ASPECTS OF ENVIRONMENTAL LICENSING FOR SILVICULTURE IN BRAZIL

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ABSTRACT

Silviculture, among other potentially polluting activities, needs to go through the necessary steps in order to obtain environmental licensing, in accordance to federal law. That guarantees the surveillance of projects and activities that are capable of causing major damage to the environment. The act of licensing this activity was granted, however, to environmental statewide offices, assigned by Complimentary Law 140/2011(BRASIL, 2011), which resulted in differences in the treatment given to this activity when considering a national perspective. Having forest plantations occupying farmers' space is something that have been happening for a while and, when under the gaze of development projects, this situation increases the optimization of the area by producers. That way, the proposition was to analyze, using descriptive research as a method, the guidelines used by Brazilian states in the application of environmental licensing for silviculture, as well as to assess the differences between states and identify the main reasons behind the devising of more rigid rules. It was possible to notice a bigger development to silviculture on states that had less strict legal requirements, which might be what's pulling projects in, associated to the fact that in states more traditionally inclined to silviculture, like São Paulo and Minas Gerais, the activity began earlier than the enactment of those requirements. States that are not as traditional on these fields, on the other hand, have laws that are not as specific and bigger restrictions. It was also possible to identify a tendency of decentralization of the licensing responsibility to cities with qualified environment offices. In Brazil, the requirements are far less restrictive in states that have a tradition in silviculture and are becoming more enticing to small and medium producers.

KEYWORDS: requirements, environmental offices, environmental impact study

ASPECTOS DO LICENCIAMENTO AMBIENTAL PARA A SILVICULTURA NO BRASIL

RESUMO

A silvicultura, dentre outras atividades consideradas potencialmente poluidoras, também precisa de obtenção do licenciamento ambiental, segundo lei federal. A atribuição de licenciar essas atividades, no entanto, foi outorgada aos órgãos ambientais estaduais, o que gerou diferenças ao tratamento desta atividade no cenário nacional. Ter plantações florestais ocupando as áreas de produtores rurais é uma cena que acontece há tempos e, quando sob olhares de projetos de fomento, tal situação aumenta a otimização da área pelos produtores. Assim, propôs-se verificar, pelo método da pesquisa descritiva, as diretrizes dos estados brasileiros no procedimento de requerimento de licença ambiental para a silvicultura, bem como avaliar as diferenças entre os estados e identificar as principais causas para o estabelecimento de normas mais rígidas. Foi possível observar que nos estados onde as exigências são menores, há maior desenvolvimento da atividade silvicultural, o que pode ter sido umas das atrações para os empreendimentos do ramo, associado ao fato que estados mais tradicionais no setor, como São Paulo e Minas Gerais, as atividades silviculturais iniciaram muito antes da promulgação de tais requisitos. Enquanto isso, estados com menos tradição neste setor, em contrapartida, têm leis menos específicas e maiores restrições. Foi possível também identificar a ocorrência de uma tendência de descentralização da atribuição de licenciar para os municípios com órgãos ambientais capacitados. Por fim, no Brasil verifica-se que os requisitos para o licenciamento ambiental das atividades de silvicultura são menos restritivos nos estados mais tradicionais deste setor, e tem se tornado mais favoráveis ao pequeno e médio produtor.

PALAVRAS-CHAVE: requisitos, órgãos ambientais, estudo de impacto ambiental

INTRODUCTION

The environment has an unquestionable importance to society, as is the existence of laws supporting environmental management, ensuring compliance with all the items present in the Brazilian Constitution of 1988 (BRASIL, 1988). In compliance to it, there are legal principles to evaluating negative impacts caused by the activity to be carried out. Those requisites constitute the process of environmental licensing. The process is a requirement to projects that are deemed potentially polluting. Silviculture is categorized as such by the CONAMA Resolution nº 237/1997 (BRASIL, 1997), thus requiring environmental licensing. It's by the means of this instrument that the competent officecan verify the adequacy of a project or activity to the environment, licensing through different stepsit's implantation, so it can establish minimal principles to allow the project can actually happen (MOTA; PÊGO 2013). The formulation of the standards to obtain the licensing are assigned to the competent office affiliated to the Sistema Nacional do Meio Ambiente (SISNAMA), which enabled the existence of different treatment being given by states to the various potentially polluting productive branches.

