated at its highest level (121 tons) since 2011, and it increased by a further 12 per cent in 2020.<sup>104</sup> Moreover, with the advent of COVID-19, eradication of coca bush fell by more than one half in 2020<sup>105,106</sup> and the prices of coca leaf, coca paste and cocaine hydrochloride all incurred sharp drops in April 2020, especially coca leaf prices, which fell by 46 per cent in comparison with January 2020.<sup>107</sup> Similar to the developments in the Plurinational

State of Bolivia, this was likely indicative of an overabundance of coca leaf as well as temporary disruptions in the cocaine supply and processing chain, causing fluctuations in cocaine availability which may have impacted the flow of cocaine both into the Plurinational State of Bolivia or even into Brazil directly. Peru shares a border with the Brazilian states of Acre and Amazonas; however, the increases in cocaine seizures in the first six months after the onset of COVID-19 were distinctly more pronounced in the Brazilian states sharing a border with the Plurinational State of Bolivia. Based on estimates by Peruvian authorities, it appears that the most important channel for cocaine exiting Peru across its land borders consists of clandestine flights to the Plurinational State of Bolivia; however, starting in 2018, Peruvian authorities observed a new trend of flights headed towards Brazil.<sup>108,109</sup>

Finally, it cannot be excluded that the difficulties generally encountered by law enforcement agencies in the Plurinational State of Bolivia and Peru in their activities (beyond eradication of coca bush), especially in those activities targeting the later stages of the cocaine supply chain, may have contributed to a greater availability of cocaine in Peru and the Plurinational State of Bolivia and a greater opportunity for criminal groups to operate. According to one Brazilian interviewee, law enforcement agencies in the main producer countries experienced difficulties in carrying out police operations in the beginning of the pandemic, as they had

101 UNODC Annual Report Questionnaire, responses from the Plurinational State of Bolivia for 2018, 2019, 2020.

102 *Policía Nacional del Perú*, "Tendencias de Las Redes Criminales Del Tráfico Ilícito de Drogas En Perú," 2020.

103 Mauricio Quiroz Terán, "Resabios de Sendero y Dos Carteles de Brasil Controlan La Narcoruta Perú – Bolivia," *El Deber*, July 19, 2021.

104 *Observatorio Peruano de Drogas*, "Producción Estimada de Hoja de Coca En El Perú," October 2021.

105 *Policía Nacional del Perú*, "Anuario Estadístico Policial 2019".

106 UNODC Annual Report Questionnaire, responses from Peru for 2020.

107 *Observatorio Peruano de Drogas*, "Monitoreo de Precios de Hoja de Coca y Derivados Cocaínicos En Zonas Estratégicas de Intervención," February 2022.

108 *Policía Nacional del Perú*, "Tendencias de Las Redes Criminales Del Tráfico Ilícito de Drogas En Perú," 2020.

109 UNODC, "Cocaine Insights 5, Cocaine Trafficking: The Paraná-Paraguay Waterway and the Airbridge Link", forthcoming.

to redirect resources to monitor lockdown measures. Aside from eradication activities, lab dismantling operations also had to be suspended. Reduced police counterdrug activity in source countries might have led to an increase in the supply of drugs.<sup>110</sup>

Based on data from Peruvian authorities, significant decreases were recorded in 2020 not only in terms of eradication of coca bush, but also seizures of cocaine hydrochloride (which declined by 28 per cent), seizures of chemicals frequently used in the manufacture of drugs (both those of under national control, which declined by 37 per cent, and those not under national control, which declined by 68 per cent) and detections of maceration pits (27 per cent), of coca paste laboratories (22 per cent) and of clandestine airstrips (29 per cent). However, seizures of coca paste actually increased by 26 per cent.<sup>111,112</sup>

In the Plurinational State of Bolivia, year-on-year changes, in 2020, in seizures of cocaine hydrochloride, cocaine base and coca leaf were within 10 per cent of the 2019 levels; however, the number of destroyed cocaine hydrochloride (“crystallization”) laboratories fell from 50 in 2019 (including 27 in the eastern department of Santa Cruz bordering the Brazil) to 36 in 2020 (including 15 in Santa Cruz). Similarly, the number of destroyed “recycling” laboratories fell from 47 in 2019 (including 25 in Santa Cruz) to 37 in 2020 (including 16 in Santa Cruz).<sup>113,114</sup>

