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Notes and explanation of symbols

The following symbols are used in tables in the Review:
Three dots (...) indicate that data are not available or are not separately reported.
A dash (—) indicates that the amount is nil or negligible.
A blank space in a table means that the item in question is not applicable.
A minus sign (-) indicates a deficit or decrease, unless otherwise specified.
A point (.) is used to indicate decimals.
A slash (/) indicates a crop year or fiscal year, e.g., 1970/1971.
Use of a hyphen (-) between years, e.g., 1971-1973, indicates reference to the complete number of calendar 
years involved, including the beginning and end years.
Reference to "tons" mean metric tons, and to "dollars", United States dollars, unless otherwise stated.
Unless otherwise stated, references to annual rates of growth or variation signify compounded annual rates.
Individual figures and percentages in tables do not necessarily add up to corresponding totals, because of 
rounding.
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The ecopolitics of development in Brazil

Roberto P. Guimarães*

How a collectivity deals with nature discloses as much about its internal social relations as the other way around. The present inquiry is a prologue to more detailed study of ecopolitics, to the study of the political philosophy of relations between human beings and nature, exploring the feasibility of integrating the knowledge of the social and of the natural sciences on the interchange between human activities and the cycles of nature. It is also an introduction to the study of a specific type of public policies, those that address issues of resource use and conservation, and the quality of life, especially in the so-called developing countries.

Analysis of the Brazilian case provides a particularly helpful focus for Third World studies. Because Brazil has been one of the fastest-growing economies in the world, the study of its ecopolitics sheds light on the crucial dimensions of the debate over development and the environment, with important implications for politicians, policy-makers and social scientists. The historical analysis of environmental management in the context of Brazil's political development unveils the social and political conditions that allowed for, and conditioned, the creation of a specialized environmental agency, the Special Secretariat for the Environment (SEMA). Detailed study of the bureaucratic politics of public policies concerning the environment reveals also how "environment" is conceptualized in development planning, and how environmental management reflects the main features of the political system and of the social formation of Brazil.

Introduction*

The history of humankind is the history of its relations with nature. More than pure rhetoric, this statement acknowledges a reality whose multiple facets have not been fully understood so far. Living in an era of automobiles, non-returnables and computers, we have been led to believe that we can get everything we want in the supermarket, in the drugstore, or through telephone orders. Yet we forget that all our basic needs have a source on the land or in the sea. It has been all too easy to forget, for instance, that if it were not for the sudden disappearance of dinosaurs, human beings, like any other mammals, would not have had much chance to mature as a species. It is only when great famines occur, or when countries wage war in part to secure access to natural resources, that we stop suffering such lapses, that we realize that "We have for a long time been breaking the little laws, and the big laws are beginning to catch up with us". But then, again, there is the conquest of the Moon, the advent of robotics, or a new breakthrough in the cure of cancer, and we retreat into our delusions of power.

The emergence of this new, ecological dimension in the political debate poses hitherto unforeseen challenges to the social sciences. Among other things, we need to identify and analyse what elements of the natural environment contribute to the flourishing, maintenance, and eventual demise of human societies; and how social conditions affect natural systems, disturbing or reinforcing their life-support cycles.

*Social Affairs Officer in ECLAC's Social Development Division.

Introduction*

Why not? We have a lot left to pollute. They don't.

When the Gods wish to punish us, they answer our prayers.
Oscar Wilde

Introduction*

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Consequently, to understand adequately the inner workings of an ecosocial system—how natural and human systems interact, reinforce, maintain, and transform one another—it is crucial to explore the political dimension of these relations. In effect, it is time to recognize that the ecological outcomes of the way people use the earth's resources are ultimately related to the modes of relationships amongst people themselves.

Ecopolitics is thus a short word for ecological politics. It emerges from the recognition that to overcome the current ecological and environmental crisis, decisions will have to be made, thereby favouring some interests over others, both within as well as between nations. However, this sort of ecopolitical understanding can come only after one acquires a historical perspective on how economic interests, social classes and the political and institutional structure have evolved in the recent past of a particular nation. Consequently, we must turn our attention to studying the process of social formation that makes more transparent the prevailing patterns of relationship between humans and nature in a particular national setting; in this case, that of Brazil.

Yet, meaningful knowledge cannot become relevant to the everyday concerns of citizens and policy-makers without careful scrutiny of the evidence immediately above the ground. Ecopolitics must, in this sense, come closer to ecopolitics. The study of the creation of a specialized agency for environmental matters in Brazil is thus a logical result of what will be developed in the first three sections of this article. It is also a necessary prelude to a deeper analysis of environmental politics, for a closer focus on how decisions are made may shed light on more general processes.

I

Some preliminaries about the Brazilian social formation

1. The Brazilian "dilemma": patrimonialism and bureaucratic power

Brazilian society is a typical example of "parallax view" at work. The parallax effect, a concept borrowed from astronomy to help unfold social reality in Brazil, indicates the apparent change in the position of an object resulting from the change in the position from which it is observed. This may indeed be the best way to describe Brazil. In a penetrating analysis of what he calls "the Brazilian dilemma", anthropologist Roberto da Matta has managed to reveal, with an insight unparalleled by any other study of the Brazilian character so far, that authority, hierarchy, violence and oppression pertain to this society as much as democracy, egalitarianism and compromise. He writes:

We have in Brazil carnivals and hierarchies, equality and compromise, with the cordiality of an encounter full of smiles giving place, shortly after, to the terrible violence of the repulsive "do you know to whom you are talking?" And we also have samba [a Brazilian dance of African origin], cachaca [liquor distilled from fermented sugar cane], beach and soccer, but mingled with "relative democracy" and "Brazilian-style capitalism", a system where only the workers assume the risks, while, as it is known, they do not realize any profit... And all of this, above anything else, in the name of our undeniable "democratic vocation".5


