



The irrisory surveillance of sound pollution in the Federal District of Brazil

Paulo Afonso Cavichioli Carmona¹ Roberlei José Resende Belinati²

¹ Post-doctorate in Urban Constitutional Law. Universidade del Salento – UNISALENTO. Brasília, DF – Brazil. paulo.carmona@ceub.edu.br

² Master of law. Centro Universitário de Brasília - UniCEUB. Brasília, DF – Brazil. roberlei.belinati@belinatiadvocacia.com.br

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Abstract

Introduction: Noise pollution is considered the second largest source of pollution in urban centers, although it is still underestimated by the Government. In Europe, on the other hand, ambitious discussions, research and public policies in the face of noise are already a reality.

Objective of the Study: This paper presents the negligible inspection of noise pollution in which it is carried out in the Federal District.

Methodology/Approach: It was based on the systematic analysis of data obtained through the Federal District's Law on Access to Information, District Law n. 4,990/2012. Data were requested from the Federal District Military Police – PMDF and from the Brasília Environmental Institute – IBRAM.

Results and discussion: As a result, it was seen that, in the 2018/2019 biennium, dial 190 registered 72,838 complaints of “automotive loud sound” or 9,289 calls registered as “commercial loud sound”, despite, in the same period, IBRAM having made only 2,952 inspections or drawn up only 801 tax assessments. In this area, enter into the discussion about the possibility of PMDF, an integrating organ of SISNAMA, to actively participate in the inspection and assessment of noise pollution, an activity not performed by the corporation.

Keywords: Noise pollution. IBRAM. PMDF. Federal District. Noise

A fiscalização irrisória da poluição sonora no Distrito Federal

Resumo

Introdução: A poluição sonora é considerada a segunda maior fonte de poluição nos centros urbanos, nada obstante ainda ser subestimada pelo Poder Público. Na Europa, por outro lado, discussões, pesquisas e políticas públicas ambiciosas em face do ruído já são uma realidade.

Objetivo do estudo: O presente trabalho apresenta a fiscalização irrisória da poluição sonora, tal como é realizada no Distrito Federal.

Metodologia/abordagem: Baseou-se na análise sistemática de dados obtidos por meio da lei de acesso à informação do Distrito Federal, Lei Distrital n. 4.990/2012. Foram solicitados dados da Polícia Militar do Distrito Federal – PMDF e do Instituto Brasília Ambiental – IBRAM.

Resultados e discussão: Como resultado, vislumbrou-se que, no biênio 2018/2019, o disque 190 registrou 72.838 reclamações de “som alto automotivo” ou 9.289 chamadas registradas como “som alto comercial”, em que pese, no mesmo período, o IBRAM ter realizado apenas 2.952 fiscalizações ou lavrado tão somente 801 autos de infração. Nessa seara, adentra-se na discussão sobre a possibilidade da PMDF, órgão integrador do SISNAMA, participar ativamente na fiscalização e atuação da poluição sonora, atividade não realizada pela corporação.

Palavras-chave: Poluição sonora. IBRAM. PMDF. Distrito Federal. Ruído

Supervisión irrisorial de polución sonora en el Distrito Federal

Resumen

Introducción: La polución sonora se considera la segunda fuente de contaminación más importante en los centros urbanos, aunque el Gobierno todavía la subestima. En Europa, en cambio, las





discusiones, la investigación y las políticas públicas ambiciosas frente al ruido ya son una realidad.

Objetivo del estudio: El presente trabajo presenta la insignificante inspección de la polución sonora, tal y como se realiza en el Distrito Federal.

Metodología/Enfoque: Se basó en el análisis sistemático de los datos obtenidos a través de la ley de acceso a la información del Distrito Federal, Ley de Distrito n. 4.990 / 2012. Los datos fueron solicitados a la Policía Militar del Distrito Federal - PMDF y al Instituto Ambiental de Brasilia - IBRAM.

Resultados y discusión: Como resultado, se observó que, en el bienio 2018/2019, el dial 190 registró 72.838 denuncias de "ruido fuerte automotriz" o 9.289 llamadas registradas como "ruido fuerte comercial", a pesar de que en el mismo período el IBRAM solo ha realizado 2.952 inspecciones o redactar solo 801 liquidaciones fiscales. En este ámbito, entramos en la discusión sobre la posibilidad de que PMDF, órgano integrador del SISNAMA, participe activamente en la inspección y evaluación de la contaminación acústica, actividad no realizada por la corporación.

Palabras claves: Polución sonora. IBRAM. PMDF. Distrito Federal. ruido

1 Introduction

Noise pollution, perhaps not with that name, nor with the density in which the matter is debated today, has been fought for longer than one can imagine. Since the independence of Brazil, normative acts have been issued with the aim of ordering and limiting the sound pressure in the atmosphere.

As an example, in 1824, the Internal Regiment of the Imperial Library was approved, which stipulated that the patrons should keep the greatest respect, silence and peace in this environment. The bylaws forbade speaking out loud and holding scientific disputes inside the library. Even in Brazilian Empire, there were some public disciplinary acts against noise, such as the Legislative Power Act of August 27, 1828, which stated that the Council's deliberations could have spectators, as long as they remained silent, under penalty of expulsion. Law of October 1, 1828, is also interesting, as it gave shape to the Municipal Chambers, in which title III, art. 66, § 4, of the law said that the Chamber had police power and that it could deal with the voices in the streets in hours of silence, in addition to insults and obscenities against public morals. Still in the historical context of the Imperial Period, Decision nº 400/1831, which dealt with public spectacles, is curious. According to this decision, no one inside the theater could speak loud or shout at anyone, except for the words: "bravo", "caput" and "outside", under penalty of the judge imposing silence, imposing a fine on violators from 6 to 10,000 and decree from 2 to 6 days in jail.

