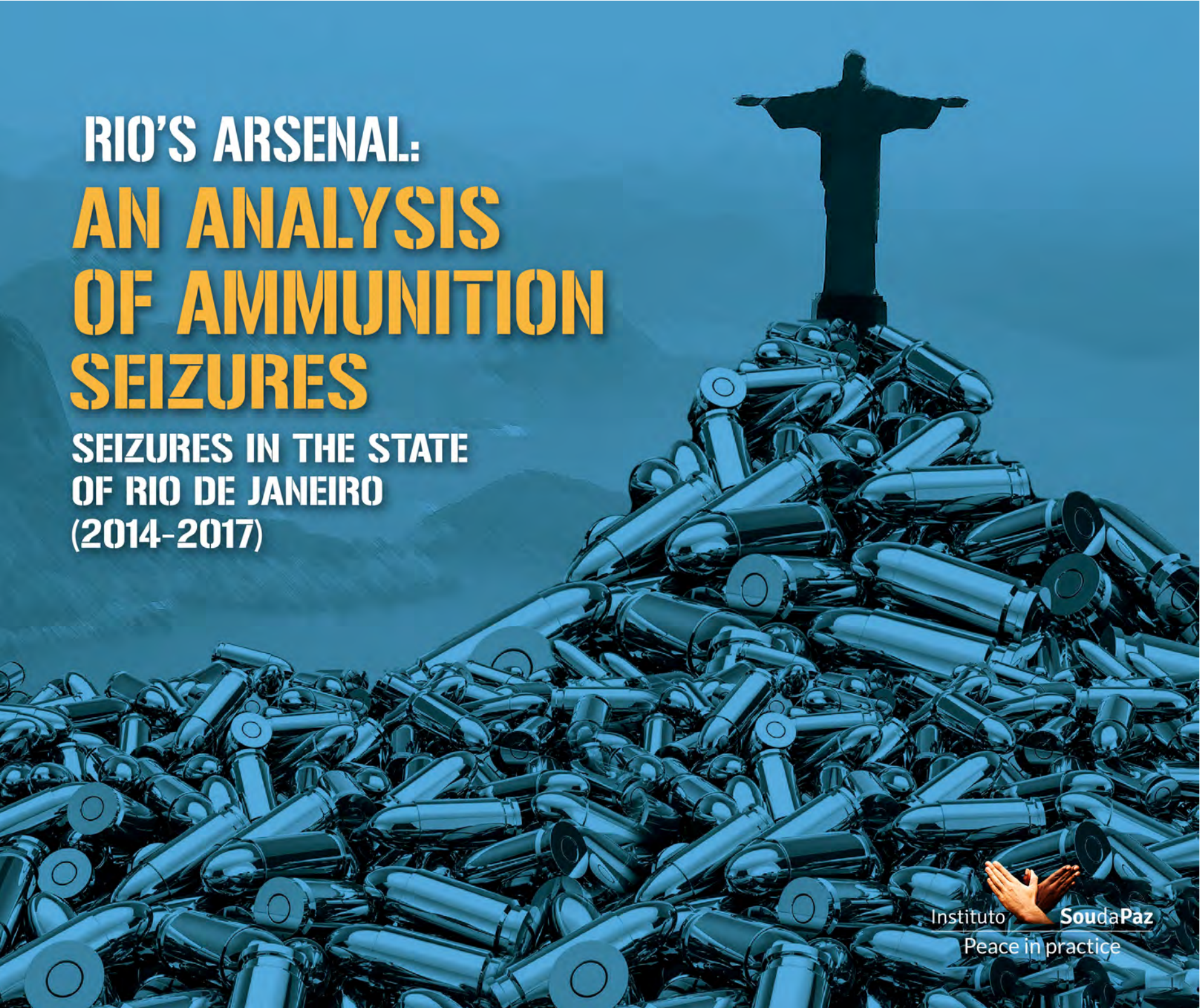


# **RIO'S ARSENAL: AN ANALYSIS OF AMMUNITION SEIZURES**

**SEIZURES IN THE STATE  
OF RIO DE JANEIRO  
(2014-2017)**



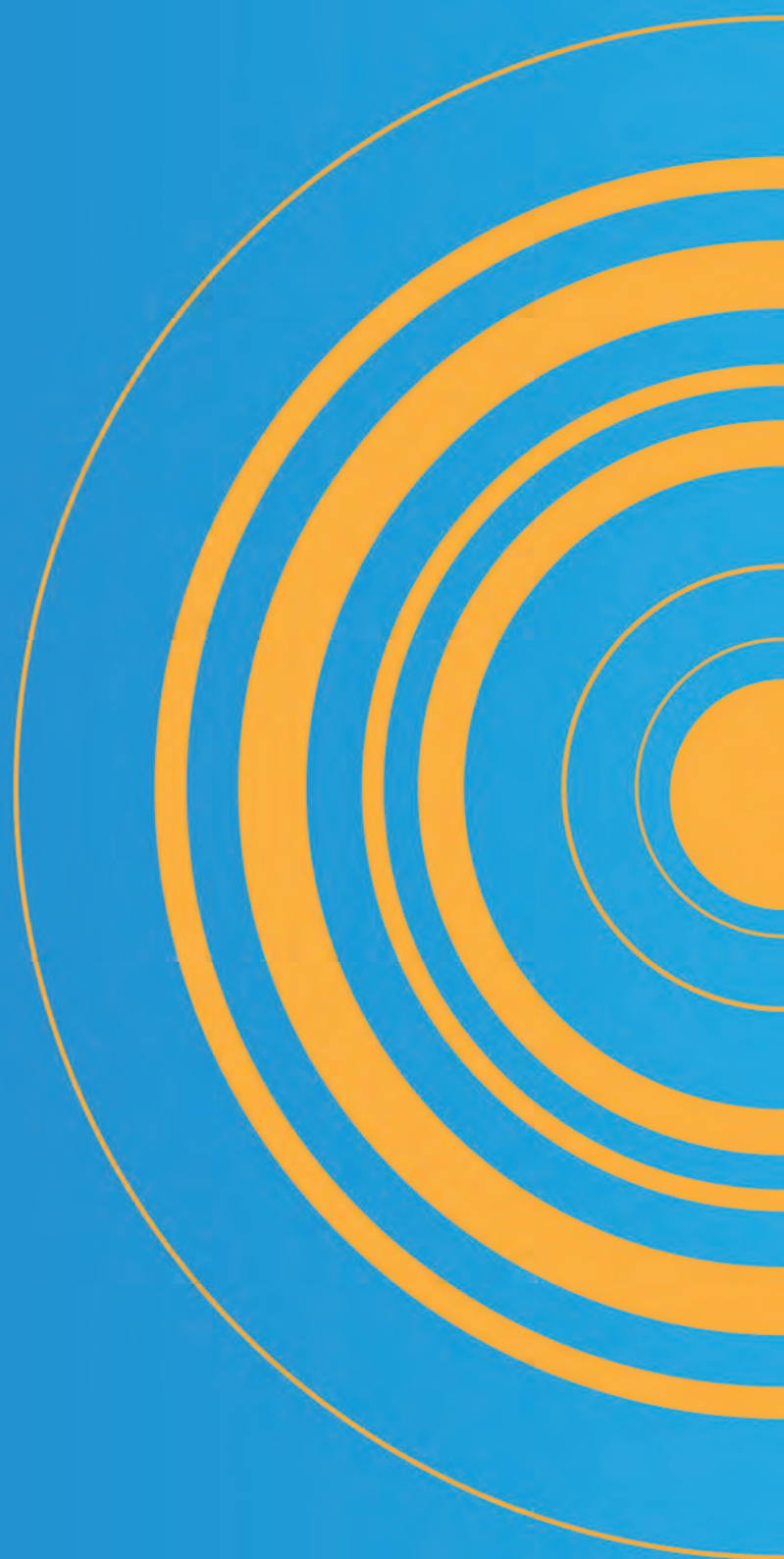



# Acknowledgements

We would like to thank the German Ministry of Foreign Affairs for supporting this research.

We would also like to thank the Public Security Institute of the State of Rio de Janeiro (ISP) for collecting, organizing, and making available the ammunition seizure data. It is important to highlight that Rio de Janeiro is one of the few states that provides disaggregated data about ammunition seizures (with the quantity and caliber of ammunition included).

Finally, we would like to thank Cecília Oliveira and Project Fogo Cruzado (Crossfire), which made shootings data from 2016 and 2017 available, and provided important additional analysis. And, of course, to the whole team at Instituto Sou da Paz.





# RIO' S ARSENAL: AN ANALYSIS OF AMMUNITION SEIZURES

IN THE STATE OF  
RIO DE JANEIRO  
(2014-2017)

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# I. Introduction

Instituto Sou da Paz has been dedicated, since its foundation in 1999, to the reduction of homicides and gun violence. In the spirit of this mission, and considering the scarcity of both analysis and diagnostics about Brazil's gun and ammunition illegal market, we have produced, in the last five years a series of research reports and resources aimed at understanding the profile of weapons used in crimes in Brazil. This is essential data, with the potential to generate targeted public policies, allocate resources more accurately, and increase our understanding of criminal trends, both through the safer seizure of weapons in greater quantity, and through improved control and inspection policies capable of preventing diversions from the legal gun market throughout its life cycle.

This report delivers an unprecedented product in analyzing a large volume of ammunition seizure data in the state of Rio de Janeiro. If the study of the profile and origin of weapons is still scarce in Brazil, looking at ammunition seizures is a yet nascent process. Understanding the patterns and origins of the fuel for shootings and confrontation would already be important in the Brazilian general context of alarming rates of armed violence.

However, the current moment in Rio de Janeiro is anything but ordinary. In 2017, an extended financial crisis caused a rapid deterioration of resources devoted to proactive crime prevention, especially those related to violent deaths, a scenario accompanied by the growing seizures of weapons and ammunition until 2016.

The study now being introduced, was made possible from data organized by the Instituto de Segurança Pública (ISP, "Public Security Institute") on ammunition seizures recorded by the Polícia Civil do Estado do Rio de Janeiro ("Civil Police of the State of Rio de Janeiro") Though still with its limitations, the data is valuable in understanding the illegal market and usage of guns in the state. Perhaps even more important, the data is critical in illuminating the most effective seizures paths to be pursued by federal and state authorities.

The ample availability of ammunition is the main fuel for gangs and the organized crime that fight each other on lasting confrontations for territory and against the police, contributing to the occurrence of more than 2,600 shootings or notifications of firearm shootings from January to June of 2017.

## Nota Metodológica

The data source is the Instituto de Segurança Pública do Rio de Janeiro.

They present the seizures organized per day and policial district with details on quantities and calibers. Only in 2014, the data also included information on the ammunition brands.

The Project Fogo Cruzado ("Cross Fire") kindly gave us access to their database on shootings registered between July 2016 and July 2017.

The term "ammunition" used in this report follows national definitions referring to intact cartridges, excluding empty cases and projectiles.

1. "De Onde Vêm as Armas do Crime: Análise do Universo de Armas Apreendidas em 2011 e 2012 em São Paulo" (2013), "DNA das Armas" (2015) & "De Onde Vêm as Armas do Crime Apreendidas no Sudeste?" (2016).

2. Registered by the "Fogo Cruzado" app in the Rio de Janeiro metropolitan region from January to June 2017.

3. More information at: <https://extra.globo.com/casos-de-policia/rio-tem-em-media-uma-pessoa-vitima-de-bala-perdida-cada-sete-horas-em-2017-21558626.html>

Only in the last eight months, more than 100 security officers lost their lives in these territories and almost 650 people were victims of stray bullets.

Most seizures, as expected by its grater staffs, are carried out by state forces, but there are also important contributions by federal forces, especially the Polícia Federal Rodoviária ("Federal Highway Police"). This police institution appears prominently in the analysis of a sample of major seizures, registering an average of 8,000 ammunition seized.