Despite the apparent difficulty of characterizing the Brazilian social formation, its basic elements are quite straightforward: hierarchy, paternalism, repression and authoritarianism, alone or combined in different ways. For example, although paternalistic, Brazil is also an extremely formalistic society, where rules and regulations are much more important than facts. Also, in a society at once paternalistic and repressive, there is always a "Big Father" to be revered, often the personification of the State through a demagogic leader, in contraposition to the depersonalized masses. Above and beyond these elements, however, the most dominant structural facet of the political development of Brazil has been the presence of patrimonialism, a bureaucratic order that encompasses both public and private dimensions.4

The patrimonial order is usually described in terms of its concrete political practices of social control, such as clientelism, patronage, or co-optation, which combine elements of paternalism, repression, hierarchy and the authority to rule and stand above social classes. The bureaucracy, administrative apparatus and general staff of the patrimonial order should not be confused with the "State" bureaucracy, the "élite", or the "dominant classes". The bureaucracy does not constitute a class in and of itself, although more often than not it acts as a surrogate of the élite. It may stand above dominant classes, but it does not enjoy autonomy over society. Conversely, even if the composition of the élite changes, the patrimonial order persists.

As Faoro explains, this bureaucratic "caste" develops a pendular movement that often misleads the observer. It turns against the landowner in favour of the middle classes; alternatively, it turns for or against the proletariat. Also, the bureaucratic apparatus may be modernizing or conservative. It may favour the pluralistic aspects of democracy or it may enhance patronage and co-optation. These apparent behaviours are actually optical illusions suggested by the projection of modern ideologies and realities upon a past that is historically consistent within the fluidity of its mechanisms. Therefore, for the estate patrimonial structure, social formations are mobile points of support.

The process of formation of the Brazilian State also compounds the difficulties of understanding reality in that country. Whereas in the vast majority of countries the State follows the pre-existence of a more or less organized society, in Brazil it happened the other way around. The first Governor General of Brazil, Tomé de Souza, arrived in the country in 1549 already with a government structure, laws, rules and regulations, and even with a constitution, the Regimento de Almeirim prepared in Portugal one year earlier. These had all been derived from the institutional and political system prevailing in Portugal, and they were to be implemented in a Brazil as yet without Brazilians. The Indians, as still today, have never been considered citizens. The Brazilian State was, so to speak, part of Tomé de Souza's luggage. This situation prevailed at least until the 1930s, when, despite some profound changes in the society, the same institutional framework remained in force.

This explains most of the elements of the social formation described above. The patrimonial, bureaucratic character of the State has imposed, and will probably continue to impose, its own limits on the constitution of society, giving it the distinctive features of formalism, bureaucratism and authoritarianism. There has been such a concentration of power in the hands of the State that civil society has had very little room to organize itself, to form strong channels for articulation of interests. The little it may have had has often been co-opted or simply suppressed. On the other hand, political society itself (the Legislature, party system and electoral processes) has not been able to represent the plurality of interests existing in Brazilian society. In short, to the formation of society and of the State in Brazil corresponds a power structure that is concentrated and exclusionary; an organization of decision-making processes that responds to the particular interests of the best.
organized groups of society; and, finally, a strong technocratic, hierarchical and formalistic pattern of conflict resolution.

2. Ecopolitical implications of the Brazilian social formation

Insofar as ecopolitics is concerned, the obstacles posed by this particular process of social formation seem to be rather obvious. First of all, we should note the legalistic tradition of Brazilian politics. The compulsion to have every minuscule aspect of life foreseen, regulated and enshrined in the law is such in Brazil that someone suggested the most effective solution to all of the country's problems would be one single law making all previous ones mandatory. This means also that reality, to be accepted as such, must be first imagined by the legislator. For example, up to the presidencies of Getúlio Vargas (1930-1945, 1951-1954) the mobilization of the working classes was considered to be mostly a "police problem". Their unions became legitimized only when the State bestowed its recognition upon them. Similarly, in a patrimonial order where nothing has value in and of itself, environmental issues assume relevance in the eyes of the State as their functionality to its corporatist policies also increases. Until that happens, this particular reality simply does not exist. Society, which is used to seeing through the eyes of the State, may not recognize it. Even after its sanctification through the law, there is not any guarantee that it will be adequately addressed, as Brazilian workers discovered long ago.

A second aspect, in fact a corollary of the legalistic tradition, is the quasi-worship of everything that is public. This manifests itself in several ways. The most common way was summarized by Raymundo Faoro as follows:

A Brazilian who excels is bound to have lent his collaboration to the State apparatus, not to private enterprise, to business success, or to cultural contributions, in a Confucian ethics of the good servant with an administrative career and a curriculum vitae approved from the top down. But because Brazilians are proud to be "the largest Catholic country in the world", while church attendance must be among the lowest, and while candomblé, umbanda and other Afro-Brazilian rituals claim increasing numbers of followers, so their worship of the State is also blended with a certain dose of iconoclasm.

None of this should be allowed to add more confusion. The State is the source of much of what concerns the individual, in private or public life, and the results are too well known to deserve further comment here: a tightly controlled society, corruption and the distribution of privileges. Still, it should be underlined that corruption may assume a multitude of forms; for example, direct payment in exchange for a favour, or a specific way of making life easier without necessarily being illegal. It may not even be considered corruption. This should not alarm anyone, since in many instances the (in)famous jeitinho brasileiro [the Brazilian fix, sometimes euphemistically referred to as "creative imagination"] may well be a powerful weapon against the discretionary powers of the State.

For ecopolitical purposes, the most important manifestation of corruption is the "structural" variety. Because to survive and remain in State favour one should not cause too many problems, it is no surprise that government agencies and State enterprises in Brazil are generally the worst environmental offenders. The State sector is the first to claim environmental awareness, but it is also the first one to shove problems under the rug.