During the Brazilian Old Republic, Expedited Act nº 474, of June 14, 1912, prohibited coachmen and carters from cracking whips. The aforementioned act gained publicity when it was announced in the newspaper *A Gazeta de São Paulo*, in issue 02378, in 1914.

In approximately 200 years of the independence of Brazil, problems, litigation and effects of excessive noise are growing in an exponential way. This occurs since it is an issue closely correlated to the urbanization and the expansion of cities, added to the absence of planning. Thus, urban policies tend to increase noise pollution, which is an environmental problem in modern urban society.



According to the Brazilian Institute of Geography and Statistics (IBGE), in the last 100 years, Brazil's population has increased seven times (IBGE, 1920). In 1920, Brazil had 30,635,605 inhabitants, while the last population estimate, in 2020, was 212,358,000 (IBGE, 2020). It is important to mention that, at the beginning of the 20th century, Brazil had an average of 10% of its population in urban areas. Today, this percentage reaches 86% and, probably, with the next census to be carried out, this number will have reached the 90% mark. It is true that there is no need to collect centenary data to demonstrate the exponential growth of the urban population and, as a consequence, the increase in noise pollution. In Federal District, for example, according to data from the Traffic Department of the Federal District (DETRAN/DF), from 2008 to 2019, the number of registered vehicles fleet increased by more than 75%, from 1,046,638 to 1,840,659 vehicles (DETRAN/DF, 2019).

In 2014, noise pollution had already affected 10% of the world's population (PRO-ACÚSTICA, 2014), and, according to the World Health Organization (WHO), by 2050 one out of ten people will have hearing loss, that is, 900 million people. In addition, WHO warns that approximately 50% of young people between 12 and 35 years old, a number equivalent to 1.1 billion people, are at risk of having hearing loss due to long exposure to harmful noise, especially emanating from the city's roads. (WHO-ITU, 2019). Currently, it is estimated that 5% of the world population, or 466 million people, among which 34 million are children, have disabling hearing loss, which directly impacts their quality of life. According to WHO, most of them live in poor or developing countries. Half of hearing loss cases, however, could be avoided through public policies (WHO-ITU, 2019). As for the economic effects, it is estimated that the lack of treatment for disabling hearing loss causes an annual global loss of 750 billion US dollars (WHO, 2018).

In Brazil, public policies against noise pollution are still not sufficient. Until 2020, Sao Paulo municipality, which is one of the noisiest cities in the world, did not have an essential instrument to combat noise pollution: noise maps. In 2016, however, Law 16,499 was published in Sao Paulo, which provided for the obligation for the Executive Branch to draw up the urban noise map; this law was regulated just 3 years later, through Decree No. 58.737/2019. The noise map has not been designed yet, though.

Pursuant to Law No. 16,499/2016, urban noise map is "a decision support tool for urban planning and ordering aiming noise management in the city, with identification of priority areas for noise reduction and preservation of areas with appropriate sound levels". In this area, the noise map enables, for example, a buyer interested in a property to become aware of whether the sound pressure in that neighborhood is adequate or high. It provides more information that is essential for those who will spend most part of their time in that area. Noise maps also allow the region administrator to authorize or not new economic activity in a given location where noise pollution is already high compared to establishments that are already in the site. Maps





also enable to carry out noise reduction plans to adapt the acoustic environment if it is above what it is allowed for the site.

In Federal District, there is no specific law that provides for the obligation to draw up a noise map. However, Brasilia Environmental Institute (IBRAM) provided a noise map designed in 2013 (GARAVELLI, 2013), focusing on the analysis of automotive noise, or the environmental noise generated by vehicular traffic in Brasília, limited to central axes of the famous Brasilia figure, which resembles an airplane.

Whether in Sao Paulo, in Federal District, or even in Brazil, there are still no detailed studies on noise pollution. Without noise maps, public managers are not aware of the critical areas that deserve attention and intervention. Without noise maps, therefore, an attempt to reduce noise overshoot is through inspection. In other words, there are no ambitious public policies in Brazil aimed at controlling and combating noise pollution.

Regarding noise pollution harmful effects, people sensitive to noise tend to have more sleep disturbances and negative psychological effects (STANSFELD, 1992; MARKS and GRIEFAHN, 2007). Pregnant women are also affected, as rest is often more disrupted; moreover, noise can cause premature births and newborns underweight (WHO Europe, 2009; NIEUWENHUIJSEN et al, 2017). Socioeconomically disadvantaged are frequently exposed to higher levels of noise, as they usually live in simpler houses and in more degraded areas, with fewer silent spaces (EEA, 2018; DREGER et al., 2019; WHO, 2019).

The WHO Europe office states that at least 100 million Europeans are affected by automotive traffic noise. In Western Europe, between 1.0 to 1.6 million years of health life are lost as a result of noise pollution produced by vehicles, among which 61,000 years are lost to ischemic heart disease, 45,000 years to cognitive impairment in children, 903,000 years for sleep disorders, 22,000 years for tinnitus, and 587,000 years for annoyance. The study emphasizes that no data was collected in the central and eastern part of the European continent. All these numbers made noise pollution the second largest in terms of harmful effects, behind air pollution. (WHO Europe, 2018)

The 2018 guideline establishes several recommendations, among which the most impressive are those on average exposure to noise from vehicle traffic, noise that most affects Europeans. This type of pressure should be below 53 dB(A), since above that, the sound pressure starts to cause harmful effects. For nocturnal exposure, it is recommended that the noise exposure should be below 45 dB(A), because, above this pressure, there are studies that demonstrate sleep impairment. (WHO, 2018)

In this context, when comparing research and concerns of specialists from European continent, it is clear that Brazil is still behind when it comes to studies on noise pollution control. While European continent has more frequently updated and published works in the last 10 years, covering numerous countries in Western Europe, little has been done in Brazil.



