

BIODIESEL IN THE BRAZILIAN LEGAL CONTEXT

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ABSTRACT

It is within the current context of the environmental crisis that the demand for renewable energy acquires all its importance. In this sense, biodiesel appears as an interesting alternative, especially in Brazil, which has vast areas available for agriculture, abundant labor and appropriate technology. This work aims to analyze the legal regulation of biofuels in Brazil and, more specifically, biodiesel. Despite its advantages compared to fossil fuels, it is necessary to be cautious about the environmental and social impacts of this type of fuel. The need for a renewed legal framework that provides more effective incentives and better consideration of the ecological dimension of this type of fuel is what was found in the present work. The methodology used was the bibliographical and documentary research, for the reading of scientific articles and chapters of books, mainly official documents.

Keywords: Natural environment; Biofuels; Biodiesel.

*O BIODIESEL NO CONTEXTO JURÍDICO BRASILEIRO***RÉSUMÉ**

C'est dans le contexte courant de la crise environnementale que la quête pour des énergies renouvelables prend toute son importance. In this sense, biodiesel appears to be an interesting alternative, especially to Brésil, which is possible from the vast areas available for agriculture, from the main work and the technologie appropriée. Ce travail a comme objectif de faire une analyze of the legal regulation of biofuels in Brésil et plus spécifiquement du biodiesel. In the light of the advances made by the Member States in the field of fossil fuels, it is necessary to ensure that the environmental impacts of the type of carburant are respected. The legal basis of the law is that it is necessary to take account of the ethical dimension of the type of carburant which is to be found in the labor market. The méthodologie utilizes to été la recherche bibliographique et documentaire, en lisant des articles scientifiques, des livres et chapitres de livres, en plus des documents officiels.

Mots-Clés: *Environnement Naturel; Biocarburants; Biodiesel.*

INTRODUCTION

It is within the context of the environmental crisis, defined as a situation of shortage of natural resources and ecological disasters of planetary repercussions caused by human activities (LEITE, 2003, p. 21-22), that the discussion on renewable energy matrices is of particular importance. Fuels derived from fossil matter, such as petroleum, natural gas, and mineral carbon, which continue to account for most of the world's energy supply (LIMA, 2008, p. 20), are highly polluting and contribute significantly to global warming not to mention the fact that they are not renewable. As the international economy has evolved a lot in recent years, increasing considerably the demand for energy, a phenomenon that tends to develop more intensively in developing countries, like China and India (INTERNATIONAL ENERGY AGENCY 2007, p. 68), the search for an alternative that is viable from the ecological, economic and social point of view seems urgent.

In Brazil, biodiesel¹ is presented as one of the great alternatives for the substitution of fuels of fossil origin, when we consider the presence of vast extensions propitious to the culture of these biomasses and the existence of manpower and appropriate technology. This is indeed a unique opportunity to promote the reduction of regional and social inequalities and to the geological representation of the country, which affirms itself as an emerging international leader with regard to renewable energies and, in particular, fuels (INTERNATIONAL ENERGY AGENCY, 2007, p. 68). The study of the diversification of the energy matrix began to occupy an increasingly important place in the national political agenda, to such an extent that the Growth Acceleration Program provided for the application of seventeen billion and four hundred million Reais in the development and production of renewable fuels until December 2015 (SILVA, 2009, p. 12).

However, it is important that these public policies are implemented in the light of appropriate legislation, considering the strategic importance of the subject, since even the energy matrix considered proper are not free from questioning. Biodiesel has a relatively well-developed regulatory

¹ According to Pierre Sablière (2014, p. 1051/1052) a biofuel is a liquid hydrofuel obtained from vegetable or animal matter by extracting carbon chains which these materials contain. Biodiesel is a type of biofuel, such as bioethanol and biogas vegetable oil. For Jacques Vernier (2012, p. 87-89), bioethanol and biodiesel are the two most important species of biofuels.

framework, which should take into account environmental, economic and social aspects. The problem lies in the fact that this legislation is very recent, so much so that, although Law 6. 938/81 (National Environmental Policy) or Law 9. 478/97 (National Energy Policy), in its original versions, do not position themselves on this subject, in such a way that this legislation suffers from a lack of maturity and effectiveness.

The objective of this work is therefore to perform an analysis of the legal regulation of biodiesel in Brazil, in view of the intention to find out if the legislation in force is adequate and if there is an integration of the public policies of this sector. In this regard, the environmental framework of this fuel modality will be studied in the National Energy Policy, taking as reference the specialized doctrine and the Brazilian environmental and energy legislation. It will also be observed the possibilities of stimulating the production and promotion of the use of biodiesel through urban policy, although the competence to adjust and regulate² the sector is federal.

1 BIODIESEL

According to Assis and Zucarelli, biodiesel is a “liquid fuel derived from renewable biomass, produced from different raw materials such as castor, purge, palm, cotton, babassu, among others; animal fats; and waste oils.” (ASSIS; ZUCARELLI, 2007, p. 44). Article XXV of Law No. 9. 478/976 classifies biodiesel as the “fuel derived from renewable biomass for use in compression-ignited internal combustion engines or, in accordance with regulations, for the production of other types of fuel, which may partially or fully replace fossil fuels.”

