

## **DEMOCRATIZATION AND THE ISSUE OF CLIMATE CHANGE IN BRAZIL 1987-1994**

### **ABSTRACT:**

The paper describes the development of Brazilian positions and policies related to the issue of climate change during the 1987-1994 period. The main focus of the paper is on the political conflicts connected to the most important Brazilian source of greenhouse gas emissions, namely deforestation in Brazilian Amazonia. It is argued that the election of president Collor as a new Brazilian president in 1989 spurred the transition to a more cooperative position on the issue of climate change. This happened because Collor perceived the improvement of Brazil's international environmental record as an essential precondition for the fulfillment of his economic liberalization programme, and because his position as the first democratically elected president since 1961 facilitated an increased political distance to the military and regional business groups sceptical to such reforms. However, partly because of resistance from these interests and the powerful Ministry of External Affairs (Itamaraty), and partly because of the weakness of the sections of the Brazilian environmental movement with an interest in the Amazon region, Collor's attempts to change Brazil's international role in the UNCED negotiations and to launch a forest policy for the Amazon region inspired by considerations for climate change were partially crippled.

### **1. Introduction**

During the late 1980s, Brazil became the environmental villain of an emerging global ecological order. The Sarney government's (1985-1990) position on the issue of climate change was among the most defensive and hostile in the G-77 group. While principally denying any responsibility for global environmental problems, the country was forced by a coalition of the United States, the European Community, multilateral agencies and international NGOs to adopt half-hearted reforms that addressed the problem of climate change. Between 1990 and 1992, under the Collor government, the country's attitude to the climate issue was reversed in a much more cooperative direction. At the same time, efforts to cope with Brazil's contribution to the greenhouse problem were implemented with more vigour. This phase culminated with the arrangement of the UNCED conference in Rio de Janeiro in 1992 and the impeachment of president Collor in September 1992. Under president Itamar Franco, there was another reversal of Brazil's environmental policies back to the defensive positions and the half-hearted efforts of the Sarney era.

In this paper, argue that these changes were influenced by a combination of special characteristics of the sources of greenhouse gas emissions in Brazil and the state and civil

society forces connected to these sources. The lion's share of these emissions come from deforestation in the vast region of Brazilian Amazonia.<sup>1</sup> But the political structures that linked the various interests created by this emission profile with federal decision-making changed considerably with the progress of democratization in Brazil. In section 3-5, I will explore the configurations of these forces with an emphasis on the contrasts between the Sarney and Collor governments. A main point is that the process of democratization in Brazil implied a more progressive policy related to the question of climate change as the influence of the military and their allies was weakened. But prior to this discussion, some of the characteristics of the distribution of greenhouse gas emissions from Brazil on various anthropogenic sources and geographical regions will be discussed.

## **2. Greenhouse gas emissions from Brazil - conflicting perceptions**

At one level, the issue of climate change is a problem of the natural sciences, characterized by the struggle for reduced uncertainty and refined methods of data analysis. However, at another level, our perceptions of the issue is influenced by the strategies of several groups of actors, presenting conflicting versions of an uncertain reality.

Worries about climate change in Brazil predate the scientific advances in atmosphere sciences from the late 1970s.<sup>2</sup> Such worries were especially focused on regional climate change as a consequence of deforestation in the Amazon region. Potter et al. (1975) simulated the climatic consequences of general deforestation in the zone 5 degrees N to 5 degrees S (of which Amazonia took the lion's share). Main outcomes in this model were drops of temperature in this zone along with changes in rainfall. Molion (1976) and Salati et al. (1979) warned that reduced rainfall might be the outcome of continued deforestation in Amazonia; a possibility also reflected upon in by current political commentators (Bourne 1978). Speculations about the implications of deforestation for global climate change through the reduction of biomass and increased emission of CO<sub>2</sub> to the atmosphere also emerged in this period (Bolin 1977, Adams et. al. 1977, Wong 1978): For Amazonia, the issue was raised in connection with the enormous amounts of biomass represented by the Amazon rainforest.<sup>3</sup>

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<sup>1</sup> The term «Brazilian Amazonia» as used in most texts usually has one of two meanings. One is the «North-region» as defined by the Brazilian census agency IBGE, including the states of Pará, Amazonas, Rondônia, Acre, Amapá and Roraima. A second, which is used in this chapter, is the term «Legal Amazonia» used by the Brazilian regional development agency SUDAM (according to Complementary Law No. 31 of 1977) also includes Tocantins, Mato Grosso and a large share of Maranhão.

<sup>2</sup>Even though connections between human activity and global climate change as a consequence of increased anthropogenic emissions of carbon dioxide has been an object of scientific speculation since the 18th century, the launching of the World Climate Programme by World Meteorological Organization in 1979 was the first large-scale effort to estimate the seriousness of this problem (McCormick 1989:190).

<sup>3</sup>Salati & Ribeiro (1979) estimated the Amazon region to represent about 20 percent of the planet's organic carbon reservoir.

Though the net contribution of rainforest removal vs. emissions from energy was clouded with uncertainty during the 1980s (Fearnside 1985:80-81), most estimates concluded that the burning of fossil fuels was far more important than the removal of biomass from tropical forests (Dobson et al. 1989; *The Economist*, 11. February 1989:19).

