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# AGRICULTURE AND BRAZILIAN ENVIRONMENTAL LEGISLATION

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## I. AGRICULTURAL ZONING

### *A. Federal Constitution*

Continued productivity increases from the use of land are dependant on increased protection of Brazil's environment. Environmental concerns were included in the National Plans for Development II and III: The latter plan is currently in force. Additional plans governing the use and occupation of land in Brazil include: the plan against erosion (Law 6.255/75), the national irrigation plan (Law 6.662/79), and the plan of land reform (Law 4.504 of November 30, 1964). The "ecological-economical zoning of Amazonia" is also under study. These plans often are interlinked or overlap and depend on different Ministries for enforcement - some on the Ministry of Agriculture and others on the Ministry of the Interior.

Implementation of these plans has been limited by constitutional restrictions on expropriation of property. Besides Art. 172, the Constitutional Amendment of 1969 established specific property rights including:

> 1. The right of property is assured, except for expropriation for public necessity or use or in the social interest, by way of previous and just payment in money, excepting the provision in Art. 161, which permits the owner to accept payment in public bonds that include clauses of exact adjustment for elapsed inflation. In case of imminent public danger, the competent authority can use private property, assuring the owner of later indemnification" (Art. 153, paragraph 22). 2. "The Union can expropriate rural territorial property by way of just payment, determined according to criteria established by law, using special titles of public debt, with clauses of exact adjustment for elapsed inflation, to be redeemed within twenty years, in annual successive parts, assured of acceptance at any time, as way of payment of up to fifty percent of the rural land tax and as payment of the price of public land" (Art. 161, caput).

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3. Expropriation can only occur in areas included in priority zones, and can be invoked in rural properties for which uses are contrary to ones established by law (Art. 161, paragraph 2).

It behooves us to look in Brazilian law for principles of land use regulation. We find in the Statute of Land (Federal Law 4.504 of November 30, 1964) that expropriation, in the social interest, can occur to "compel the rational exploitation of land" (Art. 18, paragraph c), "renovate and enhance natural resources" (Art. 18, paragraph f) and create protected areas for fauna, flora or other natural resources, to preserve them from destruction" (Art. 18, paragraph h). Noteworthy is Art. 2, paragraph 1(c) of the Statute of Land, which states that "the property of land accomplishes its social role completely when its use assures, along with other benefits, the conservation of natural resources." The Italian Professor Antônio Carroza praises this provision, finding it "very clear and explicit," alongside the laws of Ecuador (Law 1.172 of October 9, 1973), the Portugese Constitution of 1946 (Art. 103), the Spanish Constitution of 1978 (Art. 45, paragraph 2) and the Italian Constitution (Art. 44). He notes that the expression "rational exploitation of land" emphasizes the productive component of land; this does not stop us from understanding a second precept: increased productivity, in proportion to possibilities, cannot be obtained when nonrenewable or scarce natural resources are damaged.[1]

### *B. Environmental Laws*

Environmental zoning was included in the Law of National Politics of the Environmental as a power for the law's enforcement (art. 9). Nevertheless, zoning was not detailed within the law, nor in rules implementing the law. However, the law clearly gives the national government power to set environmental policy.

It is important to note that there are interests that supersede local environmental interests - national and state interests. Limitation of enforcement of environmental policies to municipal zoning would remove any possibility for successful implementation of these policies. The federal law 6.902 of April 27, 1981, set up one type of federal zoning that regulates land use in rural areas by establishing areas of environmental protection.

In Areas of Environmental Protection, the Executive Power is di-

1. P.A. Carroza, *Agricultura y Tutela de la Naturaleza: el impacto ecologico sobre el derecho agrario* in DERECHO AGRARIO Y RECURSOS NATURALES 43-68 (Abeledo Perrot, Buenos Aires, 1983).

rected to establish rules that limit or forbid:

> a) the construction and operation of potentially polluting industries that could affect water sources; b) the filling and draining of land, when it will cause substantial changes in local ecological conditions; c) the use of land in such a way that leads to increased erosion and/or significant silting of water resources; and d) the use of land for activities that threaten extinction of rare species of the regional biota existing in the protected area (Art. 9).

The law 6.902/81 includes the authorized reasons for environmental protection that the Executive Power can use to justify establishing rules regulating land use. The competent administrative agency should, however, prove the existence of these reasons when practicing its police powers. Limitation of property rights should not mean the extinction of these rights. This is not to be an indirect expropriation, but an establishment of rules of general order - adapted to each property. The generality of these rules to protect the environment, reaching theoretically all the owners of the area, means that compensation by the government is unnecessary. The success of these areas of environmental protection will depend on the involvement of public agencies that are familiar with or know well the areas involved and can make decisions about them, which are mainly of a preventive character.