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1It is worth mentioning one example of the legalistic tradition of Brazilians, which, at the same time, illustrates their disrespect for the law. In 1595 King Felipe II issued a law forbidding the enslavement of Indians in Brazil. Only 11 years later, there got under way one of the largest and longest operations to hunt down and enslave Indians in Brazil. These operations were called Bandeiras [pathfinders]; they lasted for two centuries, and often enjoyed governmental support.

6Faoro, Os donos do poder, p. 743. Joaquin Nabuco, a leading abolitionist and an influential politician during the Empire, referred to public service, in his O abolicionismo (1949): São Paulo: Instituto Progresso Editorial, as "a noble profession, and the vocation of all. Take, at random, twenty or thirty Brazilians in any place where educated society meets: all of them either had been, are or will be public employees; if not they, their children will be" (p. 158).
II

Ecopolitics in Brazil from colonial times up until the military régime

Even without firm ecological periodization, three important periods stand out in the ecopolitical history of Brazil. The first encompasses the initial 300 years of colonization, when the roots of agriculture were laid. The second is the time between the second half of the nineteenth century and the first decades of the twentieth, when agriculture paved the way for industrialization. The final period, from the 1950s to the late 1970s, witnessed the rapid modernization of the country. Actually, if speculation could run wild — of the kind that Karl Popper once said "makes science possible" — one could assert with a good degree of confidence that the most important ecopolitical phase is yet to come, most probably in the next decade. Ecopolitical historians of the twenty-first century will probably classify the 1990s as "Brazil's time of reckoning."

1. Colonial Brazil (1500-1822)

The ecopolitics of colonial Brazil can be described through one of the most salient environmental dimensions of the patrimonial order: "extractivism" (vegetal, mineral and agricultural). From the discovery of Brazil in 1500 until the turn of the eighteenth century, colonization was based on successive cycles of extraction that more or less coincided with the tendencies and fluctuations on the international scene, but that also varied with the ecological cycles in terms of exhaustion of resources. At first, Brazil wood and the red dye it produced was the only thing that mattered to Portugal. Brazil wood was followed by other extractive cycles, especially Brazil nuts, cocoa and rubber. Rubber had more significance than the other two, lasting until the first decades of the twentieth century. Sugar production also had cyclical fluctuations, alternating with cotton, tobacco and coffee. Livestock activities emerged basically as a response to the needs of the agrarian economy for food and beasts of burden, but it also played a crucial role in the extractive cycle for minerals. Mining started with the discovery of gold in 1695 and of diamonds a little later, and lasted until the end of the 1700s.

The most profound environmental feature of colonial times, one that has left the deepest and most distinctive impression on today's agricultural practices, was the way in which the land, then the most precious natural resource, was appropriated and utilized. The existence of large rural properties can be attributed to the abundance of land combined with the patrimonial order. In any event, this type of land concentration usually spells disaster. Socially, it locks peasants and rural workers into a cycle of poverty, with low wages, indebtedness and servitude. Ecologically, it perpetuates the irrational use of the land, through shift cultivation, and through slash-and-burn techniques that lead to the abandonment of the land after two or three years of cultivation. With land concentration came monoculture, which violated all principles of ecological wisdom, contributing to soil deterioration and to desertification. Monoculturalism, in its broadest sense, meaning not only a form of agriculture but also economic overspecialization (in mining, in extractive activities and in manufacturing) is always harmful. It has always been detrimental to the country, economically, politically and environmentally. Sure enough, as early as 1877 the Northeast suffered its first major drought, which lasted for two years. As late as 1986 the South entered this cycle. Since the very first moments of Brazil's existence, Brazilians have boasted about the immensity of their territory and the quality of its soil, as attested by the jingoism of Pero Vaz de Caminha, the official registrar of the discovery; but the "big laws" of ecology started to catch up with them, and the ecopolitics of colonial Brazil took its toll.

2. The Brazilian Empire (1822-1889)

With independence and the advent of the Brazilian Empire in 1822, the basic character of the economy did not change. Its secular orientation toward external markets helped to maintain and
reinforce the binomial relationship between land concentration and monoculture. The political changes that ensued, however, deepened the ideology of “tear down and move on” that still squanders the country’s resource base without much concern for the future. State power was consolidated in the hands of the proprietor classes, i.e., the sugar producers in the Northeast and coffee planters in the Southeast. In addition to strengthening the power of the landed oligarchy, several important alterations of the ecopolitical landscape resulted from independence.

Foremost among them, a truly Brazilian bureaucracy was born, to fill the many posts in the governmental structure that had been created to look after the interests of the Portuguese Crown when the court was in Rio. The process of independence itself added to the growth and expansion of an already enlarged metropolitan bureaucracy that was clearly disproportionate to the country’s economy and population. Paramount also was the creation of the National Guard in 1831, which soon was able to mobilize 200,000 men, in contrast to the 5,000-man professional army of the first years of the Empire. The coronel, power-broker par excellence, represented the very personification of the patrimonial order and of regionalism as well. His title, still used for political bosses in the rural areas, derives historically from the rank given to the head of the local regiment of the National Guard, who was the main intermediary between state and federal governments on one side, and local interests on the other.

Another major change of the nineteenth century was the abolition of slavery in 1888, a process that started with the traffic in slaves being brought to a halt in 1850. In 1871 freedom was granted to children born to slaves, and in 1885 to slaves over sixty years of age. This was partially brought about by international pressure, especially from Britain, but it also had internal causes. The development of the economy in that period shows that, except for slave-owners themselves, everyone else gained from abolition. The increasing costs of slave labour, especially after 1850, its inefficiency, the larger internal market needed by an incipient industrial bourgeoisie, all these elements combined to produce the downfall of slavery in Brazil. As a result of this process one finds European immigration and the beginnings of manufacturing. Between 1884 and 1903, over 1.7 million immigrants arrived in Brazil. Most came as substitutes for slave labour in the coffee plantations of São Paulo, but many established themselves in the capital, thereby contributing to the expansion of industrial activities.