According to Ahmed e Coutinho (2012), licensing itself turns into an administrative process, subjected to all the rules that characterize it (adversarial principle, broad defense, participation, publicity, legality, morality, etc.). This process aims to foresee how the installation of the project will affect the environment through technical study (Estudo de Impacto Ambiental – EIA, or Relatório de Impacto

Ambiental – RIMA), avoiding major environmental degradation. This understanding supports the enactment of the law nº 140/2011 (BRASIL, 2011) that gives the legal definition that describes it as the administrative process destined to license projects and activities that use natural resources, are effectively or potentially polluting and capable of causing any kind of environmental degradation. Ahmed e Coutinho (2012) also emphasize the forestalling purpose of the environmental licensing process as a whole.

Therefore, it is necessary to use the possibility of environmental damage as criteria when analyzing the required documents to environmental licensing. This analysis is submitted through a Study of Environmental Impact, be it through EIA and RIMA or through Environmental Licensing. EIA works under the premise of presenting alternatives as it examines the impacts of an action; while RIMA is supposed to present those results in a way that is understandable to the public and to those who are responsible for decision-making. (BASSO; VERDUM, 2006).

Brazilian silviculture activity has shown notable expansion on national and international markets through the last decades, not only through big enterprises, but also by small and medium rural producers. As such, principles that present strict restrictions or that demand strenuous bureaucracy to those requesting licensing, end up becoming a huge impediment for those smaller producers to invest in silviculture. Law predicts simplification of the process, throughshortening of the necessary steps to obtain the licensing, be it through Environmental Permit (Autorização Ambiental – AA) or Simplified Environmental License (Licença Ambiental Simplificada – LAS) (SENAI, 2015). It falls to cities themselves to stablish their own directives when it comes to what are the potential polluters of each activity, including silviculture, while observing the type, localization and size of the project. To silviculture, the main criteria that dictates the process that leads to the licensing of the project is the actual size of the rural property or forest species plantation (PIZA, 2009).

Environmental licensing is treated as a passport to promoting a sustainable development, assuming it directs productive activities to conform to standards and principles of the competent environment offices. There is a multitude of interpretations about sustainability. Also, there is a mismatch in the relationship between perception and sustainability policies (ALMEIDA et al., 2017).

Nonetheless, silviculture is going through notable national and international expansion through the last decades, not only through big enterprises, but also by small and medium rural producers. As such, principles that present strict restrictions or that demand strenuous bureaucracy to those requesting licensing, end up becoming a huge impediment for those smaller producers to invest in silviculture. Environmental licensing can also be seeing as a entrepreneur right that corresponds to the duty of developing its business in a sustainable way (AHMED; COUTINHO, 2012).

The forest species with the largest planted areas in Brazil are eucalyptus and pine (EMBRAPA; 2016). The elaboration of strategies and instruments that support silviculture activity, facing questions relative to forest use, have become paramount to maintaining the competitive advantages Brazil holds in a worldwide scenario (EMBRAPA; 2016), and as such, Brazilian forest plantations grant Brazil international spotlight when it comes to exporting the sub products of those plantations. Such factors attest to how important is the presence of silviculture in the country and, therefore, its regulatory processes. Considering this, it is necessary to assess and

examine the differences between states and, concomitantly, determine the main causes for the establishment of stricter norms.

MATERIAL AND METHODS

It was considered as silviculture, in accordance to Bacha (1991), all activities that consist of forest plantations and the resulting exploration. The study was outlined by technical procedures of the descriptive research kind, stemmed from bibliographical and documental research. Pre-existing material was used in both stances, even though more diverse and diffuse (FONSECA; 2002) material was used on the documental research, further differentiating itself from bibliographical research by the use of first and secondhand data (GIL; 2008). The firsthand data used came from official document and legislation pertinent to the matter, that is, law in all different branches of power, resolutions, regulatory ordinances, rulings and regulatory deliberations. With regard to bibliographical research, it was done by consulting to scientific work that enabled substantiation of this study.