The inspection of noise pollution in Federal District depends on IBRAM actions. Law No. 3,984/2007 created IBRAM, an autarchic entity with legal personality under public law, with administrative, financial and patrimonial autonomy, linked to the State Secretariat for Urban Development and Environment (SEMA). Despite the link with SEMA, the president of IBRAM is granted the status of Secretary of State, pursuant to Decree No. 30,565/2009. IBRAM integrates the National Environment System (SISNAMA), according to art. 6 of Law No. 6,938/1981, and is also part of the Water Resources Management System, established by Law No. 9.433/1997.

The purpose of this article is to confirm the following premise: "The inspection of noise pollution in Federal District is negligible given the number of registered complaints". The method used to achieve the objective was through the use of the Federal District's Access to Information Law, the District Law No. 4990/2012. The study collected data from IBRAM and PMDF between 2017 and 2020.

It is worth noting that there is no consensus on the concept of noise pollution. The adopted concept for this paper was the one set out in District Law No. 4,092/2008: "any sound emission that, directly or indirectly, is offensive or harmful to health, safety and well-being of the community or violates the provisions of this law". Furthermore, art. 54 of Law No. 9,605/1998, adds that: "Cause pollution of any nature at such levels that result or may result in damage to human health, or that cause the death of animals or the significant destruction of flora (...)". Regarding the concept adopted by the doctrine, this study is according to Sirvinskas, to whom noise pollution: "(...) is the emission of unpleasant sounds or noises that, exceeding legal levels and continuously, can cause, in a given period of time, harm to human health and community and animals well-being, as well as the."

Therefore, noise pollution is considered the emission of sounds or noises that, when emitted continuously, can harm human health or the well-being of the community or animals. The harmfulness of sound or noise is presumed if they exceed limits established by law.

In this research, it was not possible to scientifically assess whether every complaint against noise registered in PMDF referred to noise or sounds that exceeded the maximum noise levels allowed by law. However, noise was presumed to be the cause of noise pollution due to the fact that the plaintiff was willing to take his time to file a complaint with PMDF. This circumstance was taken as relevant because, if the noise was moderate or of short duration, most likely, the plaintiff would not formalize a complaint.

To avoid any discomfort, the term "rest disturbance" can be used as an alternative to the term "noise pollution", since disturbing of silence confirmation is not limited to scientific evidences. Noise pollution is an environmental crime, while disturbance of silence is a criminal misdemeanor. In short, the first is harmful to human health; the second, is configured in any of these circumstances: the disturbance of someone, work or peace of mind with shouting,





noise, exercising a noisy profession, overusing sound instruments or acoustic signals or causing or not preventing noise produced by an under guarded animal (art. 42 of the Decree-Law No. 3.688/1941).

Then, the data obtained from PMDF was analyzed with those received by IBRAM. In this district autarchy, six administrative requests were filed with the scope of acquiring information on the total number of inspections carried out, as well as the number of notices of infractions issued. Under the numbers 00480000180202026, 00393000064202096, 00393000054202051, 00391000176202067, 00391000135202071 and 00391000124202091, from January 2017 to August 2020, a total of 1,178 infraction notices were drawn up, as well as 4,379 inspections against noise pollution were carried out in that period. Thus, there was an average of 27 infraction notices issued per month and 100 monthly inspections.

It is obvious that the year 2020 was atypical, due to the pandemic, which triggered the closure of businesses, which represent a large part of the assessment due to noise pollution. Thus, it is worth presenting statistics to exclude the year 2020, in order to consider the numbers in a period of commerce normality.

Furthermore, from January 2017 to December 2019, that is, in 36 months, IBRAM issued 1,076 notices of infraction against noise pollution, in the entire territory of Federal District, which means an average of 30 per month, or one notice of infraction per day. In the same triennium, 3,600 inspections were carried out, which is equivalent to 100 inspections per month, or 10 inspections every 3 days.

Taking this information about the limit of IBRAM's action in combating noise pollution in Federal District into account, the arguments that pursue the objective of this article will be developed.

2 Military Police of Federal District

PMDF is structured in General Command and support and execution bodies, according to art. 1, of Decree No. 41,167/2020. The aforementioned decree regulates art. 48, II, of Law 6,450/1977.

Unlike other Brazilian states, the Union is responsible for organizing and maintaining PMDF (art. 21, XIV, of CF/88), and the Federal Law is responsible for providing for its use by Federal District (art. 32, § 4, of CF/88). Law No. 6,450/1977 provides that PMDF is a permanent institution essential to the “public security of Federal District and also auxiliary and reserve forces of the Army in cases of conscription or mobilization (...)”. Despite being maintained by the Union, it is subordinate to Federal District. Furthermore, under the terms of the Organic Law of Federal District (LODF), it is the exclusive responsibility of Federal District



governor to exercise the superior command of PMDF, promote its officers and appoint the General Commanders (art. 100).

Among the competences of PMDF related to noise pollution control and combat, it is interesting to mention the first three items of art. 2, of Law 6.450/1977:

- I – carry out with exclusivity, with the exception of the specific missions of the Armed Forces, ostensive policing, in uniform, planned by the competent authority, in order to ensure compliance with the Law, maintenance of public order and the exercise of constituted powers;
- II – act in a preventive manner, as a deterrent force, in specific places or areas, where order disruption is presumed possible;
- III – act in a repressive manner, in case of disturbance of order, preceding the possible use of the Armed Forces;

Noise pollution is capable of disrupting order. Many of the demands related to disturbing of the peace usually start peacefully and end violently. Every week, violence against noise pollution is reported, as tempers tend to get out of control when peace of mind or tranquility is deprived, which usually affects, in the short term, sleep deprivation (insomnia), one of the effects of the polluting agent (noise).