The Area can be under either federal or state control. It is important to note that both private areas and public lands can be joined in the protected area. For each protected area, the government can establish specific land use regulations by enacting special rules under law 6.902/81. The power to enact regulations governing Areas of Environmental Protection is similar to that of Decree-law 25/1937 (prohibition of modification of historically important buildings or natural areas). In a recent study on the subject, I demonstrated that even though the objectives of both sets of regulations are similar, they should not be confused. In the Areas of Environmental Protection, the restrictions on issuance of rules and regulations are indicated, whereas in the case of Decree-law 25 the rules are established according to necessity, without legal restriction.[2]

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2. P. Machado, *Tombamento - instrumento jurídico de proteção do patrimônio natural e cultural* in 563 REVISTA DOS TRIBUNAIS 15-41 (September 1982).

*Planning and Agricultural Zoning*

Agricultural zoning, specifically the type which indicates what crops can be developed in a given area, does not currently clear legal authority in Brazil. In relation to protection of the soil against erosion, there is an inducement to conservation via confession or withdrawal of bank financing. However, there is no concrete prohibition or administrative penalty for persons that disobey soil protection plans.

The term "agricultural zoning" has been used in ecological studies, without considering the lack of any legal enforcement of planned agricultural land use. Fertile land has been used in urban developments and for expansion of monocultures in certain regions of Brazil without control. Problems of obtaining food have increased for everyone, including increased prices due to the increasing distance between cultivated areas and consumers. In addition, the absence of crop rotation has led to greater reliance on fertilizer and pesticides to compensate for loss of soil nutrients and buildup of pest organisms associated with the specific crop cultivated.

The Federated Associations of Brazilian Agronomists suggested formulating a "Code of Use of Agricultural Soil," and presented a rough draft of the proposed bill. In its second provision, the draft provided that "the utilization of agricultural land will only be permitted through planning, according to capacity of use and utilizing proper technology. The utilization of this land for non-agricultural uses, such as expansion of cities, airports, industries and roads will depend on specific planning and special authorization by the competent agency established in this bill."[3]

## II. The Culture of Sugar Cane and the Use of Alcohol as Fuel

Alcohol, starting in 1979, became an important alternative fuel for the production of energy in Brazil due to the increasing price of foreign oil. This product, originating mainly from sugar cane, currently represents about one-fourth of the annual consumption of motor fuel in the country, either used in mixture with gasoline (anhydrous alcohol) or used directly as fuel in motor vehicles. Since the creation of the National Executive Commission of Alcohol (CENAL), 424 distillery projects have been approved by March 1983 in the country.[4]

On August 7, 1978, it was reported that Brazil had a production

3. 18 Boletim da Fundacão Brasileira de Conservacão da Natureza 17-23 (1983).

4. *Relatòrio da Qualidade do Meio Ambiente* - Secretaria Especial do Meio Ambiente, p. 276 (1984).

capacity of 710 thousand liters of alcohol per day, and 508 projects under the National Program of Alcohol (PROALCOOL). The nominal capacity per harvest is 1.5 billion liters.[5] Prof. Hasime Tokeshi[6] notes that "PROALCOOL brought enormous benefits to the country including reduction of petroleum imports; nevertheless, it also caused social problems that need to be corrected." The opinion of Melo E. Fonseca was that increased sugar cane production had caused concentration of wealth and decreased food production. He argued that "the social cost of increased food prices caused by the necessity of producing food in areas more distant from centers of consumption, should be analysed with greater care by coordinating organizations of the PROALCOOL."

A major byproduct of alcohol production is vinasse. The normal rate of production is approximately 12 liters of vinasse per liter of alcohol (although this varies from proportions of 9.5 - 18.1). For 1985, the expected production of 10.7 billion liters of alcohol will produce 128 billion liters of vinasse.[7] Vinasse is a powerful pollutant.[8] Discharge of vinasse into bodies of water has significantly reduced the numbers of fish in the states of Alagoas and Pernambuco.[9]

Federal environmental legislation has forbidden discharge of vinasse in water courses since the harvest of 1979/1980 (Decree of the Ministry of the Interior no. 323/78). Decree no. 124/1980 provided that potentially polluting industries should be located two hundred meters from bodies of water, and storage sites should be protected to avoid overflows. In relation to the construction of alcohol distilleries we should mention that Resolution no. 3/79 of the National Commission of Alcohol establishes, among eight criteria for approval of distillery locations, the proper treatment and disposal of vinasse. The approval of financing and distillery location is also subject to the opinions of the Special Environmental Agency. That environmental administrative organization has only consultative power, however, which does not provide for adequate enforcement of environmental policies.