On isolated cases, when deemed necessary, the competent city office was contacted by e-mail or phone call, as to guarantee the accuracy of the acquired data. The official websites of institutions, such as the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística – IBGE), the Ministry of the Environment (Ministério do Meio Ambiente – MMA), the Brazilian Institute of the Environment and Renewable Mineral Sources (Instituto Brasileiro do Meio Ambiente e dos Recursos Minerais Renováveis – IBAMA), the Food and Agriculture Organization of the United Nations (FAO) and the corresponding environmental offices of each state. The data gathering was conducted by a non-probability sampling. Data analysis was done through reading, as proposed by Gil (2008) and was presented and discussed according to geographical region.

RESULTS AND DISCUSSION

The decisive guidelines for a simplified procedure of environmental licensing in silviculture, according to the understanding of SISNAMA state offices, were listed and expressed on table number 1. Such guidelines exist according to the maximum area allowed for silviculture licensing without the issuing of licenses and/or the conception of more detailed studies like EIA and RIMA.

TABLE 1. Maximum silviculture area that doesn't require an EIA/RIMA by Brazilian state:

State	Area	Source
Minas Gerais	Up to 300 ha	**(**COPAM 2004)
São Paulo	Up to 1000 ha	(SÃO PAULO 2011)
Rio de Janeiro	Up to 200 ha with simplified procedures, but some Administrative Regions raise the limit to up to 400 ha	(RIO DE JANEIRO 2007)
Espírito Santo	Up to 300 ha	(IDAF 2014)

Bahia	Up to 4 fiscal modules	(CEPRAM 2013)
Alagoas	Up to 100 ha	(ALAGOAS 2014)
Pernambuco		
Ceará	Up to 100 ha	(COEMA 2015)
Rio Grande do Norte	Subject only to AA*, observing the framework described on Complimentary State Law nº 308/2008; and LO or LS when the activity has a permanent nature.	(COEMA 2014)
Maranhão	Up to 11 ha; LS*** of up to 224 ha	(SEMA 2014)
Sergipe	Subject only to AA*; and LO or LS when the activity has a permanent nature.	(CEMA 2008)
Paraíba	Requires licensing for silviculture of any kind, be it of products or sub products, even being subject to the Management Plan.	(SUDEMA 2015)
Piauí	Up to 800 ha; up to 3000 ha requiring Relatório Ambiental Simplificado - RAS (Simplified Environmental Report)	(CONSEMA 2009)
Pará	Up to 4 fiscal modules of family agriculture	(PARÁ 2015)
Tocantins	Silviculture doesn't require EIA-RIMA	(TOCANTINS 2013)
Amazonas	EIA-RIMA required in any situation	(IPAAM 2012)
Roraima	Up to 4 fiscal modules	(FEMARH 2015)
Amapá	Up to 2000 ha	(AMAPÁ 1999)
Acre	Up to 1000 ha	(ACRE 1994)
Rondônia	Silviculture doesn't require EIA-RIMA	(SEDAM 2011)
Goiás	Silviculture doesn't require EIA-RIMA	(GOIÁS 2013)
Mato Grosso	Up to 100 ha	(CONSEMA 2014)
Mato Grosso do Sul	Silviculture doesn't require EIA-RIMA	(SEMAC 2007)
Paraná	Silviculture doesn't require EIA-RIMA	(IAP 2015)

Santa Catarina	Up to 100 ha	(CONSEMA 2008)
Rio Grande do Sul	Up to 1000 ha without requiring EIA-RIMA, except in cases of invasion. Single License for up to 40 ha	(FEPAM 2014)
Distrito Federal	Requires EIA-RIMA in all cases	CONAM 2014)

Through observation of the data featured on chart 1, it is possible to notice a vast diversity on the minimum requisites that orientate silviculture licensing among Brazilian states, even though it is also possible to establish a similarity when comparing states of the same region or states that are inserted on regions that share a certain biome. This fact can be related to the conservation efforts, through legal means, of areas of a single biome, so the effects are broader instead of local.