According to the Brazilian Constitution<sup>4</sup> and federal law 10.826/2003<sup>5</sup>, it is the responsibility of the Exército Brasileiro ("Brazilian Army") to inspect the manufacturing and sale process of ammunition within national territory. Currently, there is only one national factory located in the state of São Paulo which operates within a de facto monopoly.

This information becomes more relevant before the data that 42%<sup>6</sup> of the ammunition seized in 2014 were from this manufacturer, the Companhia Brasileira de Cartuchos (CBC - "Brazilian Cartridge Company"). Although this information presents a challenging weakness in the current existing national controls, it is at the same time an opportunity for national authorities to take action and promote great improvements. Finding out how this ammunition left the São Paulo factory and ended up in the hands of criminals should be a top priority for both police intelligence officials and the Brazilian Army.

Regarding the pool of analyzed data, we have found that between January 2014 and June 2016 there were more than half a million ammunition seized in Rio (548,777), which would allow for 430 bullets shot per day or one bullet shot for every group of 30 inhabitants. The seizures of ammunition, similar to the homicides registries, are quite concentrated and appear in contiguous areas. 20 of the 138 police districts in the Rio state sum 52% of the seizures.

Although rifles represent less than 5% of the total weapons seized in Rio, their ammunition accounts for 22% of the quantity seized. This indicates that these are heavily used weapons. Among those, the most predominant are the 7.62mm caliber (used in AK and FN FAL models primarily used by the armed forces of Brazil) and 5.56mm caliber (commonly used in AR rifles).

This high-energy ammunition represents an additional challenge because it escalates the intensity of confrontations. This type of ammunition can travel hundreds of meters, even kilometers, with high lethal power and have the capability of trespassing, increasing the risk of tertiary victimization, and generating recurring cases of what is popularly known as "stray bullets."

The goal of this report is to reinforce that no bullets are truly "stray." Most of them have an origin in the legal market, and if the manufacturing, marketing, and importation controls are improved, those involved in the illicit trafficking of ammunition can be held responsible and, most importantly, we can block the ammunition sources that fuel violent deaths and crimes.

Enjoy reading!



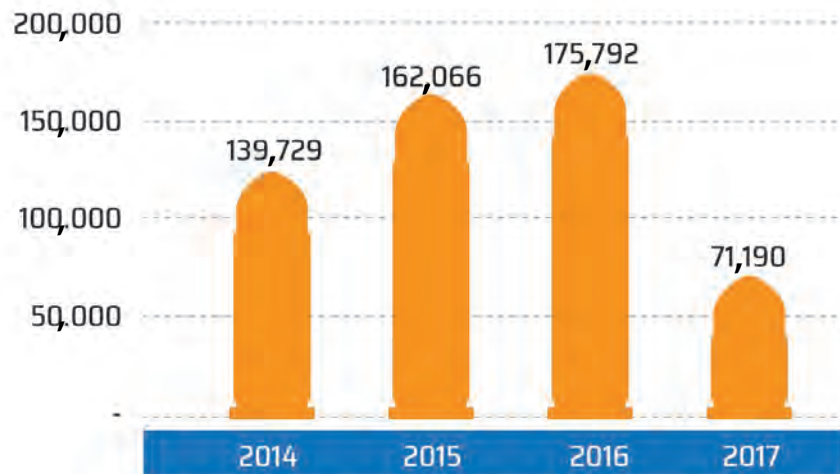
4. BRASIL. Federative Republic of Brazil Constitution art. 21 Available at: [www.planalto.gov.br/ccivil\\_03/constituicao/constituicaocompilado.htm](http://www.planalto.gov.br/ccivil_03/constituicao/constituicaocompilado.htm)

5. BRASIL. Federal Law 10.826/2003.

6. Instituto Sou da Paz "De onde vêm as armas do crime apreendidas no Sudeste?", 2016, p. 17. Available at: <http://soudapaz.org/o-que-fazemos/conhecer/pesquisas/control-de-armas/as-armas-do-crime/?show=documentos#3563>

## II. Seizures by Date

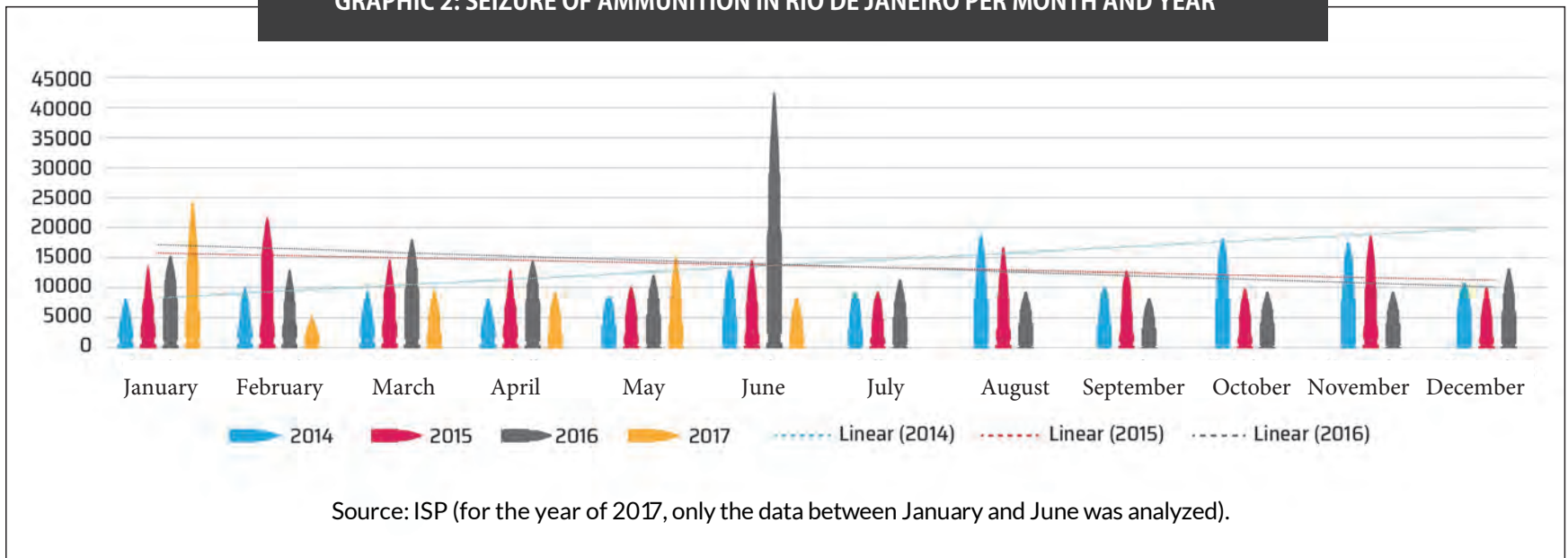
GRAPHIC 1: AMOUNT OF AMMUNITION SEIZED PER YEAR FROM JAN/14 TO JUN/17



\* 2017 data from January to June. Source: ISP

In three and a half years, the Rio de Janeiro State Police seized more than half a million ammunition (548,777). From 2014 to 2016, the growth in seizures was constant. In 2017, the growth trend was interrupted. Similar movements can be observed in the seizures of firearms (although the reduction in weapons has been much less significant).

The drop in the proportion of ammunition seized in the first half of 2017 is visible. It can be related to the reduction in policing intensity as a result of resource constraints, including salary cuts. In a scenario of growing armed violence, seizures were expected to grow, either because of the increased availability of ammunition or the need to dedicate more energy to fight the illegal market.

**GRAPHIC 2: SEIZURE OF AMMUNITION IN RIO DE JANEIRO PER MONTH AND YEAR**

In this period, the monthly average of ammunition seized was around 13 thousand. The spikes in June of 2016 and January of 2017 exemplify the impact of major seizures in the state. On June 3rd, 2016, the Circunscrições Integradas de Segurança Pública ("Integrated Public Security Circumscriptions" or police districts, CISP in the Portuguese initials) 32 (situated in the city of Rio de Janeiro and congregating mostly in the neighborhoods of Jacarepaguá and Cidade de Deus) registered the seizure of more than 21,819 ammunition. On January 22nd, 2017, the CISP 167 (which includes the city of Paraty) registered the seizure of 15,630 ammunition.

If we isolate the ammunition seizures up to 100 units per day per Police District, and of the same caliber, we see that these (which can be considered small and medium seizures) represent 58.5% of the total amount seized since 2014.

The lowest overall level in July correlates to the reduction of other observed criminal trends between May and August. As for the days of the week, the days that registered the most seized ammunition were Thursday and Friday, with a general upward movement starting on Saturday and ending with the highest average on Friday.

7. The neighborhoods included in the CISP 32 are: Anil, Cidade de Deus, Curicica, Gardênia Azul, Jacarepaguá e Taquara.

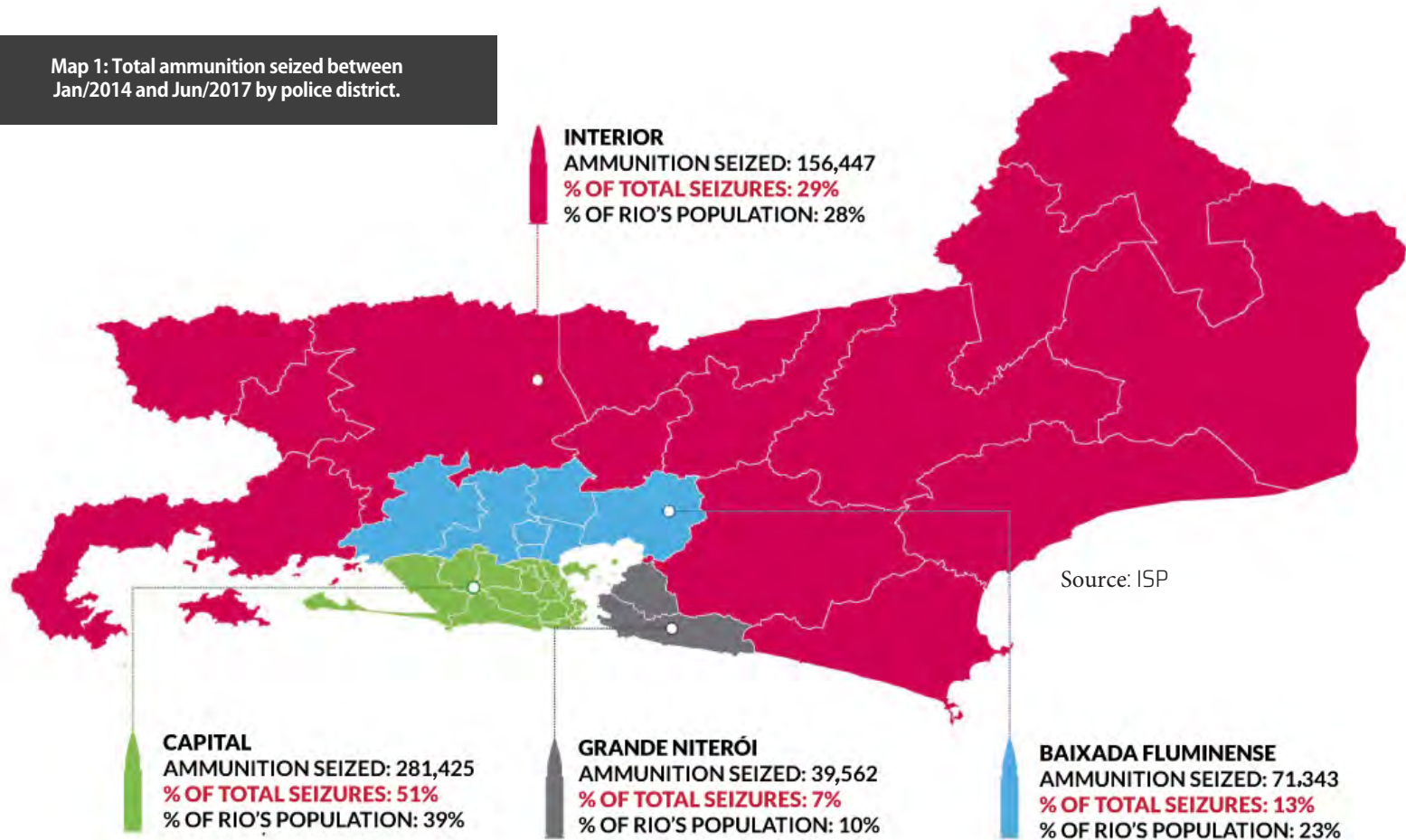
8. The CISP 167 includes the territories of Paraty, Parati-Mirim e Tarituba