Parts of the reason for a very strong focus on Brazil and its share of Amazonia in relation to the global climate, in spite of the apparently moderate impact of tropical deforestation, was new discoveries of the intensity of deforestation in the Amazon region in 1988. Early this year, a research team from the Brazilian Forestry Development Institute (IBDF) and the Brazilian Space Agency (INPE) presented a report indicating that 325,000 fires had been detected in Brazilian Amazonia by the NOAA-9 meteorological satellite (Setzer et al. 1988). From the total number of fires, they concluded that in 1987 deforestation had demolished 80,000 km<sup>2</sup> of native forest, an area corresponding to the size of Austria. In the next turn, these estimates provided the basis for other reports that concluded that Amazonian deforestation was gaining an enormous, exponential momentum (Mahar 1989, Myers 1989), and that the country was a key contributor to global greenhouse gas emissions. The prestigious World Resources Institute in Washington concluded in their 1990 survey of the global environment that deforestation in Brazil in 1987 accounted for greenhouse gas emissions larger than the combined use of fossil energy fuels in the United States (World Resources Institute 1990:346). These assumptions brought Brazil to the top of total and per capita emissions of CO<sub>2</sub> among the larger nations of the capitalist world, as demonstrated by the table below published by World Resources Institute in 1990:

**Table 1: Ranking of gross per capita emissions of carbondioxide in the WRI 1990 estimate - larger nations/capitalist world<sup>4</sup>**

Country	Per capita emissions CO <sub>2</sub> (metric tons)	Deforestation as percentage of total emissions of CO <sub>2</sub>
1. Brazil	9.1	96
2. United States	5.0	0.5
3. Canada	4.3	0

Source: World Resources Institute 1990:346, table 24.1.

These estimates provoked enormous attention to Brazil and its contribution to climate change all over the world. In September 1989, Amazonia was the frontcover story of an issue of *Time*

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<sup>4</sup>The figures presented in this table reflect information given by WRI in 1990. Later estimates for all three nations in the table may deviate considerably from these figures due to improvements in emission estimates.

*Magazine* (*Time Magazine*, 18. September 1989).<sup>5</sup> State leaders, like president Mitterand and chancellor Helmut Kohl, as well as rock star Sting, directed their attention to Amazonia.

In 1988 and 1989, the global discourse that linked Amazonia and climate change was departing from realities. Along with the emergence of Brazil as the villain of climate change, critical examinations of former deforestation estimates in Amazonia unveiled methodological problems in the interpretations of remote sensing images. The satellite images, which provided the basis of the Brazilian Space Agency's estimates, were based on spots of fire detected by infrared sensors. Such sensors are easily saturated by only small spots of fires, facilitating exaggeration of the area covered by fire (Fearnside 1990b:214-215). In addition, Mahar's (1989) deforestation estimates were flawed by empirically ungrounded exponential extrapolations of 1980 observations, grossly overestimating deforestation in several Amazonian regions (Fearnside 1990a:459-460).

These facts were increasingly recognized by scientists in the late 1980s, but Brazil proved unable to exploit these discoveries to argue convincingly in favor of more moderate estimates of the country's contribution to global warming. In the first place, the Sarney government's response to the global outcry that came in the wake of the new estimates was politically unwise. The Brazilian Space Agency was ordered to make a crash estimate of deforestation refuting especially Mahar's widely cited study, which gained credibility from being published as a World Bank paper. However, the study which the Sarney administration called for, received much criticism. First, it used a questionable methodology to minimize deforestation and greenhouse gas emissions from Amazonian deforestation. The report concluded that total deforestation in the Amazon region was less than half of the 12 percent suggested by Dennis Mahar (*O Globo*, 6. April 1989). But it came to this conclusion by subtracting «ancient» deforestation taking place before 1970. Furthermore, a second edition published 2. May 1989 calculated deforestation as a share of the total area of Legal Amazonia,<sup>6</sup> and not originally *forested* Amazonia. As Legal Amazonia also includes large savannas, the numerator and denominator refers to different areas, grossly underestimating total deforestation. Second, there are strong indications that the scientific process behind the figures was deliberately «fixed» to still international criticism of Brazil. Technicians at INPE complained that the report was prepared too rapidly, and that the scientific staff was excluded

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<sup>5</sup>The frontcover, which portrays a skull of flames devouring a forest containing innocent birds, panthers and beautiful snakes, confirms a popular image of Amazonia as an unpopulated, tropical paradise threatened by civilization. The poor urban populations of the large Amazonian cities as well as the rural poor at the agricultural frontier are not included in this image.

<sup>6</sup> The term «Amazonia» as used in most texts usually has one of two meanings. One is the «North-region» as defined by the Brazilian census agency IBGE, including the states of Pará, Amazonas, Rondônia, Acre, and Amapá in addition to the federal territory of Roraima. The definition «Legal Amazonia» that is used by the Brazilian planning agency for Amazonia, SUDAM, after 1979 also includes Mato Grosso, Tocantins and large parts of Maranhão. Legal Amazonia makes up more than 50 percent of the Brazilian territory.

from the final data analysis (Anderson 1990:20, *Folha de São Paulo*, 8. May 1989:C-3). This provoked strong criticism from the national and global scientific community (*Folha de São Paulo*, 8. May 1989:C-3) and undermined the Brazilian government's credibility.

The clumsiness of the Sarney regime's handling of deforestation estimates thus tended to take away attention from the new and more moderate estimates that arrived somewhat later. In these estimates, Brazil's contribution to the greenhouse effect were drastically decreased along with huge reductions of deforestation rates. In the 1992 version of «World Resources», carbon dioxide emissions from Brazil were reduced by more than 50 percent as compared to the 1990 estimate. Deforestation was still the overwhelming cause of greenhouse gas emissions from Brazil, making up about 77 percent of total emissions, but did no longer grