

# Assessment of the Main Difficulties Encountered in the Environmental Licensing of 21 Municipal Areas in the State of Rio de Janeiro with an Emphasis on the Municipal Area of Paracambi.

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## ABSTRACT

*Regarding Public Administration, Environmental Licensing is one of the main instruments capable of promoting the Sustainable Urban Planning. In 2011, with the creation of the Supplementary Law Number 140, there was a clearer directive as to the responsibilities of the Municipalities when licensing certain local activities. Thus, this paper has sought to identify and relate the different municipal areas in terms of the main obstacles that make it harder for their Municipal Licensing Committees to execute the Environmental Licensing of the local companies. From questionnaires applied to 21 Municipalities of Rio de Janeiro, it was possible to notice that the main difficulties are related to the absence of Training Courses, with emphasis on Gas Stations, Delay in the delivery of the necessary documents and Emergency Services Support which delay activities regarding inspections, reports and notifications. On the other hand, analysing Paracambi Municipal Area specifically, it is possible to realize that the difficulties that have been observed are mainly originated from the excess of emergency services, the deficiency of a solid information organization structure, including physical availability, absence of equipment and the necessity of training courses, highlighting the importance of diversifying the professionals from the Technical Team.*

**Keywords:** Environmental Licensing; Committee; Difficulties; Paracambi; Rio de Janeiro.

## 1. INTRODUCTION

Environmental licensing, one of the instruments presented within the Law 6938/81 aiming to comply with the National Environmental Policy principles, is one of the ways the public administration can act – correctively and preventively – concerning the environmental conditions of certain companies from the moment of their foundation. At the end of this administrative procedure, the concession of environmental licenses may or may not be granted according to technical criteria and to the analysis of legal environmental compliance established by the official authority while making use of its supervisory power (VIANA et al, 2003).

As far as the Government is concerned, Conama Resolution Number 237/97 and Supplementary Law Number 140/2011 were responsible for the regulation of situations in which environmentally structured municipal areas could be able to license, in a specific way. In such cases, municipal areas need the competent environmental organ, which, according to Law Number 140/2011, is the organism that owns properly qualified technicians – whether they are public servants or third party – in an appropriated quantity so as to comply with the demands from the administrative actions. However, in such cases, competence is limited to ventures or activities whose impacts do not exceed the municipal territorial limits (local environmental impact), or whose responsibility is passed down by the State by means of legal instruments (GUILHERME & HENKES, 2013).

According to the Manual Licensing Guidebook, issued by the National Service of Industrial Learning (SENAI), in 2015 there were 48 Municipal Areas in Rio de Janeiro which were authorized to undertake Environmental Licensing activities. In this context, the present study aims to analyze the main obstacles encountered during the environmental procedures in 21 municipal areas in Rio de Janeiro which are qualified to license: Niterói, Belford Roxo, Macaé, Itaboraí, Mangaratiba, Rio das Ostras, Armação de Búzios, Maricá, Iguaba Grande, Angra dos Reis, Arraial do Cabo, Casimiro de Abreu, Paraíba do Sul, Pirai, Itaguaí, Silva Jardim, Duque de Caxias, Areal, Queimados, Paracambi e Guapimirim.

## 2. GOAL

The aim of the present study was to analyse the main difficulties faced by Environmental Licensing Committees in 21 municipal areas in Rio de Janeiro, presenting the area of Paracambi as a case study. Paracambi is analysed in greater detail due to the facilitated access the authors had to information on that area. Besides, in the year of 2018 alone, up until October, 14 (fourteen) Environmental Licenses were issued by the Paracambi Environment Secretariat, which goes to show that this particular Municipal Area is managed by a Team whose experience in different kinds of projects should contribute beneficially to this paper.