Thus, it remains plausible that the dynamics of the cocaine production chain or cocaine supply reduction within the Plurinational State of Bolivia and Peru, themselves impacted by COVID-19 in various ways, contributed to increased flows into the neighbouring Brazilian border states, notably Mato Grosso. However, in view of the fact that the routes from and through the Plurinational State of Bolivia are not new, the mere increase in the supply of cocaine within this country does not fully explain the apparent shift away from the southern state of Paraná (bordering Paraguay) and adjacent São Paulo, and towards the more northerly state of Mato Grosso. This shift is more likely attributable to disruptions to cross-border land-based or fluvial channels, including channels exploiting legitimate trade and channels into Paraguay in addition to Brazil, combined with

the presence of an alternative, already established channel consisting of clandestine flights into Brazil, departing predominantly from the Plurinational State of Bolivia (in addition to Paraguay).

The dynamics of the supply chain in Colombia in the context of COVID-19 shared some commonalities with the Plurinational State of Bolivia and Peru, mainly in that mobility restrictions hindered some actors from reaching coca growing regions in order to buy coca leaf, thus triggering a drop in prices. In the context of Colombia, this appears to have spurred some coca growers to take charge of processing the coca leaf into coca paste themselves and to subsequently attempt to find buyers in the nearby urban centres; this situation was temporary and was gradually reversed. However, drug supply reduction activities in Colombia, such as eradication of coca bush and destruction of laboratories, did not register drastic drops in results in 2020. At the same time, production of cocaine hydrochloride was estimated to have continued to increase in 2020, due to ongoing dynamics independent of COVID-19.<sup>115</sup> In the Brazilian state of Amazonas, adjacent to Colombia, seizures of cocaine registered by the Brazilian Federal Police doubled in the 6 months following the onset of COVID-19, from 308 kg in the period October 2019-March 2020 to 637kg in the period April-September 2020.<sup>116</sup>

### *Retail markets in Brazil during the pandemic*

At the level of distribution of drugs to consumers, several emerging trends remained relevant throughout the analysed period and may have been accelerated by the pandemic. Interviewed experts agreed that retail selling of different types of drugs adapted quickly to social distancing measures by increasing the use of delivery services as well as drive-through and internet-based distribution. These dynamics are especially relevant for cocaine, which, due to its high price relative to other drugs, in many countries has a significant consumer base among the higher-income population with increased access to and familiarity with the relevant platforms – although Brazil in particular is also affected by extensive consumption among less affluent population segments.

The use of delivery services may be reflected in an increase in the number of seizures by Military Police of cocaine, in base form, from motorcycles.<sup>117</sup> Likewise, interaction between drug dealers and consumers is taking place increasingly via social media platforms, such as WhatsApp groups, Facebook, Instagram, and dating sites, where the drug is typically sold at a higher price than on the street.<sup>118</sup>

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110 Interview 2.

111 *Policía Nacional del Perú*, “Anuario Estadístico Policial 2019.” Available at: [https://web.policia.gob.pe/anuario\\_estadistico/documentos/ANUARIO%20PNP%202019%20V2.0.docx%20\(1\).pdf](https://web.policia.gob.pe/anuario_estadistico/documentos/ANUARIO%20PNP%202019%20V2.0.docx%20(1).pdf).

112 *Policía Nacional del Perú*, “Anuario Estadístico Policial 2020. Available at: [https://web.policia.gob.pe/anuario\\_estadistico/documentos/ANUARIO%20PNP%202020.pdf](https://web.policia.gob.pe/anuario_estadistico/documentos/ANUARIO%20PNP%202020.pdf).

113 *Fuerza Especial de Lucha Contra el Narcotráfico*, Plurinational State of Bolivia, “Resultados Obtenidos En La Lucha Contra El Narcotráfico, Cuadro Comparativo Por Meses Gestión 2020 (Enero - Diciembre),” accessed June 1, 2022. Available at: <https://www.felcn.gob.bo/Resultados2020.aspx>.