Furthermore, it is PMDF responsibility to ensure compliance with the law. Therefore, if noise pollution is an environmental crime or, at the very least, a criminal misdemeanor, it is legitimate to use PMDF as an instrument to control and combat noise pollution. PMDF has a specialized battalion for environmental policing, the Environmental Military Police Battalion (art. 39, I, of Decree No. 41167/2020), and it also acts as a sectional body that integrates SISNAMA, pursuant to art. 6, V, of Law 6,938/1981 (art. 57, of the aforementioned decree).

In light of the above, the competence of PMDF in carrying out the control and inspection of noise pollution is evident. PMDF has a specialized battalion in the corporation, and is also a member of SISNAMA, as an integral body of responsibility for executing programs and projects, in addition to controlling and inspecting noise pollution, due to the environmental degradation it causes.

In the next topics, practical issues of PMDF in control and inspection of noise pollution are presented. The practical view is exposed after an on-site visit to the Military Police Operations Center (COPOM), as well as through data received by the institution.

3 On-site survey of Federal District Military Police Operations Center

Two on-site surveys were carried out at COPOM. The first was on October 15, 2020 and the second was on November 23, 2020. The field research proved necessary after the request for information from the PMDF on the fight against noise pollution carried out by the institution. Some of the requested information, however, was considered sensitive, and the corporation, in respect of ethics, informed that it could not meet all of them.





The official Captain Alberto Henrique Lopes Ramos, hereinafter referred to as Captain Lopes, was responsible for answering the requests for information, and guided a visit to the Police 190 Call Center, located at COPOM. It is worth noting that Captain Lopes adopted all safety measures and sanitary protocols, as the research was carried out during the pandemic. He also respected the confidentiality of sensitive data so that there was no harm to the security of the corporation. However, such assurance measures in no way affected the success of the visit, nor did they harm the perception of a certain culture of PMDF when it answers calls for disturbing the peace.

The room Police 190 Call Center, with an average capacity of 20 agents, with two supervisors, was visited. During the pandemic, due to health safety protocol the number of agents was reduced by half,

In the system used to respond to emergency calls, there are functions to record the call as "missed call", "completed call", "prank calls", among others. The officer receives the call, records the occurrence, and then it goes to other rooms, the room of dispatchers, who are responsible for activating/forwarding a vehicle to the location of the plaintiff if necessary. This system can tell how many calls were made and how many occurrences were formalized. There is this differentiation, since not every connection becomes an occurrence, because it may fall or, for any other reason, is not completed. Captain Lopes clarified that not every call received is an emergency, as some are prank calls, others are informational (such as asking about the payment date) and others should be addressed to other bodies.

Captain Lopes was asked if the system has a pre-defined keyword to track calls concerning noise pollution, and he said that there is more than one: "disruption of peace and work"; "disturbance of tranquility"; "under investigation"; "loud automotive sound"; "loud sound in residential areas"; "loud sound in business areas"; "way in fact"; "disorder of order"; and "preventive health measure infringement". Captain Lopes informed that the system allows the call to be forwarded to other agencies that have the same system, such as IBRAM, DETRAN, Mobile Emergency Care Service (SAMU) and firefighters. Also, some calls registered as "loud sound in business areas" may be forwarded to IBRAM.

During the visit to COPOM, from the 1st to the 15th of October 2020, the number of calls/demands was provided considering some of the keywords previously outlined. From a total of 4,026 calls/demands in a 15-day period, there were 304 calls that alluded to "disruption of peace and work". With regard to "disruption of tranquility", 860 calls; "loud automotive sound", 1,853; "loud sound in business areas", 230; "loud sound in residential areas", 779. Captain Lopes, however, warns that not all 4,026 calls refer to noise pollution, especially with regard to the numbers of the keyword "disruption of tranquility", as it encompasses other situations, such as complaints related to disruptions committed by homeless people.



During the visit, another officer interested in the matter declared that "it would be good if the police could seize the sound equipment and perhaps arrest the person responsible for disturbing the peace in the act, even to set the example and warn the population that it cannot be done". However, he soon added that the police officer could not proceed in this way, as it would be a misdemeanor. In response, the agent was told that, on certain occasions, noise can cause such harm to human beings, that it would elevate the act from a mere misdemeanor to an environmental crime. And in that case, there is the possibility of seizure of equipment and imprisonment.

The agent then replied that this vision of disturbing of the peace as an environmental crime should be shared with police authorities, prosecutors and judges. As if PMDF were to carry out an arrest in flagrante delicto for an environmental crime, and the police authority understood that it was a mere misdemeanor and could not arrest in the act, he warned: "Imagine the problem to PMDF!". Finally, Captain Lopes added that, in the demands of disturbing the peace, not every victim agrees to sign the Detailed Term of Occurrence (TCO), as they might not want to identify themselves.

The collected data will be presented in the next topic. However, after the first on-site visit, Captain Lopes requested personal attendance, in order to explain the spreadsheet forwarded. Thus, on November 23, 2020, another visit to COPOM was carried out. In that occasion, he explained that, with regard to the tab "Total calls – General", the number also includes calls not answered or not completed for some reason. He pointed out that when someone calls Police 190 Call Center, the call is placed on a trunk and calls are routed to the operators. If someone calls but hangs up, that number is also computed as the grand total of calls.

Another clarification was that on the "Types – month and year" tab, the numbers provided are of "final nature", that is, they have already been filtered. He clarified that, when an operator receives a call, he fills in the initial nature based on what he hears from the citizen. Then the call goes to the dispatcher. This dispatcher can readjust the nature assigned by the first dispatcher. Thus, the number shown in the spreadsheet has already passed through the dispatcher's filter. This procedure was adopted to try to present the numbers as close as possible to reality.