# III. Seizures by Territory

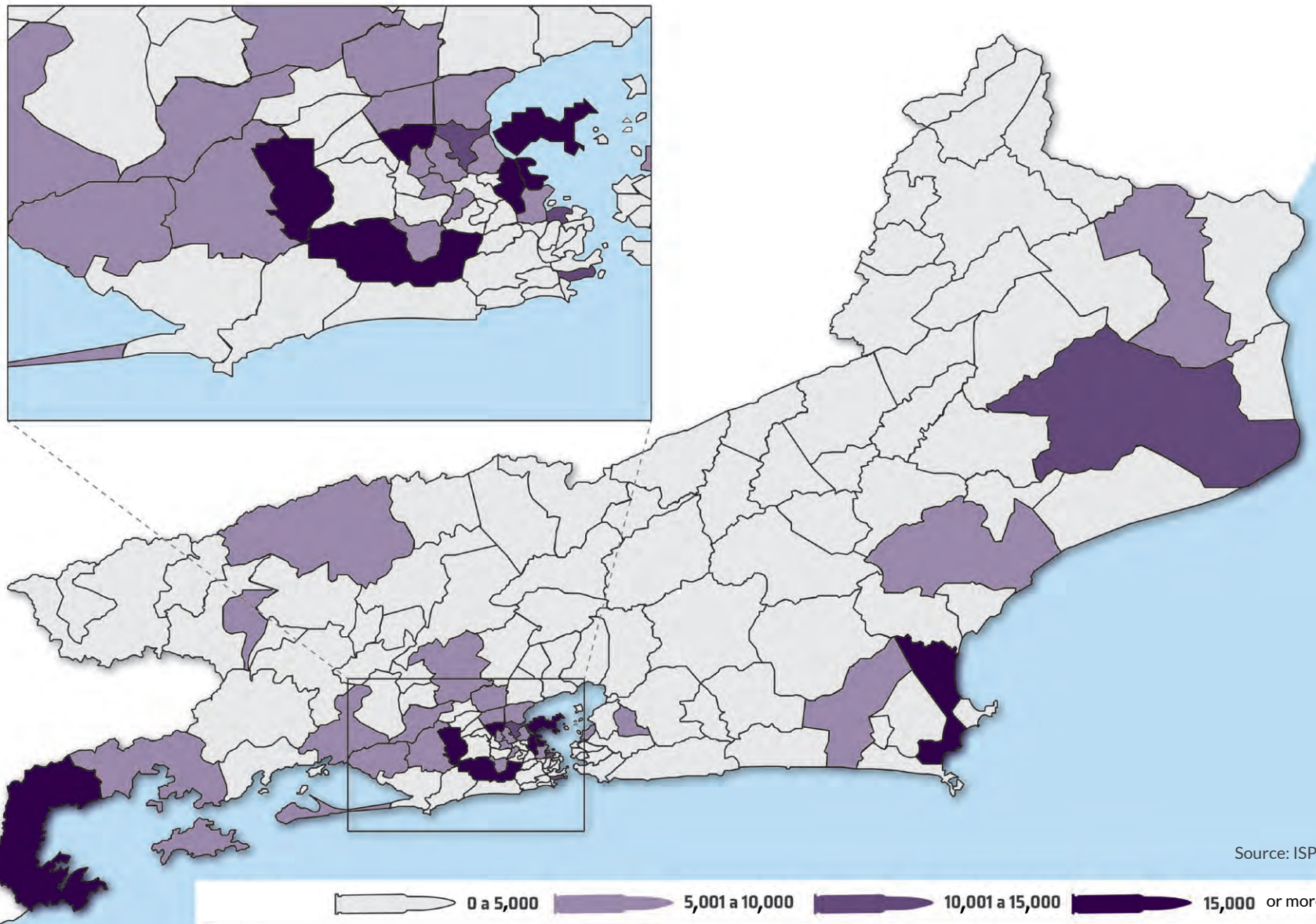
Regarding the four large regions in the state, ammunition seizures deviate little from the population distribution in Greater Niterói and the Interior. The capital has a significantly large seizure rate proportional to its population, the Baixada Fluminense, in turn, has a much lower seizure rate proportional to its population.

Map 1: Total ammunition seized between Jan/2014 and Jun/2017 by police district.



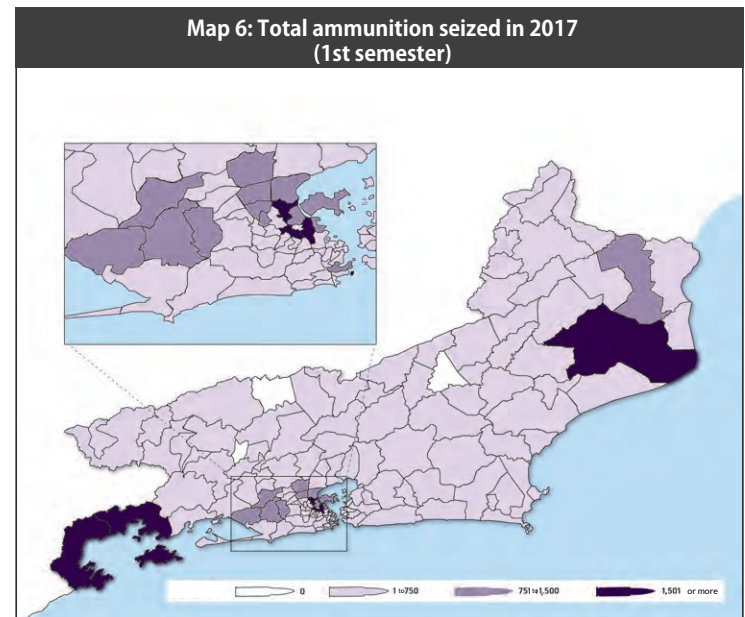
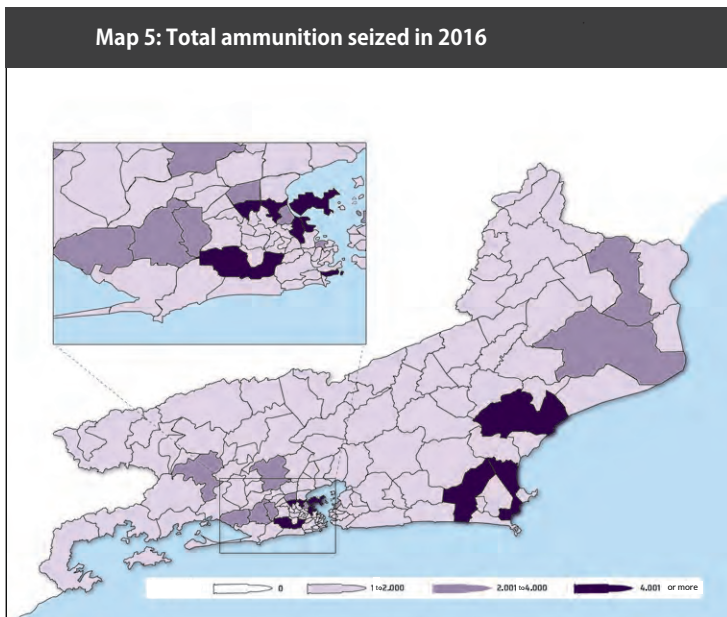
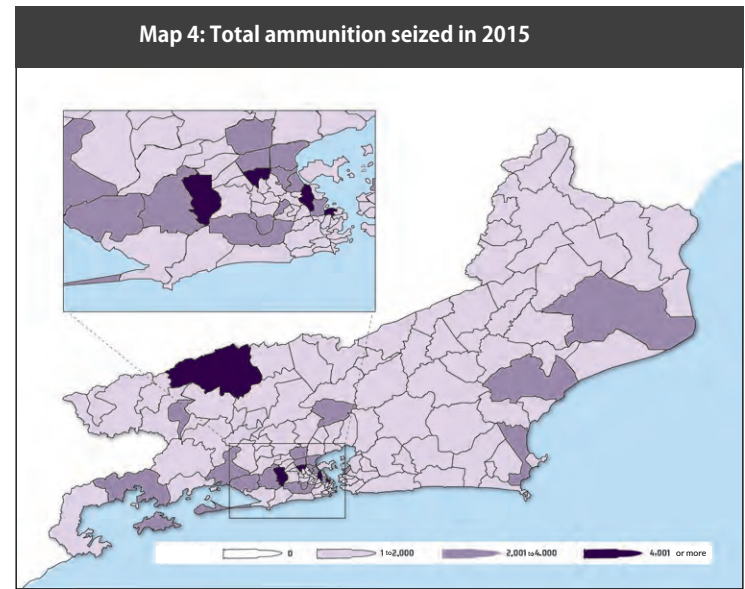
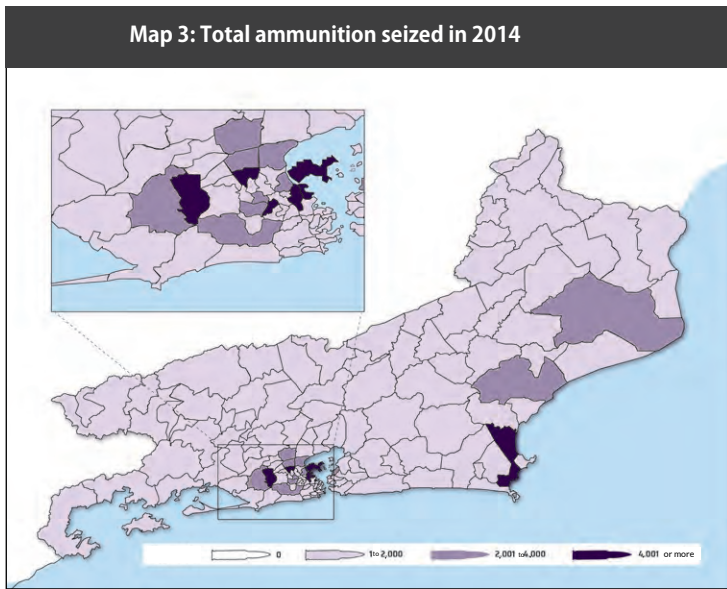
The ammunition seizures are territorially concentrated in Rio de Janeiro: 20 of 138 police districts in the state account for 52% of the total ammunition seizures, which is illustrated in the map below.

Map 2: Total ammunition seized between Jan/2014 and Jun/2017 by police district.