In 1900, Rudolph Diesel presented at the Universal Exhibition in Paris, France, an engine developed under his care, which was based on peanut oil. Although the project, at the time, failed to demonstrate its economic viability, which is why it was abandoned, was at least the first experience with biodiesel of which we are aware.

In 1937, Charles Georges Chavanne obtained the first patent

² In Brazil, the discipline of the *lato sensu* economic activities - in this case, public services previously monopolized by the State - that have been opened to the private sector in the 90s of the last century - are the subject of a new field of administrative law, called right of regulation. For a broad view of the regulatory law in the Brazilian legal order, it is necessary to consult ARAGÃO, 2002. Similarly, for Frison-Roche, “the right of economic regulation is implanted, largely in the ruins of an economic organization built around state monopolies responsible for public services and in the perspective of globalization. (FRISON-ROCHE, 2004, 7)

filing in Brussels, Belgium, and in the following year presented the first commercial patent for biodiesel (MAIA, 2012, p. 19). The technique used was to blend the palm oil and ethanol, in order to obtain biodiesel through transesterification, which is still the most usual method for the conversion of triglycerides into biodiesel. According to Assis and Zucarelli, this technique “consists of a chemical reaction in alkaline medium, in which the reaction of vegetable oils or animal fats and an alcohol (ethanol or methanol) is promoted” (Assis and Zucellielli, 2007, p. 45). Although in 1938 biodiesel was first used in a commercial bus line in Brussels and Louvain, it is only an isolated experiment that has had no further development.

It is probably the context of penury that took place just before and during World War II (1939-1945), which forced a majority of *countries* involved in this drama to seek alternatives to petroleum-derived fuels, and vegetable oils proved to be a real alternative. The proof is the prohibition in Brazil, during this period, of exporting the cotton seeds, the most appropriate plant for obtaining the oil *in natura* (MAIA, 2012, p. 19). However, after the end of the conflict, due to various financial and technological obstacles, the researches were once again left out.

In Brazil, the first experiments with biodiesel were carried out on the occasion of tests executed in the 1920s by the National Institute of Technology (INT), which experimented with renewable fuels to develop alternative energy resources (SILVA, TRENTINI, 2009, p. 28). In the sixties, the Conde Francisco Matarazzo obtained biodiesel in its industries, when trying to extract oil from the coffee bean (LIMA, 2008, p. 108). However, these various initiatives were minor and isolated and did not yield any likely results.

Due to the oil crises of 1973 and 1979, linked to the phenomenon of regulation of the circulation of production by producing countries, which led to an increase in the price of a barrel, the issue of fuels derived from vegetable oils and animal fats resurfaced, taking a big spot in this scenario. Although greater efforts were concentrated on alcohol, more nationally than internationally, there were also repercussions on discussions and research on biodiesel. At that time, INT, the Technological Research Institute (IPT) and the Executive Committee of the Cocoa Culture Plan (CEPLAC) began to develop research on the use of vegetable oils as fuel, with one of the most interesting programs being DENDIESEL, aiming at

producing biodiesel from palm oil (MEIRELLES, 2013, p. 13).

With this same spirit, the Brazilian Military Regime launches the National Alcohol Program (Proálcool), *by means* of Decree No. 76. 593/75, in order to create real alternatives for large-scale replacement of the essence. This decree provided for the possibility of using cassava or any other product to obtain automobile fuel, so that, theoretically at least, biodiesel could also be capable of receiving the same measures of governmental incitement as those attributed to Pro-Alcohol. However, because of a significantly higher return on investment per hectare planted with sugarcane, only alcohol production would be destined to be a leading position in front of the Public Authorities and the market, in line with the name of the program (FARIAS, 2010, p. 125). It is undeniable that the already secular force of the sugar-alcohol economic sector, which sought to gain a place in the energy segment, contributed to this new framework in such a way that this political dimension can not be ignored.

It is in this context of the oil crisis that the Federal University of Ceará (UFC) created in 1978 the Nucleus of Non-Conventional Energy Resources, with the objective of developing alternative energy sources, which included research on biomass (FERREIRA, 2010, p. 92-93). In 1980, Professor Expedito Parente, from UFC, applied to the National Institute of Industrial Property (INPI) to register two licenses concerning biodiesel; in 1983, the IP license no. 8007957 was granted, referring to the “Process of production of fuels originating from fruit or oleaginous grains”.

In 1983, the Federal Government, through the Secretariat of Industrial Technology, launched the National Vegetable Oils Program (OVEG), which carried out tests with transesterified vegetable oils, pure or mixed with diesel, in a proportion of 30% in vehicles that they came to cover more than a million kilometers (COSTA NETO; ROSSI; ZAGONEL; RAMOS, 2000, p. 534). The trucks, buses, and tractors presented satisfactory results, mainly because the engines did not undergo particular adaptations to be fed in diesel, which proved, therefore, the technical viability of the alternative fuel (COSTA NETO; ROSSI; ZAGONEL; RAMOS, 2000, p. 534-535). However, high production costs compared to diesel oil did not allow biodiesel to enter the fuel market at that time (MEIRELLES, 2013, p. 13).