It's also possible to notice, in accordance to the area minimum requisites for simplified process, that silviculture for small properties is becoming easier, as there's an understanding that intermittent planting creates a smaller negative impact on biodiversity and also on social structures, as it has a decreased production scale, bigger product diversity and less interference on the natural ecosystem. As such, forestry's market expansion along to the ease in licensing end up positively affecting and stimulating rural producers to join the activity.

The enactment of the new Forestry Law (Law n.º 12.651) (BRASIL, 2012), in the year 2012, brought changes, that were discussed broadly by society itself. This reflected on the way environmental offices would establish directives on matters related to forestry, influencing new directions for licensing in some states. Some states had their environmental licensing regulations updated, in accordance to the changes in forestry law. As can be seen bellow, it is possible to observe, through regional analysis, that in various states only a few remarks were added, maintaining the minimum requirements, while the requisites were completely altered in others.

Northeast

In northeast states, it is possible to identify little clarity when it comes to accommodating silviculture in the applicable legislation. This is due to the lack of tradition most northeastern states have in silviculture or the inexistence of large forest species' plantations. The conception of more specific and concise resolutions was not demanded of state offices, with the exception of Bahia. As there is usually no interest in silviculture activity among producers, the wider legislation is often capable of meeting local necessity.

In state of Pernambuco case, the more recent legislation referring to licensing in force is Law nº 14.549, enacted in the year 2011 (PERNAMBUCO, 2011). The need for licensing in order to install a forest consisting of exotic species was established in its Annex II, determining the minimum impact and area, not defining what is the minimal number of hectares for it to go through a simplified procedure and neither giving any kind of specifications on dimensions. No answers regarding this were given by the office in charge.

The state of Paraíba, considered to be a special case, due to the existence of a bigger proportion of plantations that contain other species, has more detailed requirements for all silvicultural activities, especially for those that aren't forestry. However, it should be noted that in the state there is a considerable production of

firewood (495,625 m³) and coal (735 tons), according to IBGE (2015); which means that for this production to be legal, the detailed activities of the segments are required as stated by the state office's legislation and supervision.

In Bahia's case, there are different characteristics than those of the other states that are part of the Northeast region, as the state went through different eras of forestry licensing. The areas with forest plantations were concentrated in the southern region of the state, and began to establish themselves around 1993, according to CERQUEIRA NETO (2012), with the installation of the Veracel Papel e Celulose SA, CAF Santa Bárbara Ltda., Suzano Papel e Celulose and Aracruz Celulose industries. Over time, Bahia became, in 2006, the Brazilian state with the second largest area of forest plantations destined for paper and cellulose, with 340 million hectares of eucalyptus (VITAL; 2007).

Ibá e Poyry (2016) presented a survey about the area planted with eucalyptus and pinus in Brazilian states, considering the historical series from 2010 to 2015, a decrease can be noticed in the last year regarding the usage and occupation of the soil by these forest cultures. However, Bahia stands at the third position among the charcoal producing states (103 thousand tons) and the second position among the states producing roundwood for cellulose and paper (11.1 million m³), especially in the city of Baianópolis/BA (IBGE, 2015). It is important to emphasize that in Bahia, INEMA Ordinance No. 11,292/2016 became more restrictive regarding the definition of the documents and studies required to request from INEMA the administrative acts for environmental regularity of enterprises and activities in the State of Bahia, repealing the INEMA Ordinance No. 8578/2014 (INEMA, 2016).

According to IBGE (2015), industrial demand, price, availability of labor in the harvesting of certain products and the environmental control and inspection agencies' actions, which at times liberate areas for agriculture, and other times intensify the inspection (applying fines and closing sawmills and charcoal plants), as well as the climatic conditions, are factors that explain the oscillation in the production of plant extractivism activities. Thus, in spite of this decrease in the area with forestry culture in the last year, because of the increase of production over time, the activity occupied large portions of the cities, causing several impacts to the local communities, the requirements became stricter, considering, instead of the area measurement in hectares, the fiscal module.