The following were the main points addressed: (1) what are the deficiencies encountered during the process of environmental licensing in 21 Municipal Areas of Rio de Janeiro, questioning its real role as an instrument of the National Environment Policy; (2) diagnose and describe the current situation of the Environmental Licensing in the Area of Paracambi; (3) compare the problems encountered during the Licensing Process in the Municipal Areas that were analysed in Rio de Janeiro; (4) identify the major improvements and modifications that must be made in the surveyed areas; (5) propose actions that make the Licensing Process in the Municipal Area of Paracambi more efficient.

## 3. METHODOLOGY

Throughout the study, a questionnaire was applied to one (01) technician belonging to the licensing team of each one of the 21 analysed areas. It is important to highlight that the questionnaires were answered by Engineers and by technicians of Environmental Management and Chemical Management. In the Municipal area of Paracambi, the study was more thoroughly performed, therefore, five (5) Committee technicians answered the questionnaire. In addition, in this area, there was also an analysis of the administrative procedures and a direct observation of the physical structure of the Municipal Environment Office.

On the first part of the questionnaire, each technician gave a score (from 1, least relevant, to 5, most relevant) to the following difficulties: Incomplete technical team; Constant change in management; Need for training courses; High demand for emergency services and notifications impair the licensing activities; Lack of necessary equipment during inspections; Lack of document standardization; Delay in the delivery of requested technical documents; Lack of procedures standards; Difficulty to set time limits regarding Control and Monitoring of license restraints; Deficiency in the physical availability of the workplace and materials; Deficiency in the organization of issued licenses in files, spreadsheets, digital data bank; Licenses duration monitoring is ineffective.

On the second part of the questionnaire, each technician described other obstacles specific to their areas, determined modifications they considered urgent, pointed out the types of activities that were more often licensed and explained the way their committee is formed, as to the number and technical qualification of the professionals.

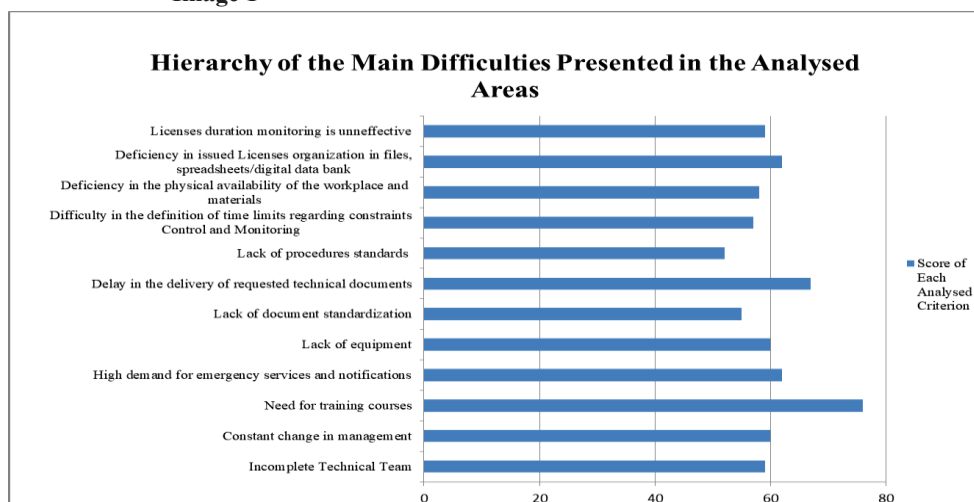
## 4. RESULTS

### 4.1 Score of the Main Difficulties Identified in the 21 Municipalities

The sum total of the score registered for each category of difficulty in the municipal areas is summarized on **Image 1**, from which can be observed that the Need for Training Courses represents the main demand pointed out by the technicians who are responsible for the licensing. The Delay in the delivery of requested technical documents shows up as the second most relevant obstacle in Licensing Processes.

One must also keep in mind that the High demand for emergency services and the deficiency in the organization of licenses in spreadsheets or digital means correspond to two significant realities in the areas that were analysed. These two items are inconveniences that are likely due to the absence of a technical team dedicated exclusively to licensing activities since unrelated demands consume the technicians' time, availability and resources between routine activities and actions related to studies, organization, document analysis, report preparation and other activities demanded in the licensing process.