Due to the increase in diesel prices in the 1990s, the Federal Government began to show a certain interest in the development of biodiesel as a real alternative energy and launched in 2002, through the Ministry of Science and Technology, the Brazilian Program of Technological Biodiesel Development (Probiodiesel), through the intermediary of Ordinance No. 702, aiming to promote the scientific and technological development of biodiesel from ethyl esters of pure or residual vegetable oils. In 2003, the Ministry of Mines and Energy launched the Green Fuel Program, establishing an objective of producing one million five hundred thousand barrels of biodiesel and insisting on the promotion of employment and wages in rural areas (SILVA; TRENTINI, 2009, p. 28-29).

In 2004, the Federal Government launched the National Program for the Production and Use of Biodiesel (PNPB) of the Ministry of Agriculture, Livestock and Food Supply (MAPA), the Ministry of Mines and Energy (MME) and other federal agencies, in an effort to create a more complete program than Probiodiesel³. Although this policy is essentially energy, the Federal Government has sought to establish a series of environmental, economic and social objectives, the main guidelines of which would be to implement a program capable of promoting social inclusion, stock, competitive price, quality and diversity of oil sources and producing regions (NODARI, 2010, p. 57).

However, Law 11. 097/05 was really a reference in the legal area of biodiesel, consolidating the PNPB, by allowing the introduction of the PNPB in the Brazilian energy matrix and by amending Law 9. 478/97. The *caput* of article 2 of Law 11. 097/05 set a mandatory percentage of 5% minimum addition of biodiesel to the diesel offered to the final consumer, extended throughout the national territory. This fact represented an important point in the National Energy Policy because this was the first effective legal measure with great impact on the economic inclusion of a biofuel other than alcohol⁴.

3 The entry into force on 16 February 2005 of the Kyoto Protocol makes it even more relevant to take action in the energy sector around the world in order to reduce greenhouse gas emissions and to reduce energy dependence. To see in the French context. . . , consult LONDON, 2005, étude 30.

4 Among the advantages of this fuel, Rubens Onofre Nodari highlights the following points: "It is a renewable energy and consisting of carbon, which is captured through photosynthesis by plants which in turn produce and store vegetable oils, or even the anabolism of animals that produce fats"; "It is an economical alternative to fossil fuel, which is limited"; "When it burns, it only produces water and carbon dioxide, thus contributing to the avoidance of greenhouse gas emissions"; "It is less polluting than diesel, since it does not contain sulfur (S) in its molecular structure and, as a consequence, does

It is necessary to highlight the versatility of biodiesel that can be mixed with petroleum derivatives - since it can be used in a diesel engine without the latter suffering some kind of private adaptation (CUNHA, 2008, p. 449) - as well as completely replacing these same derivatives. This means, therefore, that biodiesel, by consolidating its nobility titles as a future option, is also a possible way to prolong the life expectancy of the oil sector.

In fact, the PNPB was also thought of as a way to guarantee the autonomy for the national consumption of diesel oil (ASSIS; ZUCARELLI, 2007, p. 47), so that biodiesel could be an autonomous fuel but also a fuel that assist in the petroleum sector. This means, therefore, that the euphoria surrounding the exploration of the “pre-salt”⁵ is not an obstacle, even if its success or failure can contribute to the development of the biodiesel industry in a more or less important way in the not so distant future.

Finally, if it is true that the costs of biodiesel remain high when compared to those of ordinary diesel, it seems judicious to specify that this difference tends to decrease due to the increase in the production scale of the latter. The continued aggravation of the environmental problem is also increasing the space of renewable fuels; the latter show even more the assets at the social level, which are not negligible. The reflections around the durable city are also responsible for the idea that biodiesel can be a new alternative to improve the quality of life in this city. A report on “Biofuels for Transportation”, produced in 2006 by the World Watch Institute (2006, p. 38), proved Brazil’s leading position in this area and listed its advantages, such as energy security, local pollution reduction and

not generate undesirable sulfur secondary compounds, which are contaminating elements of the Earth’s atmosphere”; “It will contribute to increasing the number of jobs in the primary sector”; “It offers an alternative of self-sufficiency for family farming, because the farmer who produces vegetable oil or alcohol can use it as it is or turn it into fuel”; “It is a strategy of reducing agricultural production costs if used locally, since vegetable oil or alcohol does not need to travel thousands of kilometers, nor are they taxed like petroleum products”; “It is an excellent fuel that increases the life of the engine and, if we consider its physicochemical characteristics, maybe mixed with diesel, it has a higher octane number than diesel, allowing greater self-propelled torque that it uses”; According to the agricultural policy found by the government, it can be a source of employment and wages, avoiding or minimizing the migration of populations from rural to urban areas. “ (NODARI, 2010, p. 57-58).

5 Pre-salt is the name given to the first hydrocarbons reserves in limestone rocks that are located under the salt layer. It is the oil (petroleum) discovered in layers from 5 to 70,000 meters deep below sea level. These reserves propagate about 800 kilometers long to 200 kilometers wide and go from the coast of the State of Santa Catarina to the literal of the State of Espírito Santo. Professor Angela Moulin Penalva Santos (2015), who is also part of the research on Renewable Energies, Decentralization and the Role of Federal Entities, wrote an economic analysis on this phenomenon, in which there is a decrease in the stimulus to the production of renewable energies in the Brazil, just after the discovery of the pre-salt. (in the press).

greenhouse gas emissions, for which urban planning rules can be fully operational⁶.