Finally, Captain Lopes informed that, due to the pandemic, much of what they previously called "disruption of peace", is now named "a preventive sanitary measure violation". Crowds with music and confusions during the pandemic came to be classified as "preventive health measure infringements".

The spreadsheet was submitted, edited and updated by PMDF until November 10th, 2020. The questions and answers, as well as the numbers, are the following.



4 Questions and answers related to information requests

The questions and answers asked to and received by PMDF will be presented as follows, in this topic; however, data analysis will be carried out in the next topic in order to avoid possible confusion between PMDF's response and the analysis itself.

1 - How many calls did PMDF receive through the Police 190 Call Center number in 2019 and in 2020? 1.1 - Among these calls, would there be an average number or percentage of how many actually represented an emergency? (Excluding prank calls, incomplete calls, etc.) 1.2 - Is there an average of how many calls PMDF received in 2019, per month, and in 2020, per month, that dealt with disturbing the peace?

1. Data exposed in the spreadsheet (Table 1). 1.1. System does not provide such information. 1.2. Data exposed in the spreadsheet (Table 1).

2 - In the recording call system used by PMDF, what are the most common keywords to record calls that allude to disturbing of the peace due to noise, whatever its source? 2.1 - Would the keywords include: "disturbing of the peace and work", "disturbing of tranquility", "loud automotive noise", "loud noise in residential areas", "loud noise in business areas"? 2.2 - Is there any other keyword?

2. Disturbing of work or rest of others; disturbing of tranquility; loud automotive sound; loud sound in residential areas; loud sound in business areas; and during the pandemic, crowd reports, infraction of preventive sanitary measure. 2.1. Yes. 2.2. No.

3 - How many occurrences were recorded by PMDF due to calls alluding to disturbing of the peace (due to noise caused by mechanical sound, live music, or any other source) using the keywords of the previous topic, between the periods from January to December 2019 and between January and October 2020? 3.1 - Would it be able to provide the numbers by separating them by month and by their respective keywords? 3.2 - Is there any margin of error, such as how many of these occurrences actually refer to disturbing of the peace due to noise, whatever source it may be? 3.3 - How many of these occurrences were responded by a dispatching vehicle to the claimer's location?

3. Data exposed in the spreadsheet (Table1). 3.1. Provided. 3.2. No; such information is still being processed by PMDF quality section, with no expectation of completion this year. 3.3. Information being processed by the quality sector, with no expectation of completion this year.

4 - Does PMDF usually send vehicles to check on every occurrence related to disturbing of the peace? 4.1 – Considering limitations related to current staff number, what are the most common hypotheses in which PMDF cannot send a vehicle to claimer's location? 4.2 - Does PMDF usually send a vehicle when the disturbing of the peace occurs inside condominiums?



4. Yes. 4.1. When responding to emergencies the following situations are considered a priority: the ones involving a risk to citizen's physical integrity, violence against women, domestic violence, homicides, robbery, incidents involving minors. 4.2. Yes; however, specific legislation and regulations concerning occurrences within housing units must be checked.

5 - Does PMDF have a decibel meter? 5.1 – Nowadays, can PMDF give notice and fine anyone who disturbing of the peace due to loud sound use, whatever the source, in a residential or commercial area? 5.2 - Can PMDF fine the driver of a vehicle that listens to loud sound in the car? 5.3 - How many fines did PMDF apply due to loud automotive sound between January and December 2019 and between January and October 2020? 5.4 - Does PMDF believe that if they had the power to give notice and fine anyone who disturbed the peace of mind in a residential and commercial area, it would give more effective protection to the right to peace? 5.5 - Does PMDF have access to any police reports from other states related to noise polluters' notice giving and fining, and whether or not this possibility has increased the peace protecting effectiveness?

5. No. 5.1. Loud automotive sound, through an agreement with the executive traffic agency, DETRAN/DF, based on CONTRAN resolution No. 624/2016. 5.2. Assessment in accordance with CONTRAN resolution No. 624/2016. 5.3. There is no record of this information due to lack of control/catalog of data by operations center. 5.4. There is no record of this information, as this statement can only be answered by the corporation highest authority. 5.5. Answer to be sought from the highest authority of PMDF.

6 - Is PMDF used to drawing up the Detailed Term of Occurrence (DTO) for crimes with less offensive potential? 6.1 - Is there a total number of DTOs drawn up by PMDF between 2019 and 2020? 6.2 - Is there any statistics of how many of these DTOs corresponded to disturbing of the peace?

6. DTO is drawn up by PMDF; other information can be obtained with the corporation command.

Henceforth, only the spreadsheets made by PMDF showing the total number of calls to the call center number 190 is provided in this paper. The other spreadsheets received by the PMDF are not attached, due to their extensive size; however, there is a spreadsheets containing the main data summary.

The following spreadsheets shows the total number of calls from the call center number 190, which also includes missing calls, between the years 2018 up to November 10th, 2020. It is presented in the same format provided by COPOM.