**Image 1:** Score of the Main Difficulties Presented in Each Area.

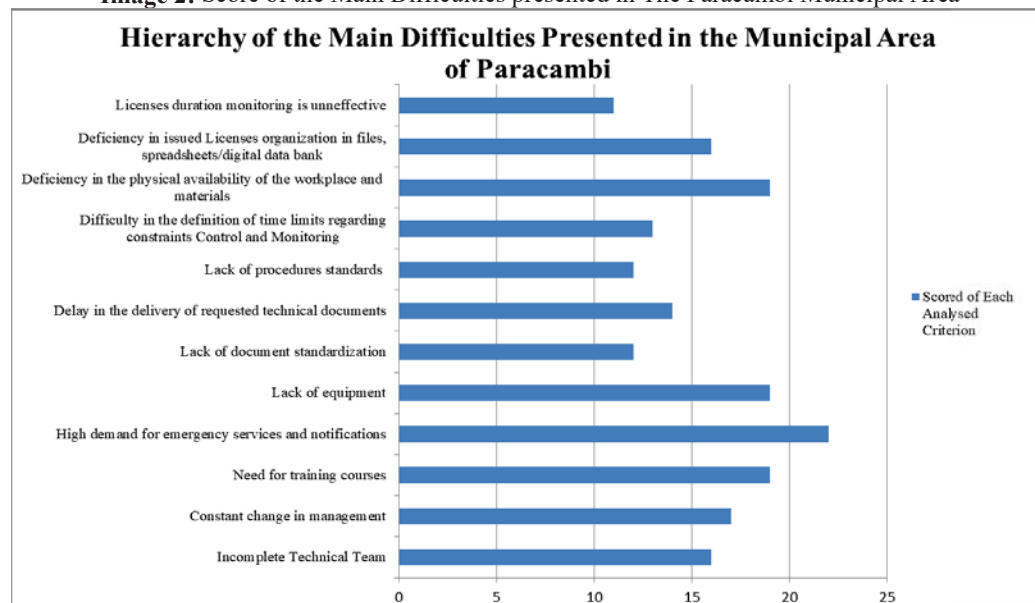


Source: The Author, 2018.

#### 4.2 Score for the Main Difficulties Identified in the Municipal Area of Paracambi

As for the Municipal Area of Paracambi, from the score obtained in the survey with five (05) technicians, it was observed that most deficiencies presented are related to high load of services demand, adding up to 22 points. Tied in second place, the lack of training courses, absence of inspection equipment and physical availability of the inspection site got 19 points, being disruptions that may also affect the Paracambi license itself. Therefore, specifically in the Paracambi municipal area, the internal infrastructure, both organizational and physical (inputs), represents an obstacle that impacts the performance of the professionals, as can be seen in the **Image 2**.

**Image 2:** Score of the Main Difficulties presented in The Paracambi Municipal Area



Source: The Author, 2018.

## 5. DISCUSSION

Based on the answers to the second part of the questionnaire, it was possible to understand the peculiarities of each Licensing Committee. From the data analysis, it was possible to determine that the main training courses must be oriented to Allotment, Gas Stations, Construction Industry and Earthmoving. This way, these items can tell the State Environmental Institute (INEA) which should be the main technical support areas provided to the municipalities. Besides, INEA must help in the better standardization of the documents required for these kinds of licenses.

It was also observed that the Committees seek greater autonomy to their services, based on the following answers to the questionnaire: Necessity for a multidisciplinary team, technicians working exclusively with licensing activities and the ability to assist in the delimitation of the Permanent Preservation Areas Around Rivers (FMP), for example. It is possible to point out that the issues regarding deficiencies in supervising activities are recurrent and indicate that the infrastructure as well as the notification procedures, files recording and the number of environmental inspectors in the municipal areas need a wide and immediate restructuring.