2 LEGAL REGULATION OF BIODIESEL

The most important Brazilian legal norm in the energy sector is Law No. 9. 478/97, which deals with the National Energy Policy and activities related to the oil monopoly, in addition to establishing the National Energy Policy Council (CNPE) and the National Petroleum Agency (ANP). This law was created to establish the legal regulation of the exploitation of energy sources and resources of the country, representing, in fact, its main legal reference⁷.

However, after its original wording, the regulation of the oil and natural gas sector has appeared as the main element of the law, to the detriment of the other segments that make up our energy matrix (ANTUNES, 2012, p. 1003-1004). This is so true that most studies on this standard simply accentuate these two types of fuels (COSTA, 2007, p. 23-29; GARCIA, ROCHA, 2005, p. 257-287; LEITE, GUTMAN, 2007, p. 31-39). The explanation is that this law arose in the context of Constitutional Amendment No. 09/95, which revoked the monopoly of the Union on the activities of the oil industry and delegated to the ordinary law the regulation of the matter, changing article 177, § § 1 and 2 of the Constitution of the Republic⁸.

6 In 2000, the European Commission is moving ahead with a goal of replacing 20% of diesel and the essence used in road transport with replacement fuels by 2020. However, the initiative also included natural gas and hydrogen. According to Bernadette Le Baut-Ferrarese and Isabelle Michallet, “it is in fact the European biofuels directive used in 2003 the first to issue true quantitative targets for biofuels used in vehicles [in the light of the finding that] “road transport represents about 30% of the European Union’s final energy consumption and about 20% of total greenhouse gas emissions” within its territory (BAUT-FERRARESE, 2008-2012, p. 465). According to Sablière (2014, p. 1057), in France “biofuels benefit from a tax system designed to promote their development in accordance with European directives. “

7 Federal Law no. 9. 427/1996, in turn, regulated the electric energy sector and also created the Electric Energy Agency (ANEEL), a municipality under a special regime, which regulates the sector, mainly concessions, permits and authorizations to operate. However, there is little interest - to say no, once the exploitation of hydronic energy is regulated - by alternative energies.

8 Art. 177. It is a monopoly of the Union: I - the search for and exploration of deposits of oil and natural gas and other fluid carbonates; II - the refinement of domestic or foreign oil; III - the import and export of the basic products and derivatives resulting from the activities provided for in the previous provisions; IV - the maritime transportation of crude oil of domestic origin or of basic petroleum products produced in the country, as well as the transport, by means of pipelines, of crude oil, its derivatives and natural gas of all origin: [...] § 1 The Union may conclude contracts with state or private companies to carry out the activities set forth in provisions I to IV of this article, observing the conditions established by law. § 2 The law referred to in § 1 shall deal with: I - the guarantee of the acquisition of petroleum derivatives throughout the national territory; II - the conditions of supply

In that regard, the law did not forget to refer to alternative fuels in its original wording, when determining in Article 1, IV and VIII, respectively, that the National Energy Policy shall aim at the protection of the natural environment and the use of alternative sources with the economic valuation of the available materials. On the other hand, Article 2, III establishes as one of the attributions of the CNPE the periodic review of the energy matrices used in the different regions of the country, in which alternative sources should also be taken into account.

It is an indirect reference to biodiesel, and to fuels in general, considering that all alternative fuels would be involved. However, it is important to note that this did not provoke specifically practical effects, explained by the fact that the legislative treatment of the subject was initially scattered and superficial.

It is only with Provisional Measure nº 214/04⁹, converted into Law 11. 097/05, dealing with the introduction of biodiesel in the Brazilian energy matrix, which we have legislated in a more detailed way on this subject. From this law, biodiesel took a more substantial space in the National Energy Police, because it modified several points of Law 9. 478/97, changing the name of the ANP, which became the National Agency for Petroleum, Natural Gas, and Biofuels. Although not a terminological issue, the importance of this change cannot be neglected, supposing that it symbolizes the intention of Public Authorities to prioritize this energy matrix and not to reduce national public policy to fossil fuels¹⁰.

In this situation, it seems evident that the regulatory agency responsible for the oil industry began to regulate, at the same time, the economic activities linked to biodiesel and biofuels in general. Law No. 11. 097/05 also amended Law 9. 847/99, which deals with the control of activities related to the national supply of fuels and establishes administrative sanctions in case of non-compliance with legal provisions; it allowed the production, import, export, storage, stocking, distribution, contract; III - the structure and attributions of the regulatory body of the Union monopoly [...].

9 In Brazilian constitutional law, the Provisional Measure (MP) is an act of the president of the republic, having the force of law without the participation of the Legislative Branch, which will only be called upon to discuss this measure later, having the competence to convert the Provisional measure in law or not, a hypothesis in which it becomes necessary to discipline the legal reports that were carried out until the release for non-conversion. The pre-requisite criteria of the MP, according to Article 62 of the Federal Constitution, are urgency and pertinence.