Most “environmental” concerns during the Empire could be subsumed more readily under public-health issues. It was an epidemic, for example, that led to the organization in 1857 of the first sewage service in Rio de Janeiro. When one examines the many regulations issued during that period, especially the Regimento dos Municípios (1828), which organized public life in the municipalities, it is also impressive to note the extent to which the State was authorized to interfere with private businesses. The minute detail on how public officials were to prevent the occurrence of “anything that may alter or harm the salubrity of the atmosphere” would amaze, and of course enrage, most antiregulation crusaders of today.

Finally, basically as a result of the efforts of André Rebouças, albeit not very successful, there appeared an incipient conservationist movement. Deeply impressed by the creation in 1872 of the first modern national park in the world (Yellowstone in the United States), Rebouças four years later proposed the creation of two national parks in Brazil: one in Ilha do Bananal (in the Central Region) and another in Sete Quedas (in the South). For reasons that are not entirely clear, these pioneering proposals had to wait 60 years to be finally implemented. And for reasons that are well known to all—the construction of the Itaipú Dam in the 1980s—it took less than that time to undo Rebouças’s dream. Sete Quedas no longer exists.

3. The Old Republic (1889-1930)

The Empire was brought down by the convergence of two forces, which inaugurated the Brazilian Republic in 1889. These were the disaffection of the dominant classes with respect to slavery and the growing influence of the military, particularly after the war against Paraguay. Hence, a new era began in Brazilian politics and economics. Its characteristics were the domi-
formance of the national bourgeoisie, first agrarian and later industrial, although most of the time it was associated with export-oriented commercial interests and the presence of the military in politics. At the other extreme stood the majority of the population, mostly rural workers —some of slave origin, others descended from Portuguese immigrants or from the miscegenation process—and recent Italian, German and Japanese immigrants. Also in the lower strata there was already an urban proletariat, mostly of Italian and Spanish origin.

The heavy presence of foreign capital also shaped the formation of the ecopolitical arena in this period ending in 1930: of the 201 corporations authorized to operate between 1899 and 1919, 160 were foreign. Finally, the process of transformation that was taking place in the economy and society of Brazil entailed at least one major ecological change, the growth of the cities. One of the consequences of urbanization was the proliferation at the turn of the century of tenements and multi-family dwellings, the forerunners of the modern favelas (squatters' settlements), where are found today three-fifths to two-thirds of the population of a metropolitan region. Another consequence of urbanization was the deterioration of sanitary conditions in the cities. During the Empire, as noted above, the great drought of 1877-1879 signaled the beginning of the environmental crisis in the rural areas. Likewise, its earliest urban manifestation was the epidemic of yellow fever and bubonic plague in Rio de Janeiro in 1903. The political overtones of environmental problems or, according to the perspective adopted here, the ecological foundations of politics are clearly demonstrated in the bitter dispute that followed Oswaldo Cruz's attempts to solve the problem and establish a sanitation policy for Rio de Janeiro.4

4. From Getúlio Vargas to the military (1930-1964)

The three decades from the closing of the "Old Republic" (1889-1930) and the advent of the military régime (1964) represent one of the most interesting periods of Brazilian history. Politically, the installation of the Getúlio Vargas régime from 1930 up until 1945 represents the downfall of an oligarchy that comprised large landowners, coffee producers and export-oriented commercial interests, and its replacement by a new, populist alliance. Forgers of the populist pact were the rising industrial bourgeoisie, the agrarian élites whose production activities were oriented toward the internal market, the corporatively organized urban workers, and the "new" middle classes emerging from the growth of the bureaucracy as well as from State-induced industrialization. These middle classes distinguished themselves from the old, "parasitic" middle classes through their increasing relationship with the country's production structure.

This period also witnessed the strengthening of the industrialists, who after 1964 became the dominant class. Also of importance were the early stages of a strong technocracy, based on the multiplication and expansion of both public and private organizations in the decades before 1964. The technocrats were the most articulate members of the "new" middle classes, encompassing lawyers, administrators, managers, health workers, educators and other occupational groups. Together they have formed what F. H. Cardoso calls the "bureaucratic rings" that link the interests of foreign and domestic capitalists with those of these specialized, highly trained technicians. These rings, which operate through the management levels of State enterprises, private corporations and the government bureaucracy, played a leading role in the presidency of Juscelino Kubitschek (1955-1961) and especially thereafter, creating new channels for articulation of interests beyond political-party structures, as well as new forms of clientelism.

In economic terms, these three decades saw dramatic alterations in the country's production structure. During the years 1940-1961, the gross national product increased 232%, the per capita product rose 86%, and industrial production

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climbed 683%. This was also a period in which major efforts were made to integrate the national territory, especially through construction of highways. Between 1928 and 1955, railways increased only 10% to 37,000 km, whereas highways more than tripled, reaching a total of 460,000 km. Especially after 1955, industrial expansion centered on the automotive industry, with the production of cars reaching 35,000 (a fifteenfold increase) in 1962, while trucks and buses totaled 30,000 (a rise of 150%). The presence of the State in the economy, if not yet as spectacular as during the military régime, was already considerable. State participation in total expenditures rose from 17.1% in 1947 to 23.9% in 1960. The public sector was responsible for 28.2% of the total investment, or the country's gross capital formation in 1956, a proportion that jumped to 48.3% in 1960 and to 60% in 1964.

This last characteristic of the period, State interventionism, had a twofold impact on ecopolitics in Brazil. Natural resources became an important government priority, and there was a persistent move toward nationalization. Heavy exploitation also began, resulting in depletion of the resource base. Several public organizations, either agencies or enterprises, came to oversee or promote, under State monopolies, the exploration of natural resources. Similarly, important initiatives were taking place in legislation, such as the promulgation of several codes: the Waters, Mining and Forestry Codes, all in 1934; the Fishing Code in 1938; and the Hunting Code in 1943. Governmental structure also became an object of change. For example, in the early 1960s the municipal governments of Santo André, São Bernardo do Campo and São Caetano do Sul, in the so-called ABC Paulista —the heart of the automotive industry in São Paulo— founded the Intermunicipal Commission for Water and Air Pollution Control. This became the embryo of today's State Company of Environmental Sanitation Technology (CETESB), which is considered to be the largest and best-equipped environmental control agency in Latin America. In Rio de Janeiro, the Sanitation Engineering Institute (IES) was created in 1962, later becoming the State Foundation of Environmental Engineering (FEEMA).