Table 1

Total number of calls to Police 190 Call Center in 2018, 2019 and 2020

MONTH	YEAR	TOTAL CALLS
JANUARY	2018	162,277
	2019	171,661
	2020	124,562
FEBRUARY	2018	150,247
	2019	163,879
	2020	126,447
MARCH	2018	180,334
	2019	175,414
	2020	127,321
APRIL	2018	164,305
	2019	172,636
	2020	167,328
MAY	2018	166,616
	2019	165,627
	2020	160,953
JUNE	2018	164,619
	2019	154,271
	2020	144,168
JULY	2018	154,957
	2019	149,075
	2020	143,628
AUGUST	2018	173,229
	2019	171,422
	2020	143,877
SEPTEMBER	2018	177,749
	2019	161,337
	2020	135,292
OCTOBER	2018	173,591
	2019	150,658
	2020	138,261
NOVEMBER	2018	176,247
	2019	155,460
	2020	53,959
DECEMBER	2018	173,871
	2019	149,392
	2020	0
TOTAL	2018	2,018,042
	2019	1,940,832
	2020	1,465,796

Source: Elaborated by the authors.

In addition to the spreadsheets outlined, Captain Lopes also designed 18 other spreadsheets showing the number of calls to the Police 190 Call Center. These calls have registered emergency situations whose keywords may address noise pollution or, at the very



least, are related to disturbing of the peace, even though these concepts are controversial and difficult to be empirically distinguished.

The spreadsheets presented on Table 2 show the number of calls per month between the years 2018, 2019 and 2020 considering only the total numbers related to each keyword per year. The data is presented in the form of a spreadsheet so that the numbers can be easily understood and can also allow comparisons between years and between keywords.

Table 2

Monthly number of calls by keyword between 2018 and 2020

	Year		
	2018	2019	2020 (Until November 10 th , 2020)
<i>Disturbing of work or rest</i>	530	769	1,026
<i>Disturbing of tranquility</i>	6,596	7,964	12,359
<i>Loud Automotive Sound</i>	36,299	36,539	38,591
<i>Loud sound in business areas</i>	4,802	4,487	2,851
<i>Loud sound in residential areas</i>	16,974	17,977	19,681
<i>Infraction of preventive sanitary measure</i>	0	2	4,005
TOTAL	65,201	67,738	78,513

Source: Elaborated by the authors.

Table 3 presents the sum of the calls excluding the keyword "disturbing of tranquility", considering that Captain Lopes informed that the records containing it do not always allude to issues involving noise and disturbing of the peace.

Table 3

Total number of calls excluding the keyword "disturbing of tranquility" between 2018 and 2020

TOTAL excluding the keyword "disturbance of tranquility"	2018 58,605	2019 59,774	2020 66,154

Source: Elaborated by the authors.

Next topic is dedicated to the information and data provided by PMDF analysis.





5 Data analysis and indication of purchase of sound meters for PMDF

PMDF plays an essential role in maintaining public order, as well as preventing crimes through ostensible policing, both by acting preventively or repressively. It is certainly an arm of the State that holds great supervisory and repressive power against those who insist on not complying with the legal system.

According to the spreadsheet presented on Table 1, Police 190 Call Center received an average of 2 million calls (2018: 2,018,042; 2019: 1,940,832). Although not all are emergency calls, it is important to acknowledge that simply answering the call takes time and can overload the system.

This concern was published on the website of the Federal District Security Department, showing that in the first 4 months of 2018, only 18% of the calls were considered an emergency (SSPDF, 2018).

Thus, according to the spreadsheet presented in Table 1, PMDF received 657,163 calls in the first 4 months of 2018, but only 18% of them (118,289 calls) were actually considered as emergency.

This data is crucial as it supports checking the number of calls related to complaints against disturbing of the peace or noise pollution that actually demands PMDF. In the period from January to April 2018, the number of calls cataloged as emergency under the keywords: "disturbing of work or peace of mind", "disturbing of tranquility", "loud automotive sound", "loud sound in business areas", "loud sound in residential areas", totaled 21,171 calls, or 17.9% of all demand considered as Police 190 Call Center.

In other words, complaints against noise, whose source is residential, commercial or automotive, meant almost one call out of every five received and recorded as emergencies on the Police 190 Call Center, from January to April of 2018.

As shown in the spreadsheet presented in Table 2, throughout 2018, there were 65,201 calls (or 58,605, disregarding the keyword "disturbing of tranquility"); in 2019, they totaled 67,738 calls (or 59,774, disregarding the keyword "disturbing of tranquility"); and in 2020, until November 10th, 2020, there were 78,513 assistances (or 66,154, disregarding the keyword "disturbing of tranquility").

It is worth mentioning that, in 2018 and 2019, IBRAM carried out a total of 2,952 inspections and issued 801 tax assessment notices. In the same period, Police 190 Call Center received 72,838 complaints related only to the keyword "loud automotive sound", or 9,289 complaints for the keyword "loud sound in business areas".

In fact, if all the complaints concerning noise were added up, considering all the keywords, 132,939 calls would be registered. Even if the keyword "disturbing of tranquility" were disregarded, there would be 118,379 demands directed to PMDF. Based on the latter



number, it is possible to infer that IBRAM carries out inspections of 2.5% of the total number of calls registered on the Police 190 Call Center (already disregarding the keyword “disturbing of tranquility”).

It cannot be forgotten that these numbers only refer to emergencies registered by the PMDF, cataloged in the keywords in question. As already shown, complaints are registered directly at the DF Ombudsman, which, in 2018, added up to 1,597 complaints related to noise pollution; and, in 2019, 1,520 records. There are also records made by IBRAM's own ombudsman, which, according to the autarchy, corresponded to 1,956 in 2018 and 2,666 in 2019.

It is true that there is no possibility of measuring how many of these complaints were registered more than once, either in the same agency or in different agencies. Therefore, the simple sum of all amounts could implicate a misguided number, due to the same claim being considered twice, three or even more times.

This compilation of data perception indicates that noise pollution or disturbing of the peace cannot be fought or controlled without new public policies implementation, starting with educational and informational programs. It is absolutely utopian to believe that IBRAM and PMDF will manage to control the problem under discussion, especially because the numbers presented do not even include the noise pollution originated from roads and highways sources, which, for instance, in Europe, is responsible for the biggest noise complaints.