10 It is worth ratifying that, although it is the competence of the Union to discipline energy, it is also possible for municipal legislators to stimulate biodiesel production under a policy of durability of the city, either by extra-fiscal measures or by urban laws.

resale and commercialization of biodiesel to be equally subject to public control.

Administrative infractions related to biodiesel and biofuels are generally punished by means of administrative sanctions provided for by Law No. 9. 847/97, which can only be applied by the ANP control sector. At the same time, the three small penalties imposed by the Ministry of Agriculture, Fisheries and Food Supply (MAPA) are no longer applied to the biofuels industry, which is classified in section 6 of Law 9. 478/97 as “the set of economic activities linked to production, import, export, transfer, transportation, storage, marketing, distribution, conformity assessment and biofuel quality certification” and the new penalties that prevailed were the following¹¹.

11 Art. 2º. Violators of the provisions of this Law and other standards relevant to the activities of the petroleum industry, the biofuels industry, the national fuel supply, the National Fuel Stock System and the Annual Strategic Stocks of Fuels Plan will be subject to the following administrative sanctions, without prejudice to applicable penalties or penalties of a civil and criminal nature: I - Fine; II - seizure of goods and products; III - loss of seized products; IV - cancellation of the registration of the product in the ANP; V - suspension of the supply of products; VI - temporary suspension, total or partial, of functioning establishment or installation; VII - cancellation of establishment or installation registration; VIII - revocation of authorization for the exercise of activity. Single paragraph. The penalties provided for in this Law may be applied cumulatively.

Art. 3º. The penalty of a fine imposed when the violation is committed, within the following limits: I - to carry out an activity related to the petroleum industry, the biofuel industry, the national fuel supply, the National Fuel Stockpile System and the Annual Fuel Inventories, without prior registration or authorization required by current legislation: Fine - from R\$ 50. 000,00 (fifty thousand reais) to R\$ 200. 000,00 (two hundred thousand reais); II - to import, export or market petroleum, natural gas, its derivatives and biofuels in quantity or specification different from that authorized, as well as to give the product a destination that is not permitted or different from that authorized, according to the form established by the legislation in force: R\$ 20. 000,00 (twenty thousand reais) to 5. 000. 000,00 (five million reais);

III - failure to comply with the prices established by the legislation in force for the sale of oil, its basic products and their products, natural gas and condensate, and ethyl alcohol in the form of fuel: Fine - R\$ 5. 000,00 (five thousand reais) to 1. 000. 000,00 (one million reais); IV - do not register or do not fill in the books or other documents according to the legislation in force or do not present them, when your request is made: Fine - from R\$ 5. 000,00 (five thousand reais) to 10. 000,00 (ten thousand reais); V - make statements or give false information, falsify, adulterate, make unusable, simulate or change records and transfers of deeds and other documents required by the legislation in force: Fine - from R\$ 20. 000,00 (twenty thousand reais) to 1. 000. 000 (one million reais); VI - do not present, in the form and deadlines established by the legislation in force or in their absence, within 48 (forty eight) hours, the documents proving the authenticity of production, importation export, refinement, recovery, treatment, processing, transportation, transfer, interchange, storage, distribution, resale, disposal and natural gas, its derivatives and biofuels: Fine - from R\$ 20. 000,00 (twenty thousand reais) to 1. 000. 000,00 (one million reais); VII - make statements or give false information, falsify, adulterate, render unusable, simulating or altering records and transfers of deeds and other documents required by the legislation in force, in order to receive value garments as a tax benefit, subsidy, reimbursement of freight, transfer expenses. Stocking and commercialization: Fine - from R\$ 500. 000,00 (five hundred thousand reais) to 5. 000. 000,00 (five million reais); VIII - failure to comply with the safety regulations foreseen for the trade or storage of fuels, directly and immediately endangering life, physical or health integrity, public or private property, public order or the regular national fuel supply: Fine - R\$ 20. 000,00 (twenty thousand reais) to 1. 000. 000,00 (one million reais); IX - construct or operate the facilities or equipment necessary for the exercise of the activities related to this law in disagreement with the current legislation: Fine - R\$ 5. 000,00 (five thousand reais) to 2. 000. 000,00 (two million

It is important to note that Law No. 9. 478/97, even after the amendments to Law 11. 097/05, made no direct reference to other forms of biofuels other than biodiesel. The importance given by this same law to biodiesel can be justified by the lack of research and planning compared to other types of biofuels, but not in relation to alcohol, which is much older in the Brazilian energy matrix than biodiesel or any other kind of biofuels.

With these changes, the name “biodiesel” began to be quoted more often in this law than the name “biofuel”, a fact that is minimally contradictory, considering that the latter represents a category, while the former is an ingredient. In fact, this framework was modified with Law No. 12. 490/2011, which introduced numerous references to biofuels.