In the state of Piauí, in contrast to most other Northeast states, it is possible to observe a great laxness regarding the environmental licensing procedure for silviculture. One of the factors that may explain this is the occurrence of the cerrado biome, which occupies a large portion of the state territory. This will require any undertaking that seeks to settle in the state, according to Forest Law n. 12,651 of 2012 (Chapter IV, article 12, item I, item b), partitioning of 35% of the property area to form the Legal Reserve. This reduces the area sought for effective production in the cerrado locations, which may have influenced the definition of the area for exemption from the elaboration of EIA/RIMA.

The state of Maranhão deserves the spotlight due to the expansion of silviculture activity in recent years. According to recent data, the change in the paperwork required to license silviculture in 2014 attracted investments in projects such as Suzano Papel e Celulose, Brazil Timber, Valor Florestal and Eco Brasil. This, associated with favorable topographic and climatic conditions, transformed it into an emerging state for forestry in Brazil. Consequently, the total area of eucalyptus plantations increased.

As such, it's possible that the implementation of legislation directly interferes, favoring or not, the potential of the region or the state in developing forestry. By the end of 2014, according to an IBGE report, the area of forest plantations consisted of approximately 207,459 hectares. Of which only 11 hectares were not dedicated to eucalyptus culture. This showcases the expressiveness of eucalyptus forestry. Based on annual growth since 2005 and, considering the installation of Suzano Papel e Celulose, eucalyptus plantation areas should continue to increase in the region of Imperatriz-MA as a way to supply the company's cellulose demand.

North

Most of the northern states perform activities besides the exploration of timber products, operating in non-timber plant extractivism, with emphasis on açaí (93.1%) and Brazilian nuts (94.9%) (IBGE, 2015).

In the context of the national participation of non-timber products, on that year, only 13 extractivism products presented a positive variation in production, when compared to 2014, being açaí the most expressive in absolute numbers, which, due to the increasing demand for the product, displayed an increase of 9.0%. On the same year, data from the Produção da Extração Vegetal e da Silcultura – PEVS (Plant Extraction and Silviculture Production)(IBGE, 2015), reported that all the wood products of the plant extraction showed a decrease in quantity; and among the reasons for these fluctuations in the production of plant extractivism is, according to IBGE (2015), the action of environmental control and inspection agencies, which at times open up areas for agriculture and at other times intensify inspection (applying fines and closing sawmills and charcoal plants). Therefore, there is a gap between the approach of legal practice and the guidelines for such practices.

In this region, the characteristics of forest plantations differs from other parts of the country due to the prevalence of native tree plantations, such as Parica *(Schizolobium amazonicum)* culture in Roraima, possibly due to the presence of the Amazonian biome, which makes it more acceptable, in the eyes of the inspection agencies, the cultivation of native species, reducing the exploratory pressures on natural forests.

Regarding the legal guidelines, there's a similarity between Tocantins and Rondônia regarding the non-requirement of EIA/RIMA for silvicultural activity licensing. There is an understanding regarding the lack of tradition Rondônia has in eucalyptus silviculture, as the climatic and topographic conditions are not adequate, which makes the state not capable of attracting economic investments in this segment and, therefore, it is not necessary to create rigid and specific laws, which would restrict eucalyptus cultivation by small and medium producers in the region. It is reasonable that governmental policies for the forestry sector deserve to be included in the economic policies category; that is, in the case there's development of a certain forestry or silvicultural activity, the regulation instruments for these activities should not only be published within the scope of environmental laws, but also as an economic policy.

In the state of Tocantins, this laxness is not only linked to appropriate environmental variables but has already shown advancements. In recent years, it was possible to notice a great leap in the establishment of silviculture in the state, associated to the arrival of large companies in the paper and cellulose sector. This shows once again that legislation contributes actively to the attraction of forest-based enterprises. In the state of Pará, on the other hand, the legal minimum requirements

have become more restrictive compared to previous years. The main items produced within the state are lamina and plywood, linings, sticks, paper, furniture, finishes and frames that use wood from Parica plantations *(Schizolobium amazonicum)* (ABRAF, 2010).