The Municipal Areas of Areal and Silva Jardim present the smallest Committees with 5 and 6 technicians, respectively. Meanwhile, the area of Guapimirim represents the municipality with the

largest Committee, with a total of 20 professionals. It was noticed that the deficiencies presented by the teams with the most qualified people revolved around matters related to environmental legislation such as the people's unawareness of environmental laws matters. On the other hand, the smallest Committees showed the necessity to form a multidisciplinary team, to train their technicians and emphasised the disturbances related to technical issues over which the Committee has no control.

In most cases, the committees have Environmental Engineers, Civil Engineers and Biologists; however, each area presents a particularity according to its own demands; therefore, Niterói, Maricá and Piraí have Lawyers in their Committees, whereas Maricá and Iguaba Grande present Topographers, Paracambi and Guapimirim have professionals in the field of Chemistry and only Angra dos Reis has an Oceanographer.

It is important to emphasize that some Areas report issues that indicate complications generated in the relation with other Environmental Agencies. Such difficulties were addressed in the following topics: Need for a more effective channel between the municipalities and INEA; difficulty to determine which entity will be responsible for licensing some activities and tardiness in processes that require approval from the people in charge of the Conservation Units.

In general, in Earthwork and Allotment activities, Biologists and Civil Engineers are vital for the assessment of the fauna and flora and also for the calculation of the volume of clearing and landfill, especially since such volumes must be equivalent and must be evaluated taking in consideration the ground swelling percentage. Furthermore, in facilities such as butcheries and dentistry offices, the septic tanks are important requirements analysed by the Civil Engineers the same as in Auto Repair Shops and Gas Stations, where the proper sizing of the Water and Oil Separator Container may be the cause of an approval or denial of an Environmental License.

Environmental Engineers take part in the evaluation of industrial plants such as metal industries. For instance, they assess whether the filters that are installed are compatible with the particles diameter and whether they are capable of holding the volume which is produced daily. Meanwhile, the commissions attorneys can elaborate justifications for specific cases when there is a Declaration of Public Utility, they can also provide opinion on agreement breaches according to existing laws and assist in the calculation of the fines.

Thus, The Licensing process is often considered slow due to the necessity of a "multicriteria" evaluation which is that in which the Entrepreneur proves their structural and legal capabilities. In this way, technicians have a tendency to come up with new answers and provide information that had not been contemplated in previous analysis.

A simple and promising way to expedite this procedure is to separate the documents related to each activity so that each technician can evaluate its requirements. After this compartmentalization, it is necessary for a meeting to be made prior to the inspection so that there is a group information update as well as the sharing of information and data relevant to the Licensing Process.

**Table 1** shows the results of some analysed areas aiming to demonstrate the typology of the answers that were registered in this study.



**Table 1:** Scenario presented by technicians in the analysed areas.

Municipal Area	Licensing difficulties other than the ones mentioned in the survey	Emergency alterations to improve the licensing process in the Municipal Area	Main Licensed Activities	Licensing Committee Structure
Silva Jardim	Difficulty performing Geoprocessing Activities.	Follow-up activities after the Licenses Issuance; Need for professionals with Geoprocessing skills and constitution of a Multidisciplinary Team.	Gas Stations and Earthmoving.	6 Professionals: Environmental Analysts
Angra dos Reis	Uncertainty about the Environmental Agency responsible for the Licensed Activity.	Regulation of Environmental Compensations.	Residential Works and Constructions.	6 Professionals: 1 Agronomist Engineer/ 2 Biologists/ 2 Forestry Engineers/ 1 Environmental Engineer and 1 Oceanographer.
Iguaba Grande		Increased Monitoring	Construction Industry and Lagoons Silt Removal.	10 Professionals: 3 Biologists/ 1 Engineer/ 1 Topographer/ 1 Veterinarian/1 Manager/ 3 Administrative Professionals.
Guapimirim		Need to Create an Environmental Licensing City System; Presence of a Notifications Control System; Refinement of the Zoning Certification Systems.	Small size Industries; Allotments; Metallurgical Industries.	20 Professionals: 1 Chemist/2 Forestry Engineers/1 Biologist/ 1 Administrator/ 2 Environmental Managers/ 1 Environmental Scientist/ 1 Lawyer/ 1 Agricultural Technician/ 3 Environmental Technicians/ 1 Veterinary Doctor/ 1 Environmental Engineer/ 3 Environmental Inspectors/ 2 Administrative Assistants