PMDF was asked if the institution has a decibel meter, and the answer was no. Therefore, currently, PMDF does not have any instrument to measure sound pressure and carry out the appropriate approach to polluters. Currently, the measurement of sound pressure using sonometers is exclusive to IBRAM.

The absence of decibel meters by the corporation is not due to the institution's lack of interest or requests. On June 5th, 2008, the Federal District Representative Chico Leite filed an indication in the Legislative Chamber of the Federal District, under n. 4,392/08. In this request, he suggested to the Executive Power, through the State Secretariat for Public Security, the purchase of sound meters for the PMDF, with the aim of ensuring that the institution would efficiently perform noise pollution crimes inspection.

In order to justify the acquisition, he refers to Law 4,092/2008 (DF Silence Law) addresses two points related to noise pollution: infractions and administrative punishments (written warning, fine, seizure of polluting instruments, etc.).

He adds that Secretary of State for Urban Development and Environment of the Federal District (SEDUMA), currently Secretary of State for the Environment (SEMA), would be responsible for supervising compliance with the law. However, he makes the following observation, which is worth exposing *ipsis litteris*:





It turns out that noise pollution is also a crime and finds legal capitulation in art. 54 of Law 9,605/1998 and, more specifically, in art. 42 of the Criminal Misdemeanor Law.

The legal classification of the offense gives the Federal District Military Police the competence to investigate allegations of the practice of this crime, deriving this competence from the Federal Constitution of 1988, which, in its art. 144, § 5, determines that the military police are responsible for the ostensive police and the preservation of public order.

It happens that, according to information from Military Police officers who sought out this Office, PMDF does not have a sufficient number of decibel meters to carry out an effective inspection against criminal acts of noise pollution, resulting in the population's discredit regarding the performance of the Military Police, given the impunity of violators.

Considering the large number of complaints regarding noise pollution throughout the Federal District received through the telephone number 190 (according to the police officers who sought this office) and considering that the technical evidence obtained from the sound meter is much more robust than that obtained by witnesses, we believe that the acquisition of this equipment by the Federal District Military Police is of great importance, in order to provide efficient and severe action by this Corporation in the repression of noise pollution, which disturbs the public peace and damages the quality of life of the entire population of the Federal District.

Therefore, we suggest that the Executive Branch, through the competent body of the State Secretariat for Public Security, promotes the purchase of sound meters for the Military Police of the Federal District.

It is imperative that PMDF is responsible for verifying the population's compliance with the law, which covers the Law on Environmental Crimes. In fact, it cannot be forgotten that the PMDF is part of SISNAMA. Furthermore, it is the corporation's duty to act against the crime of noise pollution, which is not limited to the contravention of disturbing of the peace.

Currently, for the characterization of the crime of noise pollution (art. 54, of Law 9,605/98), the Judiciary usually requires evidence that the noise produced is capable of causing damage to human health. Such requirement generally claims for the exact measurement of the emitted sound pressure. Therefore, how would it be possible to carry out criminal liability without the existence of sound meters available to the PMDF?

In fact, it was observed that the absolute majority of the complaints are not inspected by IBRAM, as the autarchy does not have the capacity to cover its performance throughout the territory. Thus, the thousands of complaints registered in the Police 190 Call Center do not result into reports expedition, which hinders the criminal liability of the offender, preventing the protection of a legal asset dear to society, namely, the quality of life, health and the very existence of the human being in the urban environment.

The role of Public Authorities in fighting and controlling noise pollution is essential, as individual demands are not sufficient to solve the issue. It is due to difficult of evidence production. The more organs, entities and corporations acting towards the matter, the more protection and quality of life will be, in order to preserve the social function of the city

The next topic deals with the present PMDF possibilities of issuing assessments due to noise pollution.



6 (Im)possibility for the PMDF to fine noise polluters

There is an obvious independence between criminal and administrative spheres, with its own rites and persecution. In fact, one sphere does not harm the other. Law 9,605/1998 itself, provides for “criminal and administrative sanctions”. From articles 26 to 69-A, it deals with criminal action and procedures, while from arts. 70-76, it deals with administrative infraction.

The same law separates the criminal typification into sections. The first deals with crimes against fauna; the second, crimes against flora; the third, with pollution and other environmental crimes; the fourth, with crimes against urban planning and cultural heritage; and the fifth, with crimes against environmental administration.

Regarding the administrative infraction, the Law 9,605/1998, in its article 70 states that: “an environmental administrative infraction is considered to be any action or omission that violates the legal rules of use, enjoyment, promotion, protection and recovery of the environment.”. Noise pollution is a violation of the legal rules of use, enjoyment and protection of the environment; thus, whenever identified, administrative sanctions must be applied.

However, it is not clear which competent authorities should be responsible for drawing up environmental infraction notices and for starting administrative proceedings. They aim to punish with the sanctions from art. 72 of the Law 9.605/1998, such as warning, simple fine, daily fine, seizure of products used in the infringement, destruction or destruction of the product, suspension of sale and manufacture of the product, embargo of work or activity, partial or total suspension of activities, or even restriction of rights. In Federal District, Law 4.092/2008 (Silence Law) has a chapter on infractions and penalties against individuals and legal entities that violate any provision of the law, which does not eliminate the imposition of other civil and criminal sanctions.

About the rights restricting sanctions, some deserve to be mentioned, such as suspension or cancellation of registration, license or authorization; loss or restriction of tax incentives and benefits; prohibition of contracting with the Public Administration, for a period of up to 3 years.