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5. *Jornal "O Estado de São Paulo"*, p. 37, (August 7, 1984).

6. H. Tokeshi, *Rumos para o PROÁLCOOL Simpòsio sobre Energia na Agricultura* p. 20 (documento inèdito 1984) (Faculdade de Ciências Agràrias e Veterinàrias - UNESP - Jaboticabal-SP, Brasil).

7. *Relatòrio da Qualidade Ambiental*, ob. cit.

8. J. Rezende, *Vinha: outra grande ameaça ao ambiente* in 2 MAGISTRA 1948 (especial publicacão da Escola de Agronomia da Universidade Federal da Bahia, junho 1984).

9. *Relatòrio da Qualidade Ambiental*, ob. cit.

## III. Erosion

The misuse of soil and the frequently resulting erosion are factors causing concern in Brazil because of their damage to the environment. Constitutional Amendment 169, Art. 172, established that: "the bill will regulate, through previous ecological surveys, agricultural use of land subject to inclement weather and other calamities. The misuse of land will prevent owners from receiving incentives and assistance from the government." This constitutional innovation is important. Previous constitutions (1824, 1891, 1934, 1937, 1946 and 1967) were silent about the subject.

In the first section of Art. 172, the constitution refers to an ecological survey. It is the only time that the constitutional text uses a word referring to ecology. Literally, the word environment was not used. The word "survey" seems to be used in the sense of "an asemblage of operations necessary to elaborate a map or plan of a given region or land."[10] The constitutional provision affirms that use for agricultural cultivation of land exposed to adverse climatic factors will not depend solely on the will of land owners. This article of the Constitution gives authority for government control of agricultural lands. The control, however, remains subject to what is verified in the study or ecological survey of the area in which the property is located. The Constitution of 1969 already foresaw the modern environmental impact study adopted by Federal bill 6.802/80 and regulated by Federal Decree no. 88.351/83. In the second part of Art. 172, the power of government control is limited to withholding of incentives and assistance. The law cannot provide otherwise. Thus, the first environmental-constitutional penalty was created. Even where no local law exists, this penalty can be applied. However, the text of the constitution does not establish what is "misuse of land."

The Federal Law no. 6.225 of July 14, 1975 requires the Ministry of Agriculture to delimit regions where soil conservation and erosion prevention plans. The law provides that soil conservation zoning may be modified only once per year to prevent disruption of the growing season (Art. 1).

The law established that "any financing request for farming or ranching of land subject to soil conservation and erosion prevention plans be granted by establishment of credit, official or not, only if execution of the plan has been confirmed." The erosion problem in Brazil is serious. In the state of Saõ Paulo alone, annual losses of 194 million tons of soil are expected, and calculations indicate that 1 bil-

10. *Novo Dicionàrio Brasileiro Melhoramentos*, p. 565 (Cia. Melhoramentos, São Paulo, 1970).

lion tons of fertile soil are lost each year in the whole country.[11]

The Ministry of Agriculture failed to send instructions about this law to the banks of the country, as was proposed in Art. 3, paragraph 1 of Law 6.225/75, because of insufficient funds. Nevertheless, the Bank of Brazil S. A. has required for many years terracing and other works of conservation, when necessary, for financing of wheat and soy bean plantations on areas greater than 100 hectares.

The general public has not been informed of the existence of zones of protection for Brazilian soils. However, this should not prevent the operation of the law because the key enforcement is the requirement of confirmation of a soil conservation plan to obtain bank financing. Enforcement by the general public or environmental associations would be ineffective because they lack access to information on banking practices. Furthermore, soil pollution practices are not crimes, and presently even failure to obey administrative orders on soil conservation does not have legal consequences.

We should ask: does absence of soil conservation practices constitute environmental damage? Is there any civic responsibility? The question should be asked because the beds of rivers, of lakes and of reservoirs continuously receive tons of soil and pollutants resulting from land misuse. It seems to me that the second part of Art. 14, paragraph 14 of the federal law 6.938/81, that establishes objective responsibility for environmental damage, could be put into effect with proof of damage to the environment. In this way, proving that soil erosion (with or without other pollutants, in water or other places) has occurred, could impose liability to compensate losses to governments or individuals.

Reduced soil erosion will result from the presence of protective vegetation called by the Forest Code "permanently preserved vegetation or forest." However, the standards of the Forest Code of 1965 have not been enforced for lack of implementing legislation. Because of this, restrictions on management of protected areas along rivers, control of vegetation planted there and use of these areas, have not been clearly defined, and abuses causing destruction of riverside protective vegetation have accumulated.