Source: The Author, 2018.

**Table 1 (Continuation):** Scenario presented by technicians in the analysed areas.

Municipal Area	Licensing difficulties other than the ones mentioned in the survey	Emergency alterations to improve the licensing process in the Municipal Area	Main Licensed Activities	Licensing Committee Structure
Belford Roxo	Formation of a multidisciplinary technical framework. Collaborators' Valorization Policies and Improvements in the Work Structure.	Scanned Procedures and Structural support.	Gas Stations/ Medium Size Industries	12 Professionals: Master in QSEH/ Environmental Engineer/ Petroleum Technologist/ Civil Engineer.
Casimiro de Abreu	Mistakes in the licensing documentation by the requesting party due to the lack of technical support. Conflicts with Conservation Units due to the tardiness in Processes in Environmental Protection Areas cases.	Regulation of procedures to collect the fee to start the Licensing Process. Incorporation of the Licensing System with the Registration Integrated System (REGIN).	Earth moving and levelling (Earthmoving) and Repair shops.	5 Professionals: 1 Civil Engineer/ 3 Forestry Engineers and 1 Agronomist Engineer.
Rio das Ostras	The requesting party lacks the necessary knowledge of environmental legislation, which generates difficulties during the Environmental Licensing process.	Certificate Issuing should have special procedures.	Car repair shop and Car wash.	19 Professionals: 1 Architect/ 2 Environmental Engineers / 2 Administrative Assistants/ 5 Environmental Inspectors/ 5 Biologists/ 1 Superintendent/ 2 Coordinators/ 1 Director
Armação de Búzios	Monitor licensing activities through inspections.	Internal Reorganization (technicians training and equipment acquisition)	Residential Construction; Electric Power Supply Certificates.	9 Professionals: 1 Coordinator/ 3 Licensing Technicians/ 5 Environmental Inspectors
Itaboraí		Increase in the Number of Environmental Inspectors	Construction Industry	7 Professionals: 4 Environmental Inspectors and 3 Environmental Analysts

Source: The Author, 2018.

**Table 1 (Continuation):** Scenario presented by technicians in the analysed areas.

Municipal Area	Licensing difficulties other than the ones mentioned in the survey	Emergency alterations to improve the licensing process in the Municipal Area	Main Licensed Activities	Licensing Committee Structure
Mangaratiba		Implementation of Computerized System, aiming to improve effectiveness and transparency.	Real Estate Construction. Cutting and Landfill activities.	10 Professionals: 05 with a College Degree/4 with a High School degree/1 Administrative Professional.
Queimados	There must be a continuous training program for the technicians who take part in the committees.	Lack of Infrastructure/ Equipment.	Self-licensing Activities such as Public Works and Industrial Activities.	12 Professionals: 3 Civil Engineer/ Chemist / 3 Environmental Manager/ Forestry Engineer/ 2 Biologists/ Agronomist Engineer/ Environmental Inspector
Itaguaí		Need to increase the Technical staff, so that there is more speed to the processes.	Gas Stations and Containers Storage Yards.	13 Professionals: 4 Environmental Directors/ 3 Biologists/ 1 Forestry Engineer/ 1 Agronomist Engineer/ 1 Chemical Engineer/ 1 Environmental Manager/ 2 Environmental Inspectors
Maricá		Investment on input and on equipment for better measurement on inspections.	Gas Stations/ Concrete Artifacts Production	12 Professionals: 2 Civil Engineers/ 1 Forestry Engineers/ 2 Geographers/ 1 Environmental Manager/ 2 Biologists/ 1 Lawyer/ 1 Pedagogue/ 1 Topographer/ 2 Architects
Niterói	Requirement that all servers be hired after taking public exams.	Material and Equipment Acquisition	Gas Stations/ Fuel Storage/ Allotments	6 Professionals: 2 Lawyers/ 1 Manager/ 1 Mechanical Engineer and 2 Biologists.