Undoubtedly, the most important point of Law 11. 097/05, arising from the amendment of Law 9. 478/97, was the introduction of its *caput* of art. 2° of a mandatory minimum percentage of 5% of biodiesel added with diesel oil made available to the final consumer at every point of the national territory. The deadline for the application of this percentage was fixed eight years after the publication of this law, even if the fuel should already, at the end of three years, present a minimum percentage of 2%, in accordance with the determination of § 1 of the aforementioned provision.

reais); X - save, conceal products: Fine - from R\$ 50. 000,00 (fifty thousand reais) to the amount of R\$ 1. 000. 000. 00 (one million reais); XI - to import, export and commercialize oil, natural gas, its derivatives and biofuels, in addition to technical specifications, with defects of quality or quantity, including those that arise from the disparity with the particulars entered on the container, the packaging or the label, which make them unfit or unsuitable for consumption for which they are intended or which reduce the value: Fine - from R\$ 20. 000,00 (twenty thousand reais) to R\$ 5. 000. 000,00 (five million reais); XII - to not communicate information to the register or alterations of information already registered in the competent body, the change of the corporate name or the fancy name and the address, following the established conditions: Fine - from R\$ 5. 000,00 (five thousand reais) to R\$ 10. 000,00 (ten thousand reais); XIII - to conceal, violate or render unusable a seal, a stamp or an authentication mark, used by order of inspection, to identify or close a establishment, installation, equipment or construction site: Fine - from R\$ 50. 000,00 (fifty thousand reais) to 1. 000. 000,00 (one million reais); XIV - diverting, displacing, altering or selling a product stored in an establishment or an installation suspended or interdicted under the terms of this Law: Fine - from R\$ 5. 000,00 (five thousand reais) to R\$ 100. 000,00 (one hundred thousand reais); XV - cease to provide consumers with information provided by the legislation in force or provide it in disagreement with the same legislation: Fine - from R\$ 5. 000,00 (five thousand reais) to R\$ 50. 000,00 (fifty thousand reais); XVI - not having complied with a notification for the presentation of documents or for a demand for determination required by the legislation in force, since such an obligation does not represents, per se, a fact already defined as an infraction in the present law: Fine - from R\$ 5. 000,00 (five thousand reais) to 100. 000,00 (one hundred thousand reais); XVII - can not prove guideline or delivery of manuals, documents, forms and necessary equipment according to the form defined by the legislation in force: Fine - from R\$ 10. 000,00 (ten thousand reais) to 500. 000,00 (five hundred thousand reais); XVIII - do not have the necessary equipment to check the quality, the quantity stocked and marketed of products derived from petroleum, natural gas and its derivatives, and biofuels: Fine - from 5. 000,00 (five thousand reais) to 50. 000,00 (fifty thousand reais); XIX - do not send, in the form and the period of time established in the legislation in force, the monthly information on the activities: Fine - from R\$ 20. 000,00 (twenty thousand reais) to 1. 000. 000,00 (one million reais).

Of course, this obligation was certainly the most concrete measure for the dissemination of biodiesel in the Brazilian energy matrix.

It is observed that, after January 1, 2010, national diesel oil already contains 5% biodiesel, in accordance with CNPE Resolution 6/2009, in order to achieve the objective well before the legal process, corroborating, thus, the success of **PNDB**. Brazil is truly one of the world leaders in the manufacture and consumption of biodiesel, having reached the production of 2.4 billion liters and a production capacity of 5.8 billion liters (NATIONAL PETROLEUM AGENCY, NATURAL GAS AND BIOFUELS 2013). Proof of this is that the percentage can be increased at all times to meet the value of 6 or 7%, and can reach 20% by 2020. The MAPA forecast is that by 2035 the country could produce an approximate volume of 50 billion liters of biodiesel per year, only for the domestic market (ASSIS; ZUCARELLI, 2007, p. 49), which means that expectations of the Federal Government are really promising.

A few months after the publication of Provisional Measure No. 214/04, another was published, Provisional Measure No. 227/04, which was transformed into a law (Law No. 11.116/2005), dealing with the special registration of the producer or importer of biodiesel in the Secretariat of the Federal Revenue of the Ministry of Finance, and the incidence of the contribution to PIS/PASEP and COFINS on revenues from the sale of this product. The purpose of this operation was to make biodiesel competitive in the market. In effect, there are at least six different types of taxes that affect Brazilian fuels, such as the Contribution for Intervention in the Economic Domain (CIDE), the Social Integration Program (PIS), the Contribution to the Financing of Social Security (COFINS) and the Tax on the Circulation of Goods and the Provision of Interstate and Intermunicipal Transportation and Communication Services (ICMS)¹².

Thus, the intention is to reduce the burden of tax contributions on biodiesel production that can be reduced completely in the case of members of the family agriculture of the North, Northeast and Semi-Arid regions covered by the National Program for the Consolidation of Family Agriculture (PRONAF) and the holders of the concession to use

¹² With regard to extra-fiscal urban land regulations, the reduction of the Urban Construction and Territorial Tax, which is the responsibility of the Brazilian Municipalities, for real estate connected, albeit indirectly, to the competence des Municipalités brésiliennes, pour les immeubles liés, ainsi which indirectly, to the biodiesel production network or by the one in which the fuel is sold may be another alternative of extra charge for the service of the non fossil fuels and the durable city.

the “Social fuel seal”, which consists of a set of specific measures aimed at encouraging the social inclusion of agriculture in this production chain. In order to regulate the matter, Decree No. 5297/04 was published; deals with the coefficients of reduction of the respective percentages of the contributions mentioned above and the terms and conditions for the use of these differentiated percentages¹³.