In Acre and Amazonas, even though the legal guidelines are distinct, both are concise regarding the restrictions for forestry. In Acre, according to recent official records, there is no consolidated presence of activity in the state, and the same happens in Amazonas (IBGE, 2014). They are similar in the environmental aspect, regarding the Amazon Forest that occupies large territorial portions, so that the predominant forest activity is the exploration of products or by-products of the natural forest, as already mentioned, such as Brazil nut, açaí, rubber, oilseeds and wood.

According to Barros e Veríssimo (2002), the biome in which these northern states are located has huge forest resources, the potential economic value of which can reach 4 trillion reais in lumber; without considering all the crucial environmental services provided by this forest. In this aspect, greed, lack of technical qualifications and absence, or inefficiency, of policies to promote sustainable development depict a forest with large clearings, favoring the emergence of degraded areas, which leads to a loss of resilience, resulting in forest felling or burning. It is under these conditions that "traditional" forest plantations would be established, which, from the ecological, social and economic point of view, would not make sense.

Therefore, there's no understanding of large forestry enterprises regarding the economic advantage of moving to these areas, even when taking into account the requirement of the forest code to allocate 80% of the area of the forest property of the Legal Amazon to Legal Reserve (RL), despite the criticism of the last change in this issue**,** such as the inclusion of the Permanent Preservation Area (APP) in the RL calculation and the possibility of compensating the RL in another place, provided that it's within the same biome.

Southeast

The Southeast region is known as a strong part of the silviculture sector, featuring a total of 3,301,310 hectares of planted area, 3,110,620 hectares of which are dedicated to eucalyptus culture; 185,690 hectares dedicated to pine trees; and 5,000 hectares of other species' plantations (IBGE, 2015). According to IBGE (2016), Minas Gerais stands out as the state with the highest production, which is higher than that of all states in the Northeast, North, Federal District, Espírito Santo and Rio de Janeiro combined. Consequently, tied to this, is the state economic situation, which relies on a return of billions. The knowledge of these characteristics is of fundamental importance to evaluate the influence of environmental licensing in the establishment of optimal guidelines for the establishing of activities in the states.

A deadlock of this sector in Minas Gerais is that most of the companies that operate in the state are foreign, which means that they cannot legally acquire land in the country (AGEFLOR, 2015). Another obstacle is the bureaucracy of environmental licensing, as until 2016 the state followed the same guidelines that the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA) applies in federal projects, requiring three separate licenses. In February 2017, however, the Minas Gerais government issued a statewide decree altering licensing rules, making it possible to deliver the three separate licenses in a single step.

São Paulo was one of the pioneers in studies of the silvicultural activity in Brazil. In the last century, there were more studies regarding the implantation of

eucalyptus in the state territory, initially to produce wood for São Paulo railroads and, later, experiments with eucalyptus by the major researchers of the time (FERRARO et al., 2007). Possibly the activity in the state was favored by the climate and topography, reaching 1,101,608 hectares last year (IBGE, 2015). It can be inferred that the great tradition of the activity in the state has further favored the development of studies in the area and therefore influenced the establishment of simplified procedures for silviculture occupying up to 1000 hectares.

Another state of this region that deserves to be highlighted is the State of Espírito Santo. It is currently the seventh in the ranking of the states with the largest area of silvicultural activity in Brazil, with 280,106 hectares of forest plantations. This is due to the influence of a company with a strong presence in the cellulose and paper industries. However, the plantations are associated with small and medium producers, who own most of the land in the rural area and have entered in partnerships with companies from within the state and from the South of Bahia.

Considering that the field's activities are encouraged by large companies and that the areas of the properties do not exceed the dimensions for the minimum requirements regarding the licensing, which constitutes an incentive to foresters to remain in the activity and keep producing. This incentive practice, which has existed in the state for many years, becomes beneficial (INCAPER, 2015), especially to those who optimize space by interspersing their crops, since the economic incentives given can minimize the cyclical effects of price changes of the main crops in the rural areas of the state, especially coffee, on rural income (INCAPER, 2015).