Source: ISP

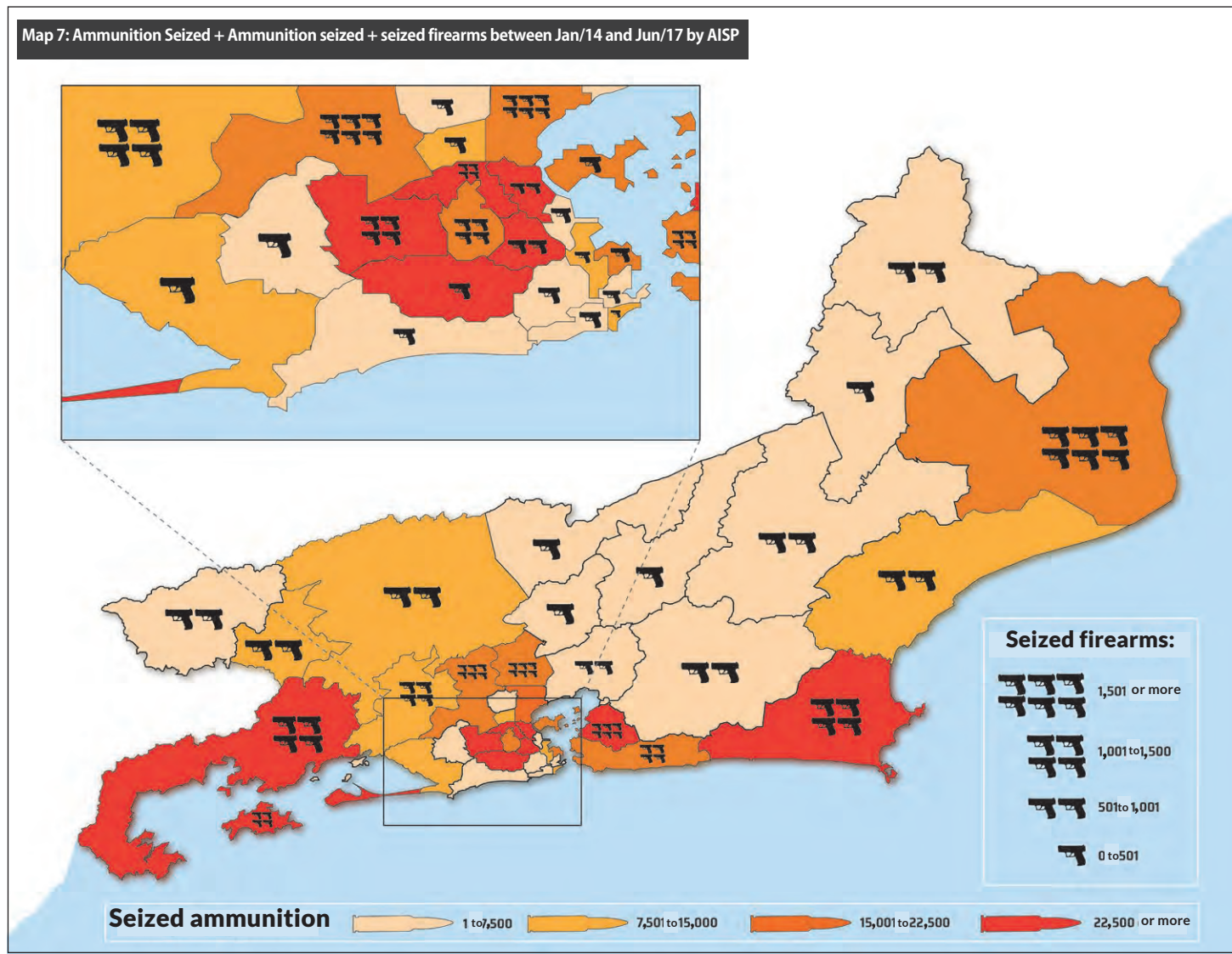
Sequence of maps with total seizures per year by Police District (CISP)



Most regions with greater quantities of ammunition seized are consistent within this period. Of the first 20 regions ranked, five (CISPs 21, 134, 39, 34 and 123) were among the ones greater quantities in the four years studied and nine others (CISPs 32, 126, 37, 38, 73, 64, 146, 36 and 22) appeared in this list three times in the last four years.

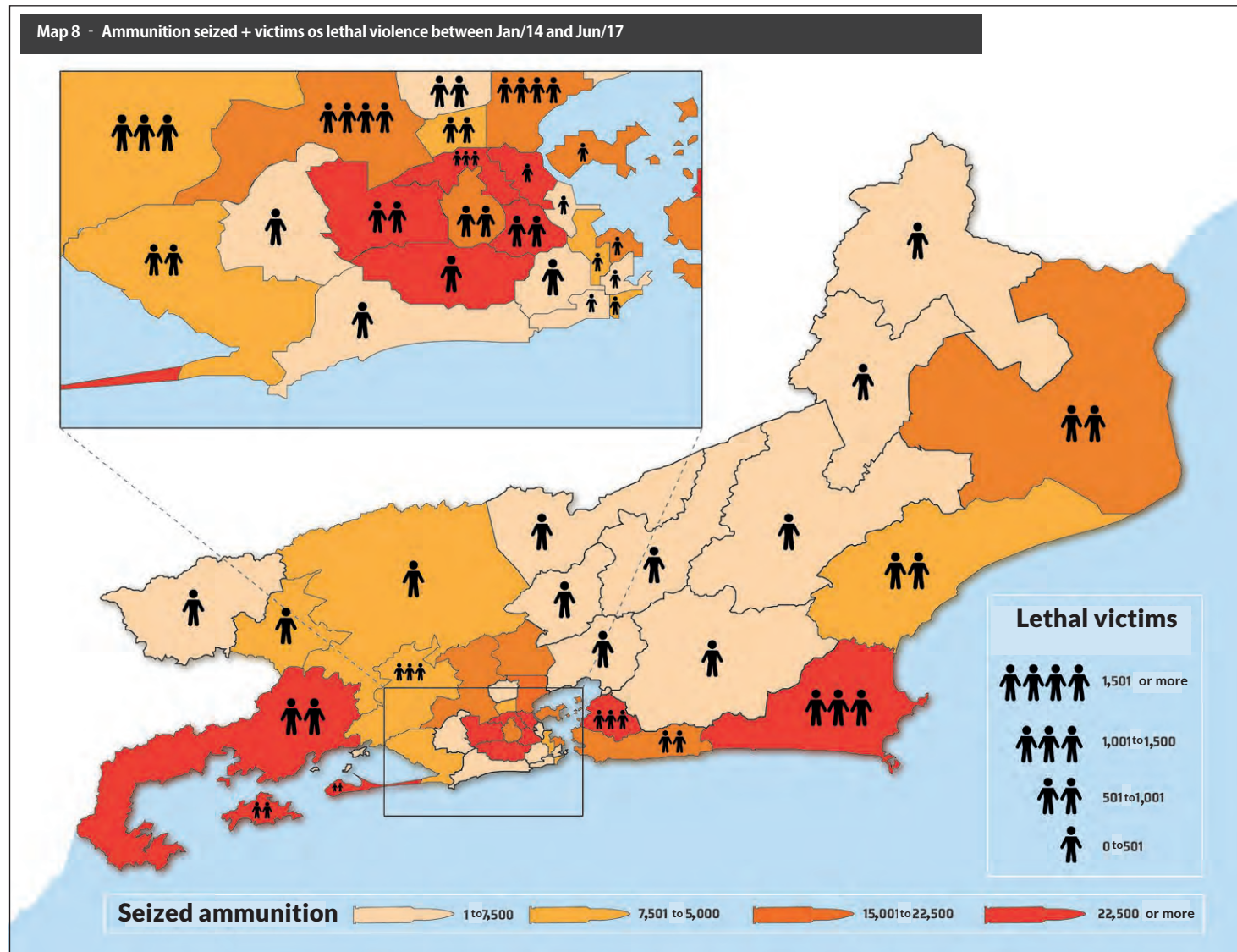
We expected to find similarities between the areas with the most ammunition seized and other criminal trends. For these comparison, we used the territorial divisions Áreas Integradas de Segurança Pública ("Integrated Public Security Areas", AISP in the Portuguese initials) to cover larger areas of possible ammunition usage.

As expected, the ammunition seizures geographical distribution had significant overlap with firearms seizure sites in the same period:

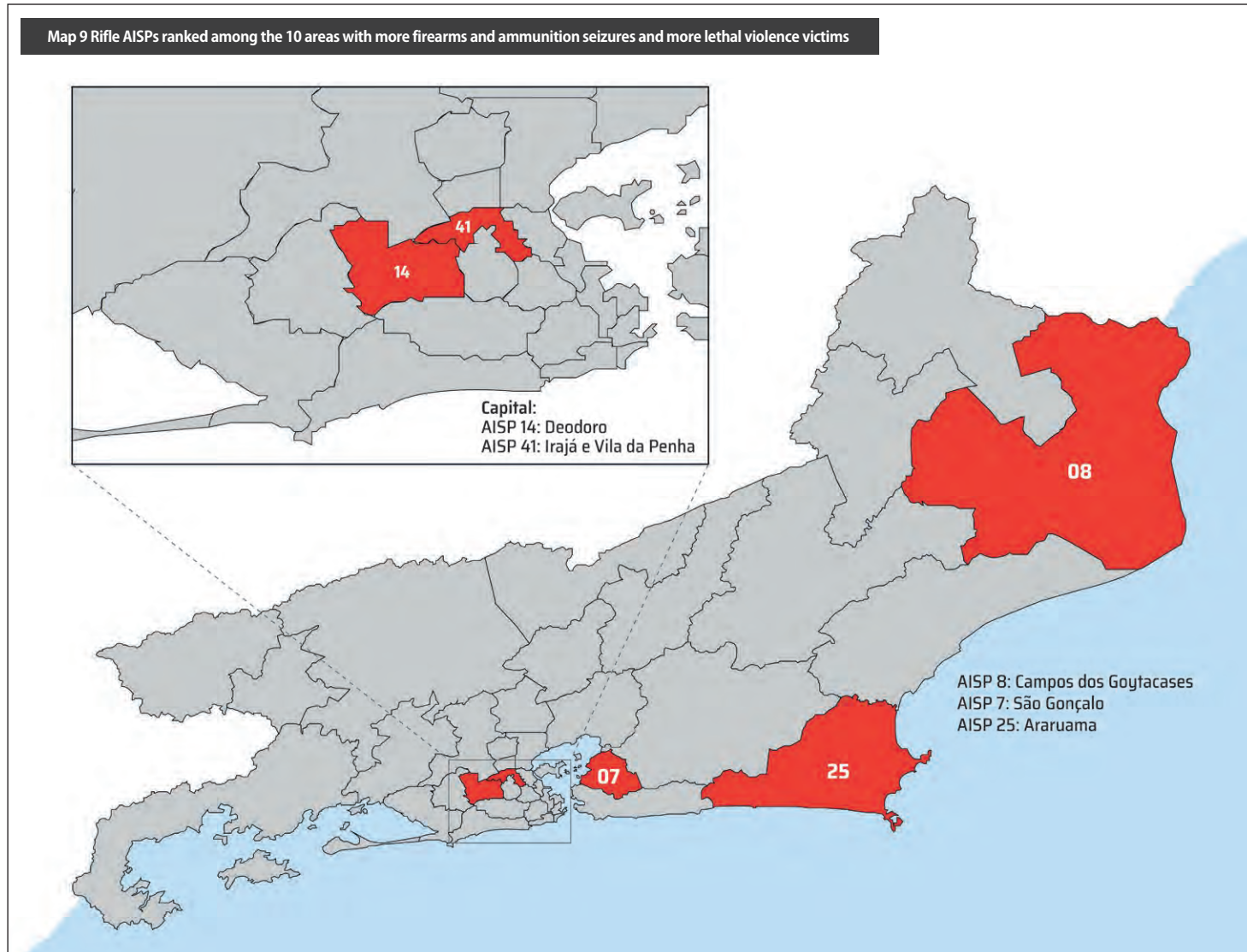


9. Were at the top seizures lists from 2014 to 2017 the CISPs: 21ª DP (Bonsucesso na capital), 134ª DP (Município de Campos dos Goytacases), 39ª DP (Pavuna na capital), 34ª DP (Bangu na capital) and 123ª DP (Município de Macaé).  
 10. Were at the lists of major seizures in at least 3 of 4 analyzed years : 32ª DP (Taquara na capital), 126ª DP (Município de Cabo Frio), 37ª DP (Ilha do Governador na capital), 38ª DP (Itaboraí), 73ª DP (Neves no Município de São Gonçalo), 64ª DP (Município de S. J. Meriti), 146ª DP (Guarus no Município de Campos de Goytacases), 36ª DP (Santa Cruz na capital) and 22ª DP (Penha na capital).