In addition to the tax exemption, the “Social Fuel” seal is a prerequisite for participation in ANP’s biodiesel purchase auctions and for obtaining better financing lines from the National Development Bank (BNDS) and other financial institutions of companies or biodiesel production projects (NODARI, 2010, p. 57). However, in order to obtain such benefits, it is necessary to acquire minimum percentages of raw

13 Art. 2º. A “Social Fuel” stamp has been established, which will be granted to the biodiesel producer, which allows: I - to promote the social inclusion of the family farmers participating in the National Program for the Consolidation of Family Agriculture (PRONAF) that supply the raw material; II - prove the regularity to the Unified Providers Registration System- SICAF. § 1 To promote the social inclusion of family farmers, the biodiesel producer must: I - acquire from the family farmer a farm not less than a percentage to be defined by the Ministry of Agriculture II - enter into contracts with family farmers, specifying the commercial conditions that guarantee an income and the terms compatible with the activity, according to the conditions to be established by the Ministry of Agrarian Development; III - to provide technical assistance and training to farmers. § 2 The percentage defined by item I of § 1: I - may be differentiated according to the region; II - shall be stipulated according to the annual purchases of raw material made by the biodiesel producer. § 3º The stamp “Social Fuel” may, in relation to the biodiesel producer:

- grant it the right to specific public policy benefits to promote the production of renewable fuels, integrating social inclusion and regional development, II - be used for the commercial promotion of its production.

Art. 4º. The differentiated reduction coefficients of the Contribution for PIS/PASEP and COFINS, provided for in § 1 of art. 5 of Law no. 11.116, 2005, shall remain as follows: I - 0,8129 for biodiesel manufactured from MAMONA or the palm fruit, kernel or almond produced in the North, Northeast and Semi-arid regions; II - 0,9135 for biodiesel manufactured from raw materials that the PRONAF family farmer will make available; III - 1,00 for biodiesel manufactured from raw materials produced in the North, Northeast and Semi-arid regions, from the family agriculture covered by the PRONAF. § 1 With the use of the coefficients defined in items I, II and III of the title of this article, the respective percentages of the PIS/PASEP and COFINS contribution that have an effect on the gross revenue obtained by the producer on the occasion of the sale of the biodiesel, are reduced by: I - R\$ 22,48 (twenty-two reais and forty-eight cents) and R\$ 103,51 (one hundred and three reais and fifty-one cents), respectively per cubic meter of biodiesel produced from castor or fruit, seed or palm kernel produced in the North, Northeast and Semi-arid regions, - R\$ 10,39 (ten reais and thirty-nine cents) and R\$ 47,85 (forty and seven reais and eighty-five cents), respectively, per cubic meter of biodiesel manufactured from raw materials from the family agriculture covered by PRONAF. III - R\$ 0,00 (zero), per cubic meter of biodiesel manufactured from materials produced in the Northern, Northeastern and Semi-Arid regions of the family agriculture covered by PRONAF. § 2 The biodiesel producer, in order to use the differentiated reduction coefficient referred to in items II and III of § 1 of this article, must be a holder, in a regular situation, of the concession of use of the seal “Social Fuel” treated in art. 2º of this Decree. § 3º In the case of the acquisition of raw materials that allows the application of different rates of rebates for the gross revenue from the sale of biodiesel, the discount rates referred to in § 1 of this article must be applied proportionally to the cost of acquisition of the raw materials used in the reference period. § 4º In what corresponds to the effects of paragraph 3 of this article, in the case of own production of raw material, it must be appraised at the lowest purchase price of raw material of during the reference period. § 5 The discount rates in this article do not apply to revenues from the sale of imported biodiesel.

material from family farms, to undertake a commitment to purchase production at predetermined prices and to fulfill the obligations to provide services, such as technical assistance to farmers (ASSIS; ZUCARELLI, 2007, p. 46).

This means, therefore, that we should follow the minimum percentage of raw materials purchased from family farmers, according to the region in question, so that the PNPB seeks to enable the reduction of regional and social disparities, an economic principle provided for in art. 170 VII of the Constitution of the Republic. The matter is also regulated by means of the Normative Instructions of the MDA, as in the case of these: nº 1/2005, nº 2/2005, nº 1/2009 and nº 1/011, which allow family farmers to participate in the production chain as partners or associates of companies or through associations or cooperatives.

Nothing prevents the “Social Fuel Seal” from being used for an environmental purpose, reducing or prohibiting the allocation of benefits to the regions that we wish to protect, such as certain areas of the Amazon biome or parts of the caatinga or cerrado, since the same instrument can serve to stimulate or break this industry. It is undeniable that this will not constitute an interdiction, which can not be decided except by means of an adequate agri-environmental delimitation, consisting of organizing the use and occupation of the soil, in an administrative way and considering the natural vocation of the environment (MORAES, 2011, p. 85-86). Decree nº 4. 297/2002 regulates the article. 9, II, of Law 6. 938/81 and establishes criteria for an Ecological-Economic Cartography, whose objective is to “organize, in a mandatory manner, the decisions of public and private agents regarding plans, programs, projects and activities that, directly or indirectly, use natural resources, thus ensuring full conservation of the capital and environmental services of ecosystems”.