114 *Fuerza Especial de Lucha Contra el Narcotráfico*, Plurinational State of Bolivia, “Resultados Obtenidos En La Lucha Contra El Narcotráfico, Cuadro Comparativo Por Meses Gestión 2019 (Enero - Diciembre),” accessed June 1, 2022. Available at: <https://www.felcn.gob.bo/Resultados2019.aspx>.

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115 Oficina de las Naciones Unidas contra la Droga and Delito (UNODC)-Sistema Integrado de Monitoreo de Cultivos Ilícitos (SIMCI), “Monitoreo de Territorios Afectados Por Cultivos Ilícitos 2020”(Bogotá: UNODC-SIMCI, 2021).

116 *Policía Federal, Brazil*.

117 Interview 11.

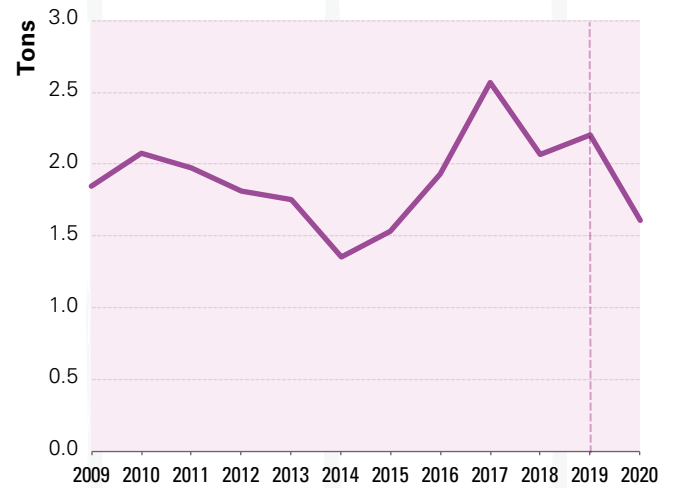
118 Interviews 4, 6, 7, 14

Some law enforcement officials perceived an increased consumption of drugs during the pandemic.<sup>119,120</sup> Like with wholesale drug trafficking, smaller groups on the retail market had more difficulties to remain active. Some experts point out the consolidation of retail drug distribution in the hands of larger dealers; many of the smaller retail drug points (*biqueiras*) went out of business.<sup>121</sup>

### Some trafficking by air is substituted by sending small quantities by mail

Reportedly, Brazilian law enforcement officials noticed a significant increase in cocaine seizures from the postal service during the pandemic. Sending small quantities of cocaine by mail might reflect an alternative way to export drugs when commercial flights were restricted.<sup>122</sup> Not surprisingly, seizures at airports declined significantly in 2020 (Fig. 32). Another explanation for an increase in seizures from the postal stream, suggested by law enforcement, is that the decrease in economic activity due to social distancing measures led more people to seek an alternative income source by sending packages with drugs by mail. Finally, an increased incidence of postal packages carrying drugs may be linked to an increase in the use of digital platforms such as darknet marketplaces, which often rely on postal services as their method of delivery, or instant messaging platforms.<sup>123</sup>

**FIG. 32** Quantity of cocaine seized in Brazilian Airports, 2009-2020



Source: *Polícia Federal*, Brazil.

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119 Interview 14.

120 Prevalence data comparing levels of use before and after the pandemic were not available.

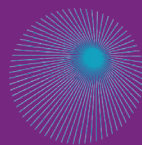
121 Interview 7.

122 Interview 2.

123 *Secretaria de Operações Integradas and Ministry of Justice and Public Security*, presentation at “International Dialogues on Justice and Public Safety: The Impact of the Pandemic on Drug Trafficking in Brazil” (March 2021).



CRIMJUST is implemented by UNODC in partnership with INTERPOL and Transparency International. CRIMJUST seeks to enhance law enforcement and judicial strategies beyond interdiction activities and to foster transnational responses along drug trafficking routes targeting each stage of the drug supply chain. This includes the production of knowledge on the cocaine market to support evidence-based policy and strategies designed to counter the cocaine threat.



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