One can also observe correlations between the ammunition seizure sites and those with more events of lethal violence (summing intentional homicides, deaths after robberies, and deaths resulting from police interventions). The list of 10 regions with the most ammunition seized also includes five of the top 10 AISPs in lethal violence.



There are five AISPs (highlighted in map 8) that are ranked among the top ten both in terms of the quantity of ammunition and firearms seized, and in lethal violence: 41, 25, 14, 7, 8. AISP 41, including the areas of Irajá and Vila da Penha, also appears as the third most impacted region if considered the shootings registries. These are areas that demand special attention when it comes to investments in preventive security policies, understanding the motivations of lethal violence, attending the most vulnerable groups, as well as preventing arms and ammunition trafficking and identifying their recurring routes and origins of diversion to prevent them from reaching these locations.


















11. The analysis of the shootings database from the Project Fogo Cruzado from July 2016 to June 2017 indicated as the 5 AISPs with larger amount of shootings: 16 (Olaria), 3 (Méier), 41 (Irajá), 9 (Rocha Miranda) and 7 (São Gonçalo).

# IV. Seizures by Caliber

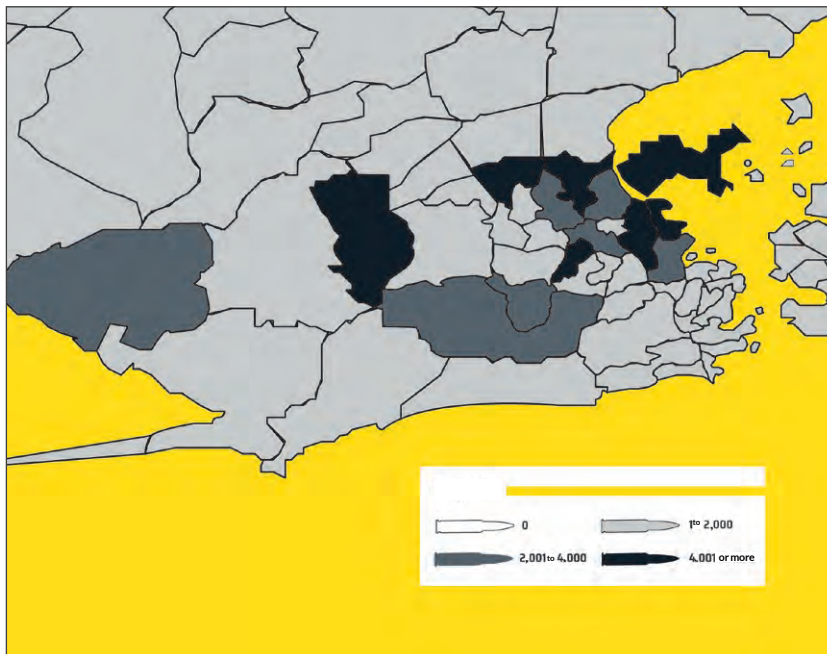
The three calibers that appear with the largest shares among the seizures are: 9mm (restricted to public forces pistols and submachine guns), 7.62mm (military grade mostly found in rifles), and .38mm (permitted for civilians, predominantly found in revolvers).

TABLE 1: CALIBERS OF AMMUNITION SEIZED BETWEEN JAN/2014 AND JUN/2017

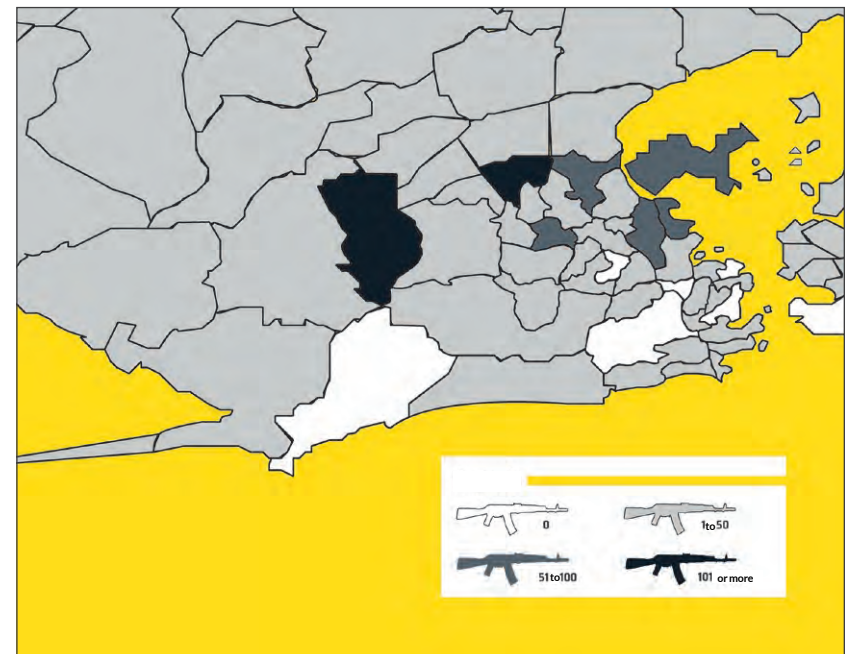
TOP 5		TABLE 1: CALIBERS OF AMMUNITION SEIZED BETWEEN JAN/2014 AND JUN/2017						
9mm		150,593	27.44%		.380		42,718	7.78%
7.62 mm / .308		77,232	14.07%		.22		20,812	3.79%
.38		57,103	10.41%		.32		19,950	3.64%
.40		55,818	10.17%		.45		19,116	3.48%
5.56 mm / .223		46,432	8.46%		.12		16,119	2.94%
					Other calibers		30,871	5.63%
					Undetermined		12,013	2.19%
<b>TOTAL</b>		<b>548,777</b>		<b>100%</b>				

Analyzing the ammunition seized in comparison to the seizures of weapons, 9mm and .38 were expected to be in the top three calibers, once amongst the weapons seized they are first and second, respectively. However, surprisingly, rifle calibers such as 7.62mm and 5.56mm are in second and fifth place among ammunition. This is surprising because, together, weapons of this caliber have only summed 5% of seizures. The fact that the volume of this ammunition surpasses 22% of the total amount seized suggests that there is a large illegal market, despite its restricted legal usage, and indicates a high intensity of those firearms usage.<sup>13</sup>

MAP 10: Seizures of rifle's ammunition between Jan/14 and Jun/17 by CISP



MAP 11: Rifles seized between Jan/14 and Jun/17



When analyzing the distribution between calibers permitted to civilian usage and military grade ammunition, we see that military grade ammunition are an increasing majority, reaching seven out of every ten ammunition seized in 2017. Although the state of Rio de Janeiro has already emerged as the state with the highest amount of military grade weapons seized in the Brazilian South-East region, it is worrying that the numbers are continuously increasing.

12. In the report "De onde vêm as armas do crime apreendidas no Sudeste?" (p.16) the analysis of seized firearms in Rio de Janeiro in 2014 summed 30,6% weapons with caliber .38 and 16,6% with caliber 9mm..

13. The rifles by their characteristics of use and automatic shooting are arms of high ammunition consumption.

14. The separation here described was valid in Brazil from 2003 until 2018. After 2018, several calibers once considered restricted to military use became available for legal civilian usage. This classification is made by the Brazilian Army and the full description of the rule valid in 2017 is presented in the methodological annex.

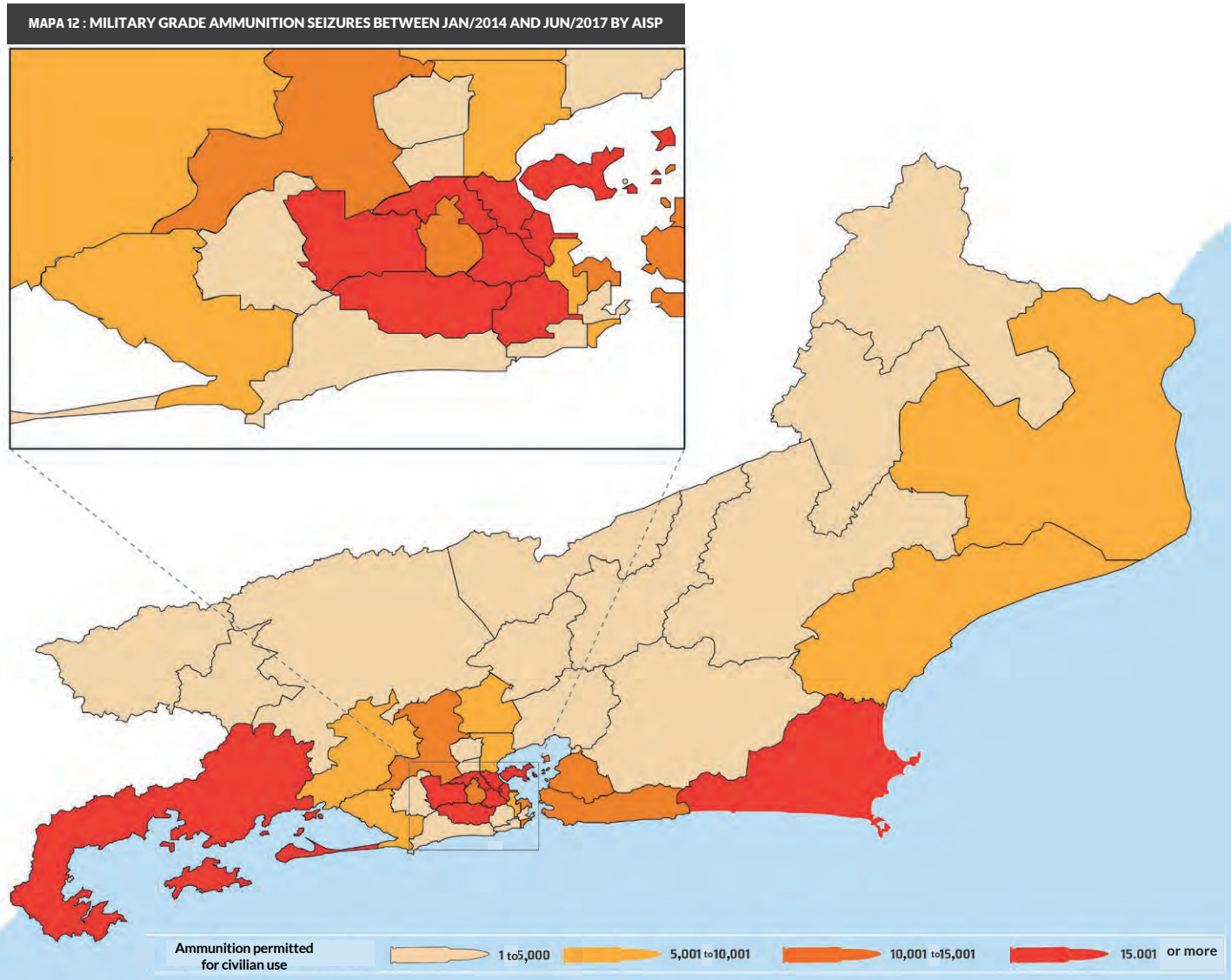
15. The Southeast region, mentioned at item 12, research on the firearms seized in the Southeast region identified that in Rio de Janeiro the military grade calibers summed ¼ of the total seized firearms.