Insofar as conservation is concerned, the First Brazilian Conference for the Protection of Nature, which took place in 1934 in Rio de Janeiro, marks a new era of awareness. Of the 38 national parks and biological reserves that exist today, half were established between 1937 and 1961, comprising over one million hectares of protected land, flora and fauna. Some 11 of the 69 state parks and biological reserves were also created before 1964, with close to 900,000 hectares. This brings the total of officially protected area in this period to close to a quarter of 1% of Brazil's total area, which is still one of the lowest indices of any nation in the world. Finally, community organizations also developed around environmental issues. Among the most active organizations in the 1930-1964 period were the Associação Rio Grandense de Proteção aos Animais (ARPA, 1951, protection of fauna), the Associação de Defesa do Meio Ambiente (ADEMA, 1955, environmental protection and conservation) and the Fundação Brasileira para Conservação da Natureza (FBCN, 1958, environmental protection and conservation).

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*Since then, this figure has been multiplied by six, amounting to 1.5% of Brazil's territory, still a very low figure. Japan, for example, with roughly the same population as Brazil and with less than one-twentieth of the Brazil's territory, has 13.5% of its area permanently protected. The United States, slightly larger than Brazil but with a population almost twice as large, has 17%. And in Sweden, about the size of Japan but much less densely populated, the total protected area is 60% of its territory. Roberto P. Guimarães (1986): "Ecopolitics in the Third World: An institutional analysis of environmental management in Brazil," doctoral thesis submitted to the University of Connecticut, pp. 192, 328-329.*
III

Developmentalism and megalomania:
Brazil under military rule

The crisis of the political system in 1964 represents the culmination of a process through which successive attempts had been made to solve the crisis of oligarchic domination that went back to the collapse of the Old Republic in 1930. Neither populism (Vargas 1930-1945) nor developmentalism (Kubitschek, 1956-1961), much less reformism (Goulart, 1961-1964), seemed to have worked. Faced with the choice of deepening the incorporation of new social groups into the general process of economic growth, or accelerating the modernization of the most dynamic sectors of the economy, the Brazilian élite opted for the latter. That would, of course, intensify the associated and dependent character of Brazil's incorporation into the international economic order. But the transformation of Brazil into a "world power", according to the ideology of the military régime, was well worth its social costs. The same applied to the political costs of marginalizing from public life the popular sectors of society, depriving an entire generation of its political citizenship. The costs would also prove to be great for the environment.

1. The ecopolitical alliance of the military régime

The civilian-military régime installed in Brazil after 1964, can be described in very simple terms. It represented the alliance of the financial and industrial bourgeoisie with multinational interests. The agrarian and commercial elements of the bourgeoisie now occupied the back seats. The working classes were, of course, excluded. What made this alliance possible was the existence of a well-trained, specialized and willing technocracy, both civilian and military.

The period 1964-1982 may go into history as a time of stirring up the "sleeping giant" mentioned in the national anthem. Brazilians have a tendency to favour grandiose schemes; they have the biggest football stadium in the world, the largest (intercity) bridge in the world and a series of "wonders" that are called the biggest even when they are not. Such grandiose self-perceptions do not, of course, automatically need the bureaucratic-authoritarian pact for them to be wasteful, but they characterize a culture where waste was almost inevitable.

2. Some examples of the military's "world power" project

These works cannot be dismissed as a mere "tendency to exaggerate or imagine things big", as is the definition of megalomania. They are instead quite real and, above all, ecologically and financially costly. The first manifestation of this emerging "world-power" complex was undoubtedly the Trans-Amazon Highway, which was supposed to run for 4 300 kilometers and consolidate the integration of the national territory. It drew worldwide attention as it accelerated the assault on one of the few tropical forests left on earth, and it led to what became known as "the genocidal policies" against Indian populations. Located at the eastern border of the forest, in the states of Pará and Maranhão, is the largest mineral deposit in the world (here we go again!) in an area of 780 000 km² or the equivalent of Texas and New England combined. There one finds the régime's latest and most ambitious venture, the Carajás Project. Over US$60 billion is expected to be invested and, if all goes well, the project will generate around US$18 billion in exports by the 1990s (especially of iron ore, bauxite, manganese and nickel). To meet the energy needs of Carajás there stands the environmentally controversial Tucurui hydrostation, with a price-tag of US$6 billion to generate 8 000 megawatts of electricity.

Near the southern border with Paraguay Itaipú, the largest hydroelectric project in the world, was built at a time when Brazil was already approaching surplus production of electricity. When Itaipú is fully operational it will
have cost US$16 billion to produce 12,600 megawatts, or 20% more electricity than the projected capacity of the Grand Coulee Dam in the United States, the largest in the world today. In the meantime, Itaipú has destroyed the Sete Quedas Falls, inundated farmland and natural sanctuaries, and evicted thousands of families.

The energy orgy was completed with the Brazil/West Germany Nuclear Treaty of 1975, which called for the construction of eight power plants, at a cost of over US$30 billion. A Westinghouse-built nuclear plant, contracted before the German deal, was to come on line in 1977, but it had managed only trial runs by 1983. Incidentally, this plant was built on one of the worst-proven ecological sites, whose Indian name (Itaorna) means "rotten rock". In addition to that, the plant stands in the middle of a string of world-famous beaches between Rio and São Paulo, barely 134 and 240 km from the two most populous concentrations of Brazilians. In short, it has already cost several times more than originally anticipated, due to a fact known for centuries to the Indians; it may hurt tourism; and it poses a serious threat to over 25 million persons, as it does to the flora and fauna of the region. On top of everything else, it was also built in the South, which helps to make Itaipú's contribution of energy even more surplus. As a matter of fact, the Angra dos Reis nuclear power plant has had so many problems, with short periods of operation followed by longer shutdowns, that people call it "firefly", evidencing the Brazilians' sense of humour amidst a planning tragedy that must also be one of the largest in the world.