In fact, this law is advanced with respect to economic and social issues, especially if we compare it to the legal structure of alcohol - biofuel of better energy efficiency (SANTOS, 2013, p. 141), but whose monoculture production system does not allow the insertion of small producers. In this respect, the environmental issue should have been better observed because there should be a large number of more effective legal provisions. This is an unacceptable contradiction, as the international community has warned of the negative environmental impacts of biodiesel and of fuels

in general¹⁴ (SIRVINSKAS, 2009, p. 320). Particular care must be taken with monoculture, with the advancement of the Amazon biomes and the cerrado, as well as with regard to the decline of family farming and the planting of food products (ASSIS; ZUCARELLI, 2007, p. 55) within a food security, which should be the subject of special attention under the granting of environmental authorization (FARIAS, 2013, p. 41-45).

If the ecological benefits brought by biodiesel are evident, it does not mean that their environmental impacts should be ignored by the Public Authorities. In fact, it is symptomatic that neither the ANP nor CONAMA published a specific standard establishing the environmental quality references or the environmental approval system for biodiesel. The problem is that in the face of a concrete fact, the administrations in charge of the environment cannot be based on norms or references of environmental quality, linked to other energetic matrices existing in the country or even to the agricultural sector, which can cause certain damages to the natural environment and the quality of life of the community. That is, even if biodiesel is strongly positioned as evidence, due to its ecological dimension, its legal structure focused primarily on economic and social aspects to the detriment of the environment. It is now necessary to harmonize them.

FINAL CONSIDERATIONS

By amending Law 9. 478/97, Law 11. 116/05 established a specific legal difference for the production and import of biodiesel, although it refers to biofuel in general, compared to certain points. This law allowed the production chain of biodiesel and biofuels, in general, to be regulated and, consequently, controlled and verbalized by the ANP, whose administrative sanctions are more effective than those previously applied by MAPA.

The biggest advance was probably the establishment of a mandatory minimum percentage of 5% increase of biodiesel within eight years. The proof is the fact that since January 1, 2010, the national diesel oil already contains 5% of biodiesel, making Brazil one of the world leaders

14 Two studies carried out in France, completed in 2012, confirm the importance of land use changes (CAS) linked to the development of energy crops in biofuels in France and the European Union and confirm the studies carried out by the European Commission (EC). In spite of the methodological difficulties to quantify this phenomenon, it is important to take into account the indirect impacts of CAS in the face of biofuel development policies (MINISTRY OF ECOLOGY, DURABLE DEVELOPMENT AND ENERGY, 2013).

in the manufacture and consumption of biodiesel; the success of the PNPB is therefore evident.

If the ecological benefits brought by biodiesel are evident, it does not mean that their environmental impacts should be ignored by the Public Authorities. With and without it, it is symptomatic that neither the ANP nor CONAMA did not forget a specific standard establishing the references of environmental quality or the system of environmental homologation of biodiesel. The problem is that in the face of a concrete fact, the administrations in charge of the environment cannot be based on norms or references of environmental quality, linked to other energetic matrices existing in the country or even to the agriculture sector, which can cause certain damages to the natural environment and to the quality of life of the collectivity. That is, even if biodiesel is strongly positioned as evidence, due to its ecological dimension, its legal structure focused primarily on economic and social aspects to the detriment of the environment.

A specific tax regime was adopted for biodiesel, adopting a model of calculation and rate of the contribution of PIS/PASEP and CONFINS on the gross revenue obtained by the producer or importer. To this end, the inclusion of family farmers and the priority given to the poorer regions of the country, as in the case of the semi-arid region, is fundamental. This is the reason why a “social fuel seal” was established, a precondition for being able to compete in ANP’s biodiesel auctions and to obtain better financing lines from the BNDES and other financial institutions¹⁵. Extra-fiscal stimuli may not be limited to national legislation, but also by means of urban planning that adopts the stimulating measures for their production, distribution or use, within a framework of balance with the possible dangerous consequences for the environment, even in rural areas, initially outside the competence of urban planning, since it is also necessary to take into account the effects of urban public policies on the countryside.

The lack of trade union organization of farmers is a serious problem because public policies are designed and implemented without the presence of workers’ collective representation, so that social participation leaves something to be desired. The Public Authorities should more effectively encourage the creation of cooperatives of farmers in the biodiesel chain. On the other hand, environmental issues should also be incorporated into

¹⁵ In France, incentives to promote renewable energy that occur through biofuels can occur with the fiscal approval technique. (LQNDBECK, 2007, p. 1).

the social problems, especially as small farmers do not have the means to combat environmental degradation. It would be interesting to create a legal reference for biofuels in general, which could also include alcohol, and could address the issue in a more profound and holistic way, either from an environmental perspective or from a prism of durable city law.

Although they are incorporated into the Brazilian energy matrix, the fact is that the production and use of biodiesel are still in the initial phase, when we compare them with the existing expectations regarding this subject. Tax incentives at the state level are timid and almost always such policies are limited to the creation of a program or policy and the establishment of a committee or a management council. It should be pointed out that the greater aid from the Public Authorities to the production of biodiesel is, in fact, of an economic and social order; ecological protection was not defined as a priority since no concrete device was actually created. As Aristotle said, virtue is in the middle.

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