Among the states of the Southeast, Rio de Janeiro has the smaller presence in the field of forestry. It was only in 2007 that the Law noº 5.067, that deals with the Economic and Ecological Zoning, defined parameters for silvicultural activity, promoting its development in some regions of the state. This law takes into account the hydrographic regions and the relief for issuing permits for the activities. Thus, the obtaining of the environmental license in the state varies from region to region, even being completely prohibited in some localities (TABLE 2).

The implementation of this standard was an important step for silviculture in Rio de Janeiro. According to FIRJAN (2009), when considering that smaller plantations do not cause major damage to the environment, thus being implemented with the requirement of a simple communication to the competent organ and a simplified procedure for the medium sized properties, in a way that was possible to generate greater interest of the rural producers and the expansion of the activity in the state, contributing both to environment conservation issues, reducing the pressure by the irregular exploitation of wood in the fragments of Atlantic Forest and to economic indicator.

TABLE 2. Technical Parameters for the Framing of the Activity of Economic Silviculture according to its Size for the purposes of Environmental Licensing, in the State of Rio de Janeiro

Scale (ha) (Hydrographic Region)	Small scale (Implementation Release)	Medium scale (LAS)	Large scale (LAS)	Large Scale LP/LIO (EIA/RIMA)
I – Baía de Ilha Grande	Not allowed	Not allowed	Not allowed	Not allowed
II – Guandu	Up to 20	Over 20 and	---	Over 200

III – Médio Paraíba do Sul		Up to 50	Over 50 and up to 200	---	Over 200
IV – Piabanha	Up to the altitude of 1200 meters.	Up to 50	Over 50 and up to 200	---	Over 200
	Over the altitude of 1200 meters	Up to 10	Over 10 and up to 200	---	Over 200
V – Baía de Guanabara		Up to 15	Over 15 and up to 200	---	Over 200
VI – Lagos and Bacia do São João		Up to 15	Over 15 and up to 200	---	Over 200
VII – Dois Rios	Up to the altitude of 1200 meters.	Up to 50	Over 50 and up to 200	---	Over 200
	Over the altitude of 1200 meters	Up to 15	Over 15 and up to 200	---	Over 200
VIII – Macaé and Rio das Ostras		Up to 20	Over 20 and up to 200	---	Over 200
IX – Baixo Paraíba do Sul		Up to 50	Over 50 and up to 200	Over 200 and up to 400	Over 400
X - Itabapoana		Up to 50	Over 50 and up to 200	Over 200 and up to 400	Over 400

South

The South Region, with 3,780,010 hectares, has the largest planted area, being 1,691,900 hectares occupied with eucalyptus; 1,861,414 hectares with pine trees; and 226,696 hectares with other species (IBGE, 2015). This may be related to the local climate, topographic feasibility, industrial poles of the sector and legislation that is favorable to the establishment of the activity.

Among the states, according to IBGE (2015), Paraná has the largest area in forest plantation (1,626,944 hectares), followed by Rio Grande do Sul (1,161,657 hectares) and Santa Catarina (991,409 hectares). This success has historical reasons, because, despite the disagreement in the literature, the introduction of the genus Eucalyptus, pointed by Foelkel (2005) by studying the books of Navarro de Andrade, like the work Andrade (1911), was attributed to the initiative of a major farmer in Rio Grande do Sul in 1868 (MARCHIORI, 2014).

The introduction of the genus Eucalyptus spp. was, despite many divergences in the literature, pointed out by the researcher Navarro de Andrade, in the year 1911, as the result of the initiative of a great farmer in the year of 1868 in Rio Grande do Sul (MARCHIORI, 2014). However, species of the genus Pinus turned up to be more suited to the climate and became predominant, supplying industries of the region that

used wood as raw material, such as the manufacturers of plywood. However, there is a tendency to substitute pine for eucalyptus, when compared to the occupation of areas by the crops of these genera during the last years. This can be attributed to the higher costs of maintenance and management of pine forests, in addition to the longer time to profit, caused by the time of rotation of the species.