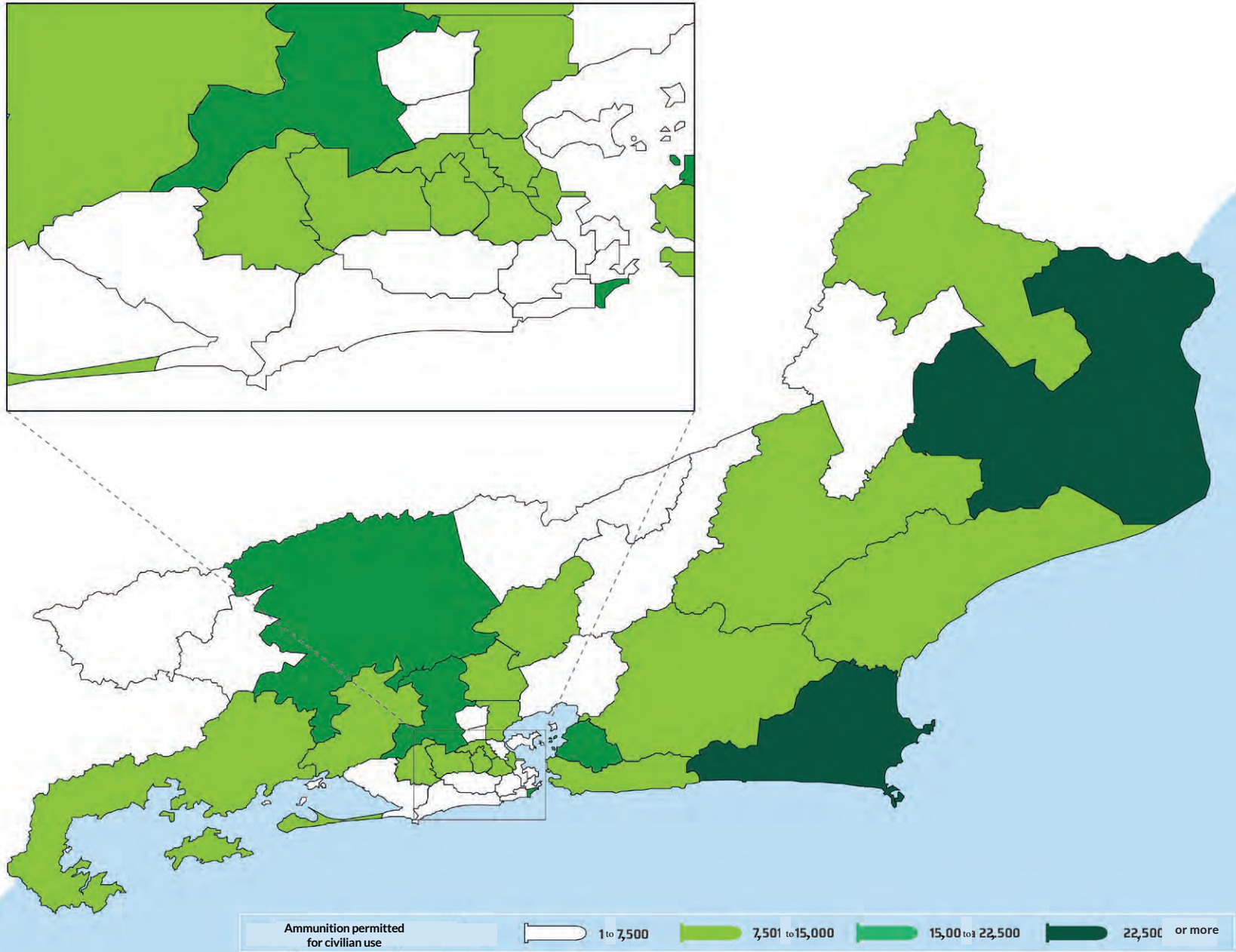


Table 2: ammunition seized between Jan/14 and Jun/17 by type

TYPE OF AMMUNITION	2014	2015	2016	2017*	TOTAL
PERMITTED FOR LEGALLY REGISTERED CIVILIAN	41%	38%	31%	30%	36%
MILITARY GRADE	59%	62%	69%	70%	64%

There are territorial differences in terms of the type of ammunition seized. The seizures of ammunition permitted for civilian use are concentrated in the state interior, while the seizures of military grade ammunition are concentrated in the capital and its surroundings.





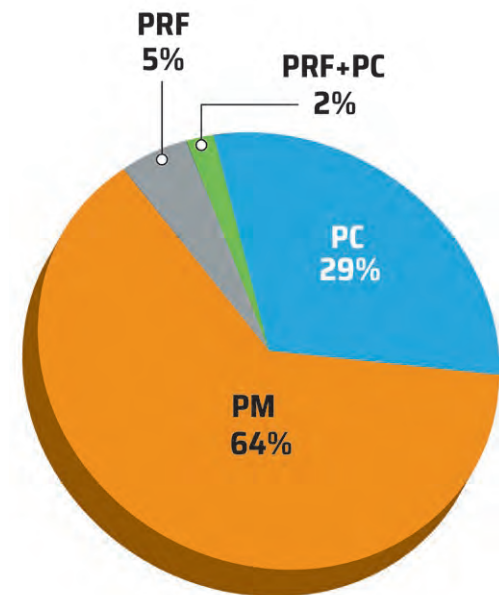
# V. Major Seizures

With the intention of gaining a qualitative perspective on the ammunition seizures, we identified the days and police districts that summed more than 500 ammunitions seized and researched, through official channels of the State Public Security Secretary and other media sources, the involved actors and dynamics to identify the circumstances surrounding major seizures.

From a list of 92 possible cases of interest, it was possible to identify the dynamics of 42 major operations that, added together, seized 106,619 ammunition, or 19% of the total amount seized between January of 2014 and June of 2017. Analyzing that sample is the purpose of this section.

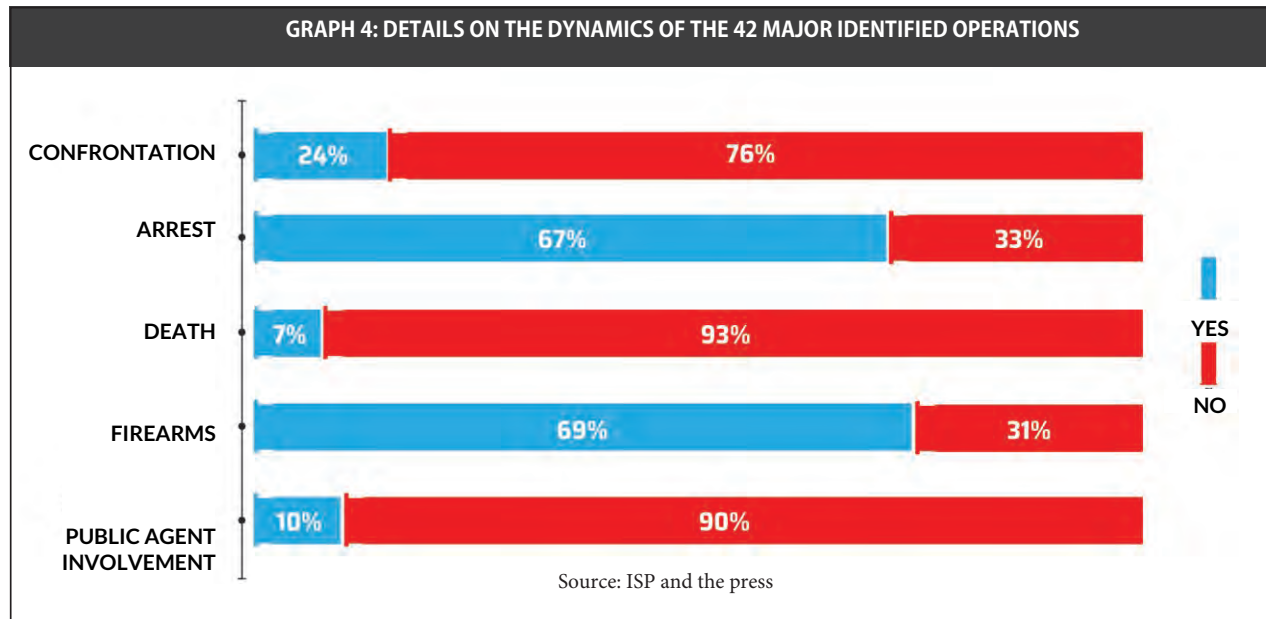
Almost two-thirds of major operations identified were conducted by the Military Police (PM in the Portuguese initials) (64%) and those achieved an average of 2,352 ammunition seized per operation. The highest average amount of ammunition seized per operation was the one attributed to the Federal Highway Police (PRF in the Portuguese initials): it averaged 8,091 ammunition seized in just two operations. The Civil Police (PC in the Portuguese initials) seized an average of 2,127 ammunition in 12 operations conducted by them. There was one operation conducted jointly between PC and PRF that seized 1,500 ammunition.

**GRAPHIC 3: INSTITUTION RESPONSIBLE FOR THE 42 MAJOR OPERATIONS IDENTIFIED**



Source: ISP and the press

The following graph contains some details about the dynamics of these 42 major operations. This analysis was based on press reports and information on official government websites. The chart shows the frequency of confrontations between police and suspects, the frequency of suspect arrests, the frequency of suspect deaths as a result of confrontations, the proportion of cases where there were firearm seizures along with ammunition, and cases in which police officers involvement in the criminal action was reported.



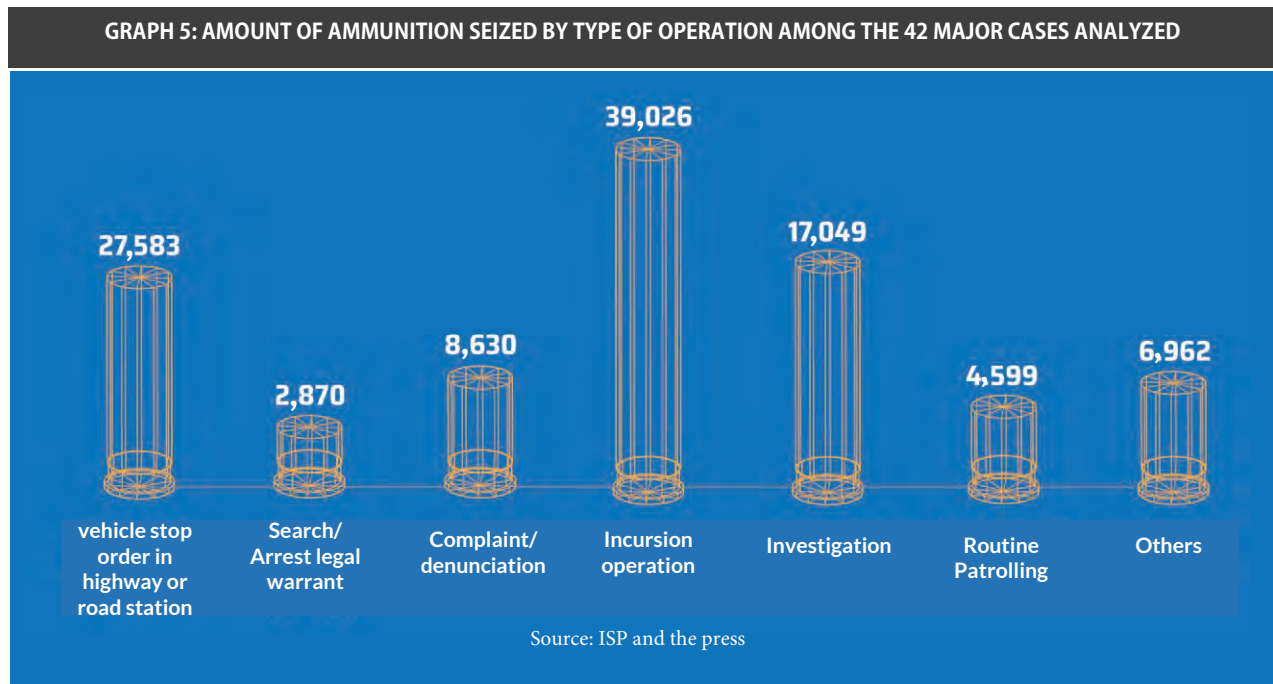
Among the 42 operations, 18 incursions within communities known as “favelas” stand out, they were responsible for the seizure of 37% of this sample ammunition. Sixteen of these incursions were conducted by the Military Police, eight had reported confrontations, one of which resulted in the deaths of two suspects. Ten operations resulted in arrests and sixteen had firearms seized along with ammunition.