Another indication of technocratic rationality at its most questionable is the Pro-Alcohol Programme, designed to find a domestic substitute for imported oil. Many consider it to be a success, for its yearly production of over 10 billion litres allows a 20% mixture of alcohol with gasoline. Furthermore, over a third of the country's car fleet runs exclusively on alcohol. On the other hand, Brazilian environmentalists cogently ask whether the alcohol programme is worth the ecological costs. It is undoubtedly true that Pro-Alcohol represents a sounder strategy for energy problems in general, i.e., the development of renewable sources. However, only 6 to 8% of Brazilians own an automobile, and creating a renewable energy source for them comes at the cost of displacing essential food crops for all citizens through extensive plantations of sugar cane. Similarly, the 10 billion litres of alcohol produced each year represent 100 to 120 billion litres of vinhoto, a waste product. In these quantities this effluent has a toxicity equivalent to the sewage of 280 to 340 million persons in terms of biochemical oxygen demand, a commonly used measure of water pollution. In other words the yearly production of alcohol is equivalent to the pollution generated annually by the untreated sewage of two to three times the entire population of Brazil.

The list could grow longer, but the point is not simply the grandiosity of Itaipú and other projects. There can be no doubt that it is much better to spend money in this fashion, on an infrastructure that will be put to use in the future, than to put it in Swiss bank accounts, as was done elsewhere. Above all else, however, what must be noted in the case of Brazil is that all of this took place in less than 10 years. There is simply no other example, in the history of capitalism, of one country's developing so many and such diversified projects all at once. But this also means that a massive debt, developed in less than one generation, will have to be paid back by several generations to come.

3. The ecopolitical underside of megalomania

Many of these projects make sense in purely economic terms. It is undoubtedly cleverer to spend cruzados every time a car stops at the "gas" pump than to spend hard-earned dollars. But do these projects make genuine sense in a country that has the highest concentration of income among 32 major capitalist countries? Or do they make sense in a country that has the highest rates of infant mortality, malnutrition and parasitic diseases among nations with a comparable level of per capita income? Notwithstanding the severe "social" costs of megalomania, "costs" that are in fact a euphemism

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2 According to a monthly bulletin of the Morgan Trust Company, 13% of the Brazilian external debt can be attributed to capital flight. Still according to the Morgan estimates, Brazil would be the country that has best invested resources borrowed from abroad. Cited by "Boletim falava da evasão de divisas" (1986): Jornal do Brasil, 25 May, p. 15.
for misery and starvation, ecological and environmental costs must also be brought into the picture. There has been extensive destruction of nature, with irreparable loss of fauna and flora and increasing levels of pollution. Even more important, the impact of all these projects on the squandering of natural resources has yet to be reckoned up. The process of desertification of the Amazon is but one manifestation of this type of reckoning, and probably not the worst. The monoculturalism of Pro-Alcohol, the lake formed by Itaipú, the exploitation of mineral reserves at Carajás—all represent a direct toll on Brazil's natural resource base. The financial resources needed for their development must be paid back, which in turn creates a need to earn dollars, which means more exports, which means intensified exploitation of already over-exploited resources.

As this process continues on and on, one can fully appreciate the extent of Brazil's social and environmental mortgage. It was a nationalistic Olavo Bilac who asserted: "Não verás país como este!" [You will not see a country such as this one!]. Every Brazilian child is taught to appreciate Bilac's description of the country's riches, which has helped to fuel Brazilian jingoism for over a century. In years to come we may see the day when his exhortation is replaced by the title of a recent novel: "Não verás país nenhum!" [You will see no country at all!].

Finally, insofar as ecopolitics goes, it should be pointed out that in none of the projects mentioned so far have Brazilian citizens as a whole been called upon to decide these issues. Brazil's social and political dilemmas are environmentally compounded, in short, by what has been recently emphasized: too much, on too many fronts, in too little time. It may indeed be said that one of Brazil's major ecopolitical problems derives precisely from what may be called the "superimposition of history", i.e., the fact that Brazilian economic growth and social differentiation find no parallel in the historical development of the now industrialized societies. This superimposition of history may be interpreted in a positive way, when we consider that in its process of rapid economic growth Brazil has never had to face environmental conditions as harsh as those of Great Britain during the nineteenth century. This applies even to the most depressed areas on the periphery of the urban centres. On the other hand, if Brazil has not had a "situational" Liverpool, it has had a "structural" Cubatão in the industrial heart of São Paulo. Conversely, Brazil has yet not solved basic sanitation and public-health problems, and already the country has extreme cases of environmental degradation.

Consequently, when one looks at the 1960s and 1970s, the official ideology clarifies the relationship between ecology and development in Brazil. After all, most of the institutional structure to deal with resource management and environmental protection was set in motion in this period. This was also the period in which the bulk of Brazilian environmental legislation was enacted. In any event, even the most committed environmentalist must agree that Brazil's environmental problems cannot be blamed on the lack of legal statutes. Developmentalist ideology has been so effectively ingrained in Brazilian politics that even those who were supposedly on the other side of the fence have fallen prey to it. Seldom if ever would environmental protection agencies adopt an adversary stance in public policy. The most complete expression of their naivete was their widely proclaimed slogan of "development with low ecological cost". This euphemism is so powerful that many bureaucrats who claim to be environmentally conscious do not even perceive the ideological overtones of the message.