The competent authority holds great responsibility in dealing with administrative process that will result in administrative sanctions, as they are severe, including fines ranging from BRL 50.00 to BRL 50 million, and prohibition to contract with the Public Administration. The fine for noise pollution in the DF, provided in Law 4,092/08, however, is milder, ranging from BRL 200.00 to BRL 20,000.00.

Art. 70, § 1, of Law 9,605/1998, states that the competent authorities are: “(...) officers of environmental agencies that are part of SISNAMA, designated for inspection activities.”.



Art. 57 of Decree 41.167/2020 also states that: “the Military Police of the Federal District will act as a sectional body integrating SISNAMA, according to art. 6, V of Law 6,938 (...)”. Furthermore, considering the PMDF as a sectional body of SISNAMA, the institution is competent to draw up environmental infraction notices, as well as to start the respective administrative proceedings.

In other words, the PMDF is an institution competent to draw up environmental infraction notice in case of identifying noise pollution. This competence already exists; however, it has not been implemented by the corporation, perhaps due to lack of explicit normative provisions regarding it.

Currently, PMDF does not issue environmental infraction notice due to noise pollution. Whenever vehicles are dispatched to verify occurrences of disturbing of the peace, sometimes they even carry out the DTO, generally attributing the polluter's conducts as a mere criminal misdemeanor (article 42 of the LCP) .

However, if PMDF is to change its internal policy towards these demands, which occupy approximately 1/5 of the calls to Police 190 Call Center, its action would no longer be limited to the sphere of criminal misdemeanor, and might include administrative sanctions, such as warnings, fines, sound system seizing, among others.

Certainly, the police officer responsible for drawing up infraction notice and applying administrative sanctions would need special training. PMDF already has in its structure a specialized battalion - the Environmental Military Police Battalion, which, according to art. 39, I, of Decree 41.167/2020, is "responsible for the execution of environmental policing, including forest, spring, river and lake policing.". It appears that the term “responsible for carrying out environmental policing” is broad, thus, environmental policing in noise pollution the control and combat is normatively viable.

Regardless PMDF's limits action against noise pollution carried out by Special Environmental Battalion, the assessed parties would certainly claim that the notice would be null, especially if there is no technical report, using a decibel meter to confirm the administrative environmental violation. The sound level meter use would evidently make legitimate evidence of difficult objection. However, there are other ways of investigating administrative violations. CONTRAN Resolution 624/2016, which regulates inspection procedure for the violation of art. 228 of the CTB, was created due to “difficulties in the operational applicability of the inspection of the violation of art. 228 of the CTB, in the rite defended by the current legislation and, as a result, the growing impunity of offenders”.

Art. 1 of the Resolution solved the gap by facilitating inspection, since it does not require any measuring sound pressure instrument, *in verbis*: "the use of any type of automotive equipment, on open roads, that produces audible external sound is prohibited, regardless the volume or frequency, disturbs the public peace”.





It was not the first time that CONTRAN has issued a resolution with the scope of facilitating inspection. So-called CONTRAN's Resolution 432/2013, which provides "procedures to be adopted by traffic authorities and their agents during inspection of consumption of alcohol or other psychoactive substances that lead to dependence (...)", in its art. 6, sole paragraph, reminds that the administrative penalties of art. 165 of the CTB are also applied to the driver who "refuses to submit to any of the procedures provided for in art. 3, not eliminating the incidence of crime provided in art. 306 of the CTB (...)", that is, the simple refusal is effective for the incidence of administrative sanctions.

Thus, the mentioned resolution indicates that, whenever there is difficulty in monitoring, it is up to the Direct and Indirect Public Administration to standardize the means to facilitate it.

Due to the facilitation created by CONTRAN's Resolution 624/2016, PMDF is invested in the power to fine drivers that use loud automotive sounds, as long as the vehicle is on open roads. The penalty may be applied if the agent establishes that he can hear an audible sound from the outside of the vehicle. However, if someone uses the same vehicle to produce sound at an excessive volume and it is parked inside a residence, PMDF will not be able to issue a fine under CONTRAN's Resolution 624/2016, as it will not be on "open roads". In this case, PMDF usually draws up the DTO, due to disturbance of peace.

It is stated that PMDF has the power to issue assessments, regardless the source of pollution is a car or not, whether it is on an open road or not. It is argued that, if the sound pressure emitted into the atmosphere, in fact, is a matter of noise pollution, it should not be classified as a criminal misdemeanor, but as an environmental crime. Therefore, in addition to the crime, administrative sanctions for environmental infractions should be applied.

7 Conclusion

Noise pollution directly and indirectly affects human beings who live in cities. Data from the European Union raises concerns about the actual healthiness of living in cities with regard to pollution, which is already considered the second most harmful. Due to lack of State action in order to fight this situation, noise pollution is on the rise at the same pace as the expansion of cities.

Despite Federal District autarchy IBRAM being responsible for inspecting and fining noise polluters, it does not have enough capacity to meet all demand. Considering the number of complaints registered in Police 190 Call Center, the inspection of the sound pressure emitted into the atmosphere is negligible. Furthermore, the balanced environment in Federal District, and, consequently, the quality of life of its inhabitants is at risk. For this reason, the competence of PMDF to issue a notice of infraction regarding noise pollution is defended, especially since the Corporation is already a member of SISNAMA.





The quest to noise pollution control is to seek the sustainable development of the city, which is the key to balancing economic development and preserving the environment. (VIEIRA, 2012). In fact, according to REIS and VENÂNCIO, “the city, as a space for coexistence, needs to be understood as a means of integration of individuals and a space for the development of human capacities” (2018).

In conclusion, if Federal District does not create ambitious public policies to prevent noise, such as the mandatory production of noise maps or educational policies for noise management, or buy decibel meters to be used by PMDF, noise pollution will harm each social function of the city, especially with regard to providing adequate quality of life for its inhabitants.

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