Also worth highlighting are the approaches based in stop orders for vehicle drivers on roads and highways, ranking second in amount summing the seizure of 26% of the ammunition, although representing only seven operations of the 42 identified. The dynamics of these operations are more diverse, two of which were led by the Militar Policing Battalion in Tourist Areas, two by the Civil Police, two by the Federal Highway Police, and one by the PRF in conjunction with the PC. Of these operations, six resulted in arrests and none recorded confrontations or deaths.

Thirdly, six operations that were motivated by investigations seized 16% of the ammunition in the sample. Of these, three were conducted by the Civil Police and three by the Intelligence Sector of the Military Police. None recorded confrontations or deaths, but all resulted in arrests, and more than half resulted in the seizure of weapons along with ammunition.

As for the general trends in this sample of operations, 67% recorded arrests, 24% had confrontations between suspects and police forces, 7% (three cases) resulted in deaths, and 69% resulted in weapons seizures along with ammunition. Four cases (10%) had police involved in the criminal activity, with two cases suggesting that there may have been some diversion of institutional ammunition. Only one case reported in the press mentioned the brand of the ammunition, in this case, 3,492 units of 9mm caliber ammunition attributed to the Companhia Brasileira de Cartuchos.

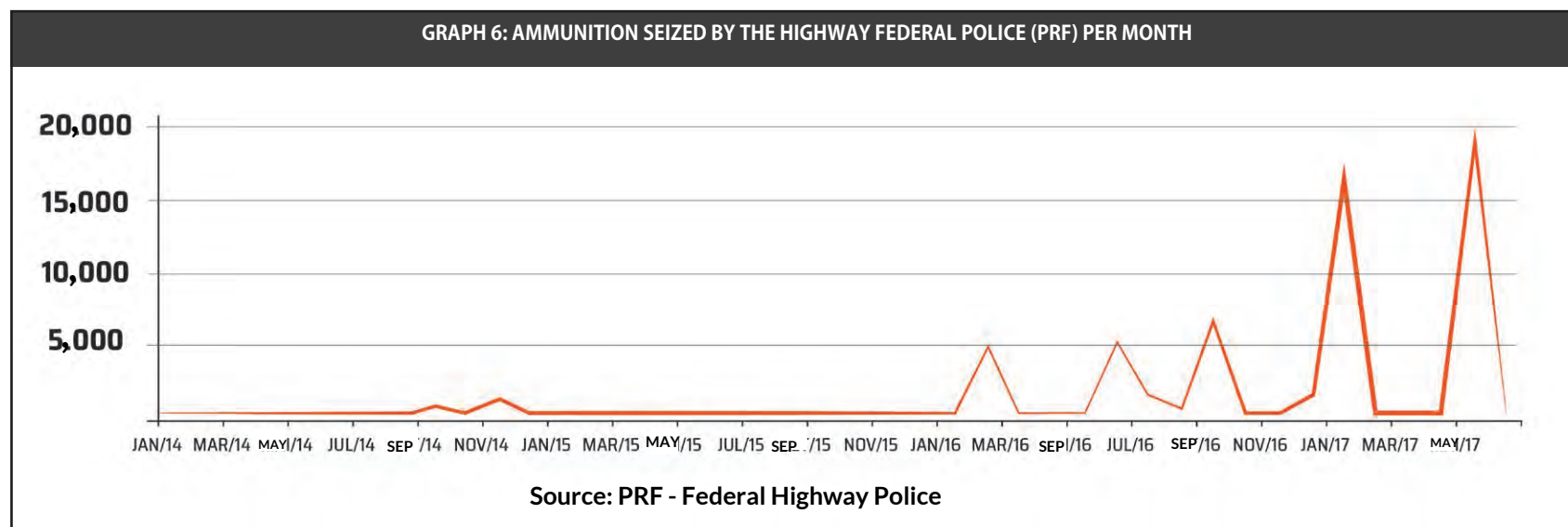
These data highlight the benefits of operations based on previous investigations or more assertive and safer approaches to individuals or small groups on roads and highways. None of these highlighted types of operations recorded confrontations or deaths, either of suspects, police officers or third parties.



Additionally, the Federal Highway Police (PRF) informed (through the Law of Access to Information<sup>16</sup>) that their officers seized a total of 58,944 ammunition between January of 2014 and June of 2017. The largest part of this amount, 59%, was seized in the months of January and May of 2017 (16,040 and 18,884 units, respectively), when two operations of approaching vehicles with stop orders on highways were responsible for the collection of about 15 thousand military grade caliber ammunition each. In the first case, the material was sent to a Civil Police station, and is therefore already counted in the seizures reported by the State Security Secretary. In the second case, the material was taken to one of the Federal Police investigative departments, and, for this reason, not being included in the other analyses of this report.

16. Request registered under the number 08850.003486/2017-95 in August 2017 and answered in September 2017

For the remainder of the analyzed period, the monthly seizures reported by the PRF were around a few dozen ammunition, having exceeded the thousand in just eight months. As one can see in the graph below, the importance of ammunition seized by the PRF in the state of Rio de Janeiro grew in the period. This coincides with the period in which Rio de Janeiro received a additional agents from this force and from the Força Nacional ("National Force") allocated on roads (both related to the extra security provided due to the Olympics), highlighting the importance of adequate personnel in the efficient oversight of highways.



As for the caliber of ammunition seized by the PRF, these details are only available for 2014 and 2015, and when added up, they represent only 6% of reported seizures by this body in the reported period. Even so, we can observe that 2,403 of the 3,439 ammunition of identified calibers (71%) are military grade. As for the two seizures that collected about 15 thousand ammunition each (in January and May of 2017), although we were not able to receive details about the calibers of ammunition via the official sources, we were able to obtain them through press reports that mentioned seizures of more than 30,000 military grade caliber ammunition.

Data was requested of seizures done by the Federal Police of Rio de Janeiro during the same period, but was not provided until the closure of this report.

<sup>17</sup> Available at "O Globo": <https://oglobo.globo.com/rio/policia-prende-casal-com-mais-de-15-mil-municoes-em-paraty-20809534> and at "Diário do Vale": (<http://diariodovale.com.br/tempo-real/prf-apreende-cerca-de-15-mil-municoes-na-via-dutra-em-pirai/>).

## Emblematic Cases of Seizures<sup>18</sup>:



### Bus inspection:

In December of 2016, a man was arrested on the Presidente Dutra Highway (BR-116), in the city of Pirai (in the south of the state) in a bus approach done by the PRF and PC. With the help of dogs, 1.5 thousand ammunition 9mm caliber were found in the suspect's luggage. According to the report, the accused left São Paulo and was going to deliver the package at the Morro do Adeus, in the northern part of the capital..



photo: Jornal hora H



photo: O Globo



### Galeão Airport

In June of 2017, the Civil Police seized, in the Galeão Airport, 60 rifles and 140 ammunition from an organized group that trafficked ammunition from the United States inside pool heaters. According to the police, this was the most important rifles seizure since 2007. Although in this seizure the number of ammunition had been small, according to prosecutors, this group alone had already managed to traffic almost 300 thousand ammunition into Rio from 2014 to 2017. The amount, they confirmed, is equivalent to 54% of the total amount seized by the police in the same period.



### International Traffic via land:

In January of 2017, the car of a couple was stopped by the Federal Highway Police on the Rio-Santos highway (BR-101), in the region of Paraty. The vehicle, which had left Rio Grande do Sul, was bringing more than 15 thousand ammunition that would be delivered at a shopping center in Irajá, in the northern part of Rio de Janeiro. Among the ammunition, there was .40, 9mm, and 7.62mm calibers, the latter from an Israeli manufacturer.



photo: @PCERJ/Twitter

18. More information on the cases can be found at O Dia: <https://goo.gl/NCmZqr>, O Globo: <https://goo.gl/xLFr1> and O Estado de S.Paulo: <https://goo.gl/UefZNh>.

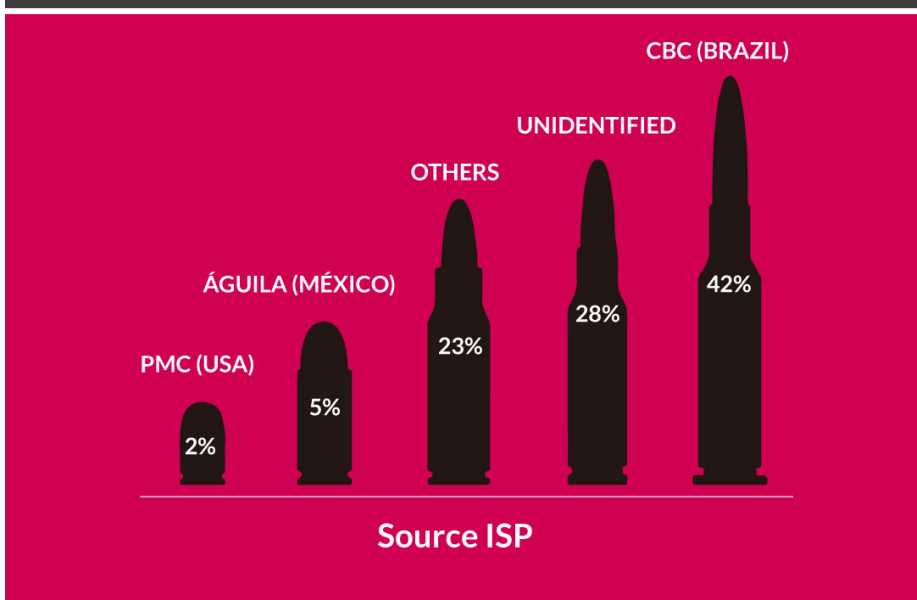
19. Public Prosecution Officer. Process nº 0504546-76.2017.4.02.5101 and police report nº 1.30.001.002385/2017-00. RJ. Available at: <http://www.mpf.mp.br/rj/sala-de-imprensa/docs/pr-rj/denuncia-traffic-internacional-de-armas/view>

# VI. Brazilian Ammunition and Diversion

Within the studied period, we only obtained ammunition brand data from 2014. The identification of this data is crucial to unveil the constantly changing supply chains of illegal ammunition, with the ultimate goal of designing strategies that are more effective to reduce the availability of ammunition on the illegal market.

Looking at the available data, we can see that it has quality challenges, as 28% of the ammunition had the brand informed as “not identified”.

Graphic 7: BRAND OF THE AMMUNITION SEIZED IN RIO DE JANEIRO IN 2014



As with firearms<sup>20</sup>, there is a significant presence of Brazilian ammunition seized in crimes. In 2014, 42% of ammunition seized was from the national brand Companhia Brasileira de Cartuchos ("Brazilian Catridge Company" known as CBC by the Portuguese initials).

The two other brands most present were the Mexican Águila (5%) and the North American PMC (2%). Their entry into the country must have been due to trafficking, once there is a de facto monopoly in Brazil, and as seen in some of the cases analyzed in the section "Major Seizures."

With almost half the amount seized, Brazilian ammunition should be subject to greater systemic screening and tracking to prevent it from being used in criminal actions and fuel more violence.

The national law determines that only the ammunition sold to public institutions need to have the lot mark on the casing, this important mechanism facilitates tracking and could be extended to all the ammunition marketed in Brazil to provide more information about the origins of ammunition diversions.

20. The report "De Onde Vêm as Armas do Crime Apreendidas no Sudeste?" analyzed seizures from 2014 and the national firearms summed 57,5% of the total (p. 17).



Some emblematic cases help provide clues about how the ammunition reached the hands of criminals and, worryingly, in many cases points to the participation of security agents.