Lest anyone miss the point, it should be made crystal clear that there is no suggestion here either that, in order to exploit natural resources rationally or to protect the environment, one must be anti-development. We must recognize the conflictive—yet, not necessarily antagonistic—relationship between environment and development. To expect that entrepreneurs will take environmental "costs" into account is as naive and Pollyanna-ish as to expect that they will protect the interests of labour. Again, labour unions are the last to take a stand against development, for in fact they share the interests of businessmen in economic growth. But, if labour had advocated "development with low human cost" or "labour impact assessment"
it would be now in a worse situation than it actually is.

Several important ecopolitical implications derive from these experiences. Some of these will no doubt strongly influence the prospects for democracy in the near future, such as the emerging industrial-military complex\(^1\) and the polarization of social differences between classes and groups. The combination also of some of the elements of the "new" authoritarianism (demonetization of society, internationalization of the economy and technocracy), all shaped ecopolities in Brazil. Policies came to be formulated and implemented in an autocratic way. The disproportionate importance given to pollution control over the management of natural resources constitutes just one of several examples. But their synergistic effect also poses serious questions for ecopolitics in the future. With the return to civilian rule and the expected reorganization of society, there is absolutely no guarantee that a new brand of corporatism will not emerge.

If so, environmental problems could still be treated separately, on an emergency basis, and according to the narrowly defined interests of each social class or economic group.

Garrett Hardin and William Ophuls, for example, appear to believe that the current rationality guiding the use of common resources could lead to authoritarian societal organizations, and that this might be the only way to enhance our chances of overcoming the environmental crisis and surviving the ecological transition.\(^12\) I believe, however, that the danger lies in the other direction, and Brazil may unfortunately provide the best illustration in years to come. It is precisely the corporatist organization of this society, with the heavy burden of its patrimonial and authoritarian heritage, as well as its inherent inability to conciliate the interests of each sector into a genuine "national" programme, that may truly underscore the "tragedy" of the commons.

IV

The creation of the special secretariat for the environment

It has become almost axiomatic to repeat Engels's assertion that people themselves make their history, only they do so within a determined environment that conditions it, based upon real relations that are already in place.\(^13\) Bearing Engels in mind, we turn to a little known, almost unnoticed fact of Brazilian ecopolitical history, that is, the very situation, almost fortuitous, that allowed SEMA to come into being.

In the late 1960s Congress was suggesting the need for a national environmental policy. The year 1967 opened with the establishment of a National Sanitation Policy. In that same year the National Council for Environmental Pollution Control was created in the Health Ministry. All Brazilian states had at least one agency closely concerned with pollution abatement. General João Baptista Figueiredo, Secretary-General of the National Security Council, and

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\(^1\)Several comprehensive analyses of this phenomena are still lacking. For a recent attempt to identify the many implications of the industrial-military complex, see Clóvis Brigagão (1985): A militarização da sociedade, Rio de Janeiro, Jorge Zahar Editor. See also René A. Dreyfuss and Otávio S. Dulk (1983): "As forças armadas e a política", in Sociedade e política no Brasil Pós-64, ed. Bernardo Soja and Maria H. T. de Almeida, São Paulo: Editora Brasiliense, pp. 87-117.


later President of Brazil, called attention in 1971 to the need for a national pollution control policy to be formulated by the Federal Government. The Declaration of the United Nations Conference on the Human Environment, held in Stockholm in 1972, also called for the creation of a specialized agency. In short, the time was ripe for SEMA. But, although over a year had gone by since Stockholm, the government did not seem to be in any hurry.

The opportunity came in a very peculiar form. The operation of a wood-pulp plant near Porto Alegre, the capital of the southern state of Rio Grande do Sul, was causing severe inconvenience for the general population. Every time the wind blew the wrong way, a new wave of nausea, vomiting and sickness affected an increasingly vocal population. After contact was made with the Interior Ministry, which was supposed to have a say in urban planning and zoning, this matter was brought to the attention of the Gabinete Civil through a decree that was tailor-made for the situation. Its backers were ready with the necessary Exposição de Motivos [a document that usually accompanies a piece of legislation, containing the justification for a particular policy] and everything else that the patrimonial order would call for on such occasions. This decree provided for a specific agency to be charged with solving specific problems such as the one in question. Being a very popular figure in Rio Grande do Sul and also an authority on legal matters, Professor João Leitão de Abreu, the Chief of Staff, immediately seized the opportunity.

With the enactment of Decree 73.030 by President Garrastazú Médici in October 1973, Brazil gained a new agency, the Secretaria Especial do Meio Ambiente (SEMA), under the co-ordination of the Interior Minister (in 1986 SEMA was transferred to the new Ministry of Urban Development).

1. The organizational culture of SEMA and ecopolitics

This experience reveals more about Brazil than it appears to do. The way in which an organization comes into being exerts strong influence on the perceived missions of its bureaucrats. An agency that has resulted, for example, from an emergency situation is likely to respond in its day-to-day operations in a spasmodic, emergency-like pattern. Another agency created to placate special interests is unlikely to address broader issues that may enlarge its clientele, thereby jeopardizing the original interests. Therefore, because we have analysed the ecopolitical foundations of SEMA in the Brazilian social formation, it seemed appropriate to reveal the most intimate moments of SEMA's birth. SEMA was created in response to an instance of environmental pollution, and this fact would later have a lasting effect both on its members' sense of purpose, its organizational "culture", and on its effectiveness in implementing environmental policies as well. Ecopolitics in Third World countries deals more with managing the natural resource base than with abating pollution. Brazil was one of the leading speakers for this viewpoint at Stockholm; yet, up to now the dominant environmental perception in Brazil relates to the pollution of air, water and soil rather than to natural resources management.