There is a large contingent of small and medium-sized properties in this region. The ease of licensing in Paraná and Rio Grande do Sul may be one of the factors that contribute to a greater manifestation of forestry in these states. In addition, pinus culture influenced measures in the licensing legislation, in which the distinction between "forestry with invaders" and "forestry with non-invaders" is acknowledged, mainly being pinus and acacia. From this perspective, it is understood that the elaboration of detailed studies, such as the EIA / RIMA, generates higher costs to the silviculture producers, and thus, depending on the value added of the product and the quantity to be produced, silvicultural activities become unprofitable.

Central-West

The Central-West region is currently considered one of the new forestry frontiers (REIS et al., 2014). The main factors that influenced this process were: i) the agribusiness expansion, that demanded wood for energy purposes, showing a growth of 202% since 2006; ii) the cellulose and paper segment, that had an increase of more than 2,630% in the production of wood to meet the demand of facilities newly installed in Mato Grosso do Sul (IBGE, 2012); and iii) the population increase, which also generates wood consumption to serve several other purposes (REIS et al*.,* 2014).

From a description of the region, by Manzatto et al. (2002), it was possible to make inferences about why this area, especially the state of Mato Grosso do Sul, has been taking the spotlight in the silviculture business. The Brazilian Central Plateau characterizes the Central-West region, a vast surface flattened by natural erosive processes. The predominance of a warm and tropical climate with accentuated veranicos is a characteristic of the region, with great extensions of deep soils that are well drained and of low natural fertility that is easily corrected by fertilization and liming. Despite that they have favorable physical characteristics, besides the topographic conditions which allow intense mechanization (MANZATTO et al., 2002). For these reasons, the Central-West region has, therefore, become a strategic axis, which has made high investments in the silviculture segment possible.

This has led to the establishment of three major cellulose and paper companies in the last decade: Fibria, International Paper and El Dourado Brasil. The simplification of the licensing process, according to Chaebo et al. (2010), can be attributed as one of the main reasons for this expansion. The activity has been considered profitable for the producers of the Central-West states, as Santos (2011) explains which attracted investments for the activity.

In Mato Grosso do Sul, the silviculture activities began in the eastern part of the state due, according to Santos (2011), to the low relative value of the lands covering the cities of Três Lagoas and Ribas do Rio Pardo. Três Lagoas stands out for its strategic position that grants access to the main roads leading to São Paulo and Paraná, which favors the transportation of industrial products, being considered the largest pole of cellulose and paper in the entire country. In Mato Grosso, on the other hand, silviculture for the paper and cellulose industries is far more developed.

The considerable proportions of other species are attributed to teak plantations (Tectona Grandis), inserted in the region in the late 1960s for economic purposes by Silvicultura Cáceres S.A. (SCHUHLI; FILHO 2010). In Mato Grosso, the legislation regarding licensing has undergone recent changes, since 1995. Through the State Environmental Policy, agricultural activities, including silviculture, required the issuance of a Single Environmental License by the state environmental agency, which is responsible for supervising and monitoring the activity. The requirements of detailed studies were only required for activities occupying an area of more than 1000 hectares and are now necessary for plantings that occupy over 100 hectares. All those legal discrepancies outline both negative and positive points for the economic development of Brazilian states in the silvicultural field, taking licensing into account.

CONCLUSION

Locations that are controlled by environmental state offices, which have guidelines for the establishment of silviculture activities that are not as strict, tend to attract big ventures to their region. Validating this tendency, is the fact that in some Brazilian states, the environmental licensing is being decentralized from the state office to cities that have the minimum required technical staff, as to analyze and monitor local impact caused by the activity. Despite that, there is a smaller political coming from states with less tradition in silviculture, often applying the federal law as a criterion, or guidelines from other similar activities for silviculture. Regardless of the state's silviculture development, licensing for silviculture is less bureaucratic for small and medium-sized producers.

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