In May 2017, the PM soldier Vinicius dos Santos Araújo, stationed at the Police Peacekeeping Unit of Vila Cruzeiro, was arrested by civilian police in the company of an arms dealer in a vehicle with almost 3,500 9mm ammunition made by the Brazilian Cartridge Company. According to the information provided by the press, the ammunition did not have a batch number, which meant that it wasn't diverted directly from the Military Police.

The Parliamentary Investigative Commission (CPI in the Portuguese initials) on Arms and Ammunition Trafficking held by the Legislative Assembly of the State of Rio de Janeiro, did not find massive registers of ammunition diversions from the state police (around 4 thousand units were reported as diverted in 10 years). Nonetheless, it has documented a significant number of vulnerabilities in the state control of its arms and ammunition. News about the involvement of security forces members in the diversion of arms and ammunition, however, are not rare in the press. The Federal Police, responsible for the oversight of private security firms, informed the CPI that those private companies reported having lost more than 8 thousand ammunition in a five year period (2011-2015).

Another emblematic case of the involvement of security forces members involved a sergeant of the Navy, in whose home the Civil Police identified an arsenal in November of 2014. A large quantity of pistol and rifle ammunition was seized, in addition to 10 rifles and two machine guns. The police suspect that the place was supplying drug dealers in the Morro do São Carlos area. In this seizure reports obtained by Instituto Sou da Paz, it is possible to identify at least four different calibers and four different nationalities (USA, Mexico, Thailand, and Brazil). The Brazilian ammunition summed 41% of them, including units with lot marks, indicating possible diversions from security forces. It is another case that demonstrates the relevance of national ammunition in the illegal market that supplies the organized crime in Rio de Janeiro.

21. More information at: <https://oglobo.globo.com/rio/pm-presos-apos-ser-flagrado-transportando-3500-municoes-na-zona-norte-21297829>.

22. Ammunition from the Military Police stolen or deviated within 2005-2015 (4.179). Source: PMRJ. Official letter CPI/Res 124/2015 N.O 033/2015

23. The CPI report describes problems in the implementation of an electronic military material system (SISMATBEL in Portuguese).

24. More information at <http://odia.ig.com.br/portal/rio/cabo-do-bope-presos-por-desvio-de-muni%C3%A7%C3%A3o-%C3%A9-expulso-da-corpora%C3%A7%C3%A3o-1.44847> and <http://g1.globo.com/rio-de-janeiro/noticia/2015/10/relatorio-da-pm-do-rj-aponta-extravio-de-610-armas-desde-2005.html>

25. More information at: <http://www1.folha.uol.com.br/cotidiano/2014/11/1554820-policia-apreende-arsenal-avaliado-em-r-1-milhao-na-casa-de-militar-no-rio.shtml>

# VII. Conclusion



This unprecedented report highlights the need for more attention from the Brazilian public agencies on the subject of ammunition control.

The most urgent issue, and under the control of Brazilian authorities, seems to be the need for more oversight on national production and trade, given the data on nationally produced ammunition seized on the illegal market.

More analysis is needed to verify whether this ammunition is being diverted within national territory or if it is being trafficked after exportation to other countries. The solution to this diversion also lies with the Brazilian Army, which is responsible to oversee both the production and sale processes within Brazil and to authorize exports.

The Army's Electronic System, for electronic control of ammunition sales to commercial establishments and from these establishments to final users, was developed and given to the Army by the Companhia Brasileira de Cartuchos years ago. In other words, the overseen company created and developed the very system that is designed to control their activities. This lasting and evident conflict of interests shows how little priority and attention this issue receives and how wide our gap is in the field of ammunition market control.

One way of undermining the power of the criminal factions that jeopardize Rio de Janeiro population is to interrupt or hinder their supply of ammunition. For this, there needs to be efficient and systematic profiling and tracking of both integral cartridges seized and of the used ammunition found in crime scenes.

For tracking to be more effective, it is essential to improve the current marking regulation. The current regulation determines that only ammunition sold to public agencies must be engraved with the lot code in each unit, allowing to identify the buyer. Nonetheless, At the time of this law's approval, the justification for not extending this policy to all ammunitions sold was due to technological limitations.

More than fifteen years later, it is time to evolve and increase the control over the manufacturing and sale of ammunition in Brazil, enabling a more efficient fight against illicit trafficking, besides also facilitating the work of investigators in the elucidation of homicides<sup>26</sup> and other crimes.

In moments of security crises, it is common the appeal for immediate solutions, such as the recurring demand for more severe criminal penalties, despite its inefficiency. It is necessary, however, to redirect this energy towards the prevention of armed violence, and it includes fighting large diversions and identifying the key responsables for the illegal supply chains.

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26. One example of cartridge use in crime elucidation was the murderer of the judge Patricia Acioly in 2011: <http://sao-paulo.estadao.com.br/noticias/geral,pms-participaram-da-execucao-de-juiza-no-rio-imp-,762325>

At the operational level, the amount seized seems to respond to the amount of effort invested. Facing the current high rates of victimization throughout the country and the unacceptable cases of “stray bullets,” it is up to the government to make strategic decisions that prioritize research and intelligence to identify and arrest large suppliers and interrupt major routes of illicit ammunition trafficking. This report highlights the geographical concentration in Rio de Janeiro where only 20 of 138 Police Districts account for 52% of seizures.

When aggregating other related data, as firearms seizures, occurrences of shootings, and victims of other lethal violence, the concentration is even more significant. Therefore, we need to prioritize these areas, where the return on investments might be multiplied, both in police productivity (through informed and non-violent seizures) and in social assistance and protection for its vulnerable community.

Major seizures operations within communities, even if they eventually result in significant quantities seized, need to be re-evaluated for the tragic costs that tends to accompany them, such as shootings and deaths of civilians, suspects, and police officers. Contrasting with them, the improvement of productivity in highway seizures coincides with the increase in the available staff of the National Highway Police Force in the state, giving an example of actions with significant effects and lower lethality.

We hope this analysis contributes to improving the public debate and the public security in the Rio de Janeiro state and Brazil as a whole, allowing new practices that can build more peaceful periods to our population.

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# IX. Methodological Annex

## Data Source:

This study collected its data at the website of the Instituto de Segurança Pública do Rio de Janeiro (ISP), an agency interrelated to the State Secretariat of Public Security of the Government of Rio de Janeiro.

The analysis were based in the interactive section on “Weapons, Explosive Artifacts, and Ammunition” available at <http://www.isp.rj.gov.br>. Those data derive from the official Occurrence Records (RO in the Portuguese initials) made by the Civil Police regarding the seizure of ammunition. Because it is public data, no formal inquiry or request for authorization was needed. Nonetheless, we requested and received instructions from the staff of the Instituto de Segurança Pública on how best to extract the data.

With this procedure, it was possible to extract 35,185 lines of data referring to ammunition seizures from 1/1/2014 to 6/30/2017.

## Data Description:

In each line, it is possible to read information about the daily seizures made by each Police District in units per caliber. Thus, if one operation has seized four different types of calibers on this database will be registered in four lines.

## Definitions:

The term “ammunition” used in this report refers to intact cartridges, excluding empty cases and projectiles, as defined in R-105 (decree 3.665/2000 art. 3, LXIV:

*Art. 3 For the purpose of this rule and its proper application, the following definitions are adopted:*

*LXIV - Ammunition: complete artifact, ready to load and fire a weapon, the desired effect of which can be: destruction, illumination or concealment of the target; moral effect on personnel; exercise; management; other special effects;*

## Calibers and Uses:

The Brazilian classification of restricted (military grade) or “permitted for civilian” weapons and calibers mentioned in this report was into force from 2003 to 2019, having suffered significant changes in 2019. This classification is made by the Army through the R-105 document.

Until 2019, this classification had as its main parameter to consider ammunition of restricted use (military grade) the ones used in weapons equal or similar to those used by military and security forces (including any kind of automatic weapon or weapons that produce bursts of shots). Additionally, classifications of caliber and types of weapons are made based on the energy output of the ammunition in Joules. To facilitate the analysis, we grouped similar calibers, for example, the 7.62mm and .308, as well as the 5.56mm and .223.

Dr. Domingos Tocchetto, explains that the classification of calibers coexists with three main systems, the American, expressed in hundredths of an inch (i.e., .22 and .32), the English, using thousands of an inch (i.e., .380 and .357), and the European, using millimeters (i.e., 7.62mm and 9mm). The caliber of flat barrel firearms, as shotguns, in general, is expressed in a fourth system, called a gauge, calculated by the number of spherical lead bullets based on the English pound (1lb equals 453.8 grams). The 12 gauge shotgun is an example of this fourth caliber system.

Additionally, we created categories to classify the seizures, as shown below. Next to the categories, we present brief descriptions of what we included in it.

### Brands:

As mentioned in this report, we only obtained data about the ammunition brand or manufacturer for the seizures made in 2014 (139,729 units, or 25% of the total seized in the studied period). As for the 2015-2017 period, the information still hadn't been systematized by ISP in September 2017. For that reason, the data was not included in this report.

### Database of Major Seizures:

For the section on major seizures, the data was filtered to highlight lines with seizures of 500 units or more, resulting in 92 data lines that guided our search for dynamics information on news outlets and official agencies.

In this search, we obtained details on 42 of those operations. From this sample, we prioritized the following information:

- Who is responsible for the seizure?
- Was there concomitant seizure of weapons?
- Were there any confrontations?
- Were there any lethal victims?
- Were arrests made?
- Was there involvement from public agents in the crime?
- What was the brand of the ammunition?

OPERATIONS CATEGORIES	
Category	Definition
Complaint/denunciation	The agents arrived at the seized material through a complaint, without previous planning
Others	Specific case where agents accidentally find ammunition
Incursion operation	Seizures made by agents during operations aimed at fighting non specified illegal activities (e.g., drug trafficking) usually in poor communities
Investigation	Agents seizing ammunition as a result of a prior investigation
Search/Arrest legal warrant	Operations triggered after a legal mandate resulting from consistent prior investigation and, generally, having as main objective arrests or search and seizures warrants
Routine patrolling	Police decide to approach a suspicious individual and find ammunition
Road/Highway stop order	Stop orders or interception of a vehicles resulting in the seizure of illicit material with the occupants, either by road or highway

In this chapter, we also analyzed a database of ammunition seizures by the Federal highway Police accessed through the Law of Information Access (request number 08850.003486/2017-95).

This database had information from the same period as the ISP database, that is, from January 2014 to June 2017, with a total of 58,944 ammunition.

Unfortunately, the detail of caliber in this database was available for only 6% of seizures.

## Fogo Cruzado App Database

Instituto Sou da Paz received the database of the Fogo Cruzado app <http://fogocruzado.org.br> defined as:

(<http://fogocruzado.org.br>),

*A digital collaborative platform with the goal of recording incidents of shootings and the prevalence of armed violence in the metropolitan region of Rio de Janeiro through an app for mobile technology. The app and the resulting collaborative map "Fogo Cruzado" was developed with Amnesty International as part of the "A violência não faz parte desse jogo!" ("Violence is not a part of this game!") campaign, launched a month before "Rio 2016 Olympics" to demand actions to prevent human rights violations in public security operations in Rio de Janeiro. Since then, residents in the city and metropolitan area of Rio have a tool to give visibility to the routine shootings and armed violence with which they live. The idea for the app came from independent surveys that accounted for shootings in Rio de Janeiro in early 2016, through the information available in the press, police reports and social media and became a tool for the population most affected by violence, in a secure and anonymous way, to register and inform themselves on the shootings occurrences.*

The database was used as a complementary source given the scarcity of official data about shootings and firearm discharges cases and territorial distribution. As it was launched in mid-2016, the app only provides data from July 2016 to July 2017, which summed 5,298 shootings or firearm discharges in the metropolitan region of Rio de Janeiro.



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