A second element of SEMA's creation that also reflects the ruling alliance installed after 1964 is the technocratic orientation instilled at the moment of its inception. First of all, the Exposição de Motivos that accompanies the decree establishing SEMA justifies it on the grounds that Brazil already had a multitude of agencies working on specific areas, citing 18 agencies, distributed among nine ministries. Despite that, the proposed "solution" was to create yet another organization. Worse, an agency that worked according to the dominant
precepts of technobureaucratic behaviour could not possibly be expected to get other agencies to co-operate. Being a second-class secretariat of an ordinary ministry, it could not have any political clout, even in the strictest bureaucratic sense, that would help formulate and implement a national environmental policy. Furthermore, the actual way in which SEMA was set up and staffed points to the predominance of a particular professional perspective, that of the natural sciences broadly defined: chemistry, biology, pharmacology and others. As a result, the Brazilian government was able to depoliticize environmental issues, reducing them to a question of technical, or technobureaucratic, expertise.

Necessarily, these are some of the ecopolitical implications of the alliance forged after 1964. They all refer to structural characteristics of Brazilian society that cannot be done away by a change of régime, not even by the "redemocratization" of the 1980s. Therefore, observers must be temperate in their criticism of SEMA's role in managing the environment. To be sure, current practices reinforce the dominant ideology, and SEMA is liable for most of them. Nevertheless, the most important characteristics of ecopolitics in Brazil go beyond specific administrations; they have been unfolding through a much longer process. The advent of the military régime, it should be stated once more, simply enhanced already latent values, beliefs and practices of the leadership cadres in Brazil.

V

Development plans and the environment: a summary review

Most countries of Latin America started to pay closer attention to planning activities immediately after, and in part because of, the 1929 crisis. In the case of Brazil, planning began to be taken seriously during the Getúlio Vargas era. The growth of State functions called for the existence of well-trained, professional bureaucrats. As part of the efforts to reform the administrative apparatus of the State, Vargas formed the Administrative Department of the Public Service (DASP) in 1938. One year later there appeared the Special Plan of Public Works and Equipment of National Defense, whose main objectives were to foster the creation of basic industries and improve the transport infrastructure.

This is the period in which key planning institutions, such as the National Bank for Economic Development (BNDE), came into being. This was also the time when attention began to focus on the country's natural resources, with the establishment of a multitude of public organizations to control, promote or otherwise regulate their exploitation. The National Department of Mineral Production (DNPM), the Vale do Rio Doce Company (CVRD) and the Brazilian Oil Company (PETROBRAS) are just a few examples of the dozens of State enterprises or agencies that appeared during the 1940s and 1950s.

The military régime installed in 1964 was to inaugurate a period of profound changes, and the institutional aspects of national planning received more attention than ever. In 1967 the Extraordinary Ministry for Planning created by Goulart became the (permanent) Ministry of Planning and General Co-ordination — what today is the Planning Secretariat of the Presidency of the Republic. Since then those who have occupied this post have been traditionally the most powerful members of the cabinet, enjoying political clout equivalent to that of a prime minister in parliamentary régimes. The obligation to
carry our planning activities for social and economic development became enshrined at the highest institutional level: in the Constitution of Brazil.

It is not the purpose here to analyse the results of the multitude of development plans. Nevertheless, just as Brazil's environmental problems cannot be blamed on a lack of legislation, so they cannot be blamed on a lack of planning either. What seems to be missing is relevance, planning that is detailed and "appropriate". Since the emphasis must be placed on the culture of bureaucracies as perceived by the actors involved, rather than on a culture derived from some arbitrary order imposed by the observer, we should turn our attention to the perceptions of environmental officials. The overriding conclusion that comes out of various interviews at the highest levels of environmental decision-making is one of frustration with the job that SEMA has been able to perform in this area.

Insofar as the planning process is concerned, one generalized perception is that the culture of development planning in Brazil was, and still is, largely dominated by macroeconomic criteria. Development plans at the national as well as at the regional level consistently fail to incorporate any environmental dimension, much less one that might be deemed more or less appropriate. This is believed to be the case not only because of lack of understanding or sensitiveness to environmental issues on the part of economists who hold power positions in the planning structure; there also seems to be consensus that so long as development plans are prepared according to the concepts and techniques of economics, no one should expect better results. The dominant technobureaucratic ideology of "privatization" of national resources only compounds the difficulties.

The institutional structure for planning is also held to be an obstacle to the incorporation of the environmental dimension into development plans. Located in one sectoral ministry, and having to compete for the allocation of resources on a sectoral basis, SEMA has repeatedly failed to influence the planning cultures of other ministries, and particularly that of the Planning Secretariat itself. Government officials often mentioned that every major public enterprise or project in Brazil already had an environmental unit. Yet these units have played a minor, almost cosmetic role. Never have major revisions been promoted or projected because of their work. The environmental legislation requires that an impact assessment of large-scale projects be undertaken. The potential incentive for internal compliance is high, for the government is supposed to withhold the disbursement of resources until this requirement is met. Again, the law is uniformly ignored, and yet nobody has been punished so far.

Finally, plans themselves are cited as indicators of SEMA's disappointing performance. Most assessments of SEMA's contribution to the several national and regional plans underline the fact that it has never exerted any influence whatsoever. Some officials add that SEMA could not have done so, even if it had been "granted" the opportunity, since it lacks the necessary human and material resources to tackle the task of harmonizing sectoral programmes and environmental criteria.

In short, no matter how one looks at it, the conclusion seems to be the same. The ecological and environmental realities of Brazil have not yet made their way into planning. As the opening quotation to this paper indicates, Brazil's leaders have defined the situation as one where destiny "imposes" development, tearing down, moving on. The country is seen as big enough to heal itself, and this makes business as usual possible. Ironically, at Stockholm the Brazilian government passionately advocated that environment and development be tightly connected. But more than a decade after Stockholm, Brazil's government authorities have still decided not to realize in their own country what they preached to the world. The situation described here assumes bleak overtones once additional elements are considered. The context of environmental problems, or the "agenda" of public policies in this area, adds to the complexity of policy formation and implementation. The multitude of actors involved in policy-making also renders environmental problems almost intractable in Brazil.