Despite the absence of implementing legislation, the Forest Code created permanently preserved forest or vegetation along rivers or watercourses for a distance of between five and one hundred meters on each side of the watercourse. The maximum width applies to rivers where the width is more than 200 meters (Art. 2(a)). I have noted that legal treatment to be given to the permanently preserved vegeta-

11. *Jornal "Folha de São Paulo"*, p. 12 (August 25, 1984) (entrevista de Francisco Lombardi - Chefe de Setor de Conservacão do Solo-Instituto Agronômico de Campinas).

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tion varies under Arts. 2 and 3 of the Forest Code. However, administrative discretion does not apply to delimitation of the forests of Art. 2: they are "obligatory" and "only can be altered or suppressed partially or totally, by force of law. The Federal, State or Municipal Executive Powers are not competent to authorize the partial or total suppression of these forests or forms of vegetation."[12]

## IV. Pesticides and Legislation

In Brazil, the term used for agricultural chemicals in federal legislation is "agricultural defensives," a misleading description, for it could lead one to think that these chemicals are products without risks for nature, and which would have only protective functions. In Brazilian states, however, the state legislation is now using the words "agricultural toxins" (agrotoxicos).

Agricultural chemicals are mainly regulated by decree in the federal area, not by law. Decree no. 24.114 of April 12, 1934 is still in force. However, a rough draft of a bill on pesticides is under study in the Ministry of Agriculture, with the participation of other organizations of the federal government, but resistance and protest from environmental associations to the bill has surfaced. The draft of the bill, among other things, could prohibit state organizations from registering pesticides.

We should point out recent laws of three Brazilian States, Law 7.747/82 (of the state of Rio Grande do Sul), Law 7.827/83 (of the state of Parana) and Law 4.002/84 (of the state of Saõ Paulo). Their provisions are similar in that they require prior registration of pesticides with administrative agencies and prohibit sale, with exceptions, of organochlorinates: These laws give power to the Commissions of the State Legislative Assembly to examine products, establish agronomic prescriptions (that is, pesticides to be used must be prescribed by qualified professionals) and control the registration of imported products, which should also be registered in the country of origin.

## V. Forest Legislation and Private Reserves

The first article of the Forest Code provides that the "forests and other forms of vegetation existing on the national territory" are goods of "common interest for all inhabitants of the country." This affirmation of the forest law is a significant step. The conservation of forests, according to the words and the spirit of the law, are not of interest only to neighbors. Thus, it is not necessary for an individual bringing a court action to prove prejudice to his interests or damage to his

12. P. Machado, *Direito Ambiental Brasileiro* in Revista dos Tribunais, 315 (1982).

personal property for standing: a person that lives in the south of the country can sue the owner of a forest in the Amazon.[13]

On an agricultural property, what is needed as a forested area? Art. 16 of the Forest Code institutes one type of prescribed private reserve. Through the law, participation in the conservation of forest eco systems was sought from each agricultural or forest owner. But, the law was not successful in practice for three reasons: the pieces of property to be preserved were not necessarily segregated from other property, there was no obligation to register this land use restriction in the Notary Courts of Register of Property, and there was no criminal penalty for cutting part of the forest on his property. Thus, the much-praised law creating private forest reserve has yet to be efficiently implemented.

## VI. Wildlife and the Agricultural Property

The Brazilian Civil Code of 1916 was modified by the Fauna Law of 1967. Wildlife, instead of "res nullius," became "res publica." The legal text says "The animals of any species in any phase of development, which live naturally outside captivity and constitute wildlife as well as their nests, shelters and natural nurseries are properties of the State, and use, persecution, destruction, hunting or capture of them is prohibited." I have noted that "it is not the intention of the legislature to give the State, that is, the Union, power to use, to enjoy and to dispose of wildlife." The legislature also did not intend to submit wildlife and their "habitats" to a rule of private ownership so that the wildlife could be sold, exchanged or exploited economically. Thus, neither the government nor owners of property where animals appear or live can appropriate wildlife.[14]

## VII. Subsoil and the Agricultural Owner

Constitutional Amendment 1/69 foresaw that the "beds, mines and other mineral resources and the potentials of hydraulic energy constitute distinct properties of the soil, for the effect of exploitation or industrial use" (Art. 168). The first paragraph says: "The owner of the soil is assured participation in the results of mining; the law will regulate the form of compensation for beds and mines when exploitation is a monopoly of the Union."

13. Id.
14. Id.