**Source:** The Author, 2018.



**Table 1 (Continuation):** Scenario presented by technicians in the analysed areas.

Municipal Area	Licensing difficulties other than the ones mentioned in the survey	Emergency alterations to improve the licensing process in the Municipal Area	Main Licensed Activities	Licensing Committee Structure
Macaé	The Team should be able to draw up Notifications and Proceedings.	Autonomy to Define the Permanent Preservation Areas Around Rivers (FMP).	Industry, Oil and Construction Industry	14 Professionals: 10 Analysts and 4 Administrative professionals.
Paracambi	Technical team dedicated to Licensing; Open channel for consultations with INEA; Licensing Committee independence.	Online platform to address the great demand for licenses; Equipment and cars to be used exclusively for Licensing.	Small size Industries; Allotments; Metallurgical Industries; Butcheries; Gas Stations.	6 Professionals: 1 Environmental Manager/ 1 Environmental Engineer/ 1 Chemical Engineer/ 1 Agronomist Engineer/ 1 Civil Engineer/ 1 Environmental Inspector
Paraíba do Sul	The main issues are related to the documents submission by the requesting parties.	Licensing fee needs to have a standard.	Earthmoving.	7 Professionals: 4 Biologists and 3 Environmental Engineers
Piraí		Law related matters	Allotments	5 Professionals: 1 Civil Engineer/ 1 Lawyer/ 1 Architect/ 1 Environmental Manager and 1 Biologist.
Duque de Caxias	The Inspection Agent has movement difficulties.	Implement the Online Licensing System.		10 Professionals, among Engineers, Biologists and Chemists.

Source: The Author, 2018.

## 6. CONCLUSIONS

Deficiencies involving licensing consist of 3 pillars: technical, structural and legal matters. In this aspect, licensing regarding specific activities, such as earthmoving, is the most affected, since it requires that each municipality commits to creating a municipal law proposal following the State law and adjusting to their reality. Laws are often in need of integration of the technical aspects in order to perform activities like the analysis of volumes that represent State or local impact, municipal area zoning and the necessity of other authorizations from other organs, for example. Therefore, obstacles in this matter encompass not only the Environmental Offices, but also the Municipal Procuratorate,

Planning and Civil Defence Offices. In the Paracambi Municipal Area, during questionnaire about improvements related to the necessary infrastructure, most of the employees pointed out the necessity for an adequate number of computers and chairs, the organization of processes in cabinets by typology, in addition to cars and motorcycles available for the Licensing and Inspection team.

Among the crucial demands for the Licensing Team of Paracambi is the necessity of regular meetings, creating an online platform with the activation of deadlines for the delivery of evidence regarding the fulfilment of the conditions for the license, diversifying the technical Team so that it includes Geologists, Hydraulic Engineers and Surveyor Engineer, for instance.

On the whole, Municipalities are in need of practical courses so as to standardize, at least, the minimum necessary to be analysed during Inspections, especially in Gas Stations and Companies responsible for the storage of fuel and other inflammable materials. Questions regarding the increase of the monitoring team for the assessment regarding the fulfilment of the conditions is also broadly discussed, since entrepreneurs must understand that the Municipal Organ actively takes part in the pursuit of effectively performing their functions looking to minimize the environmental impacts of the companies liable to be Environmental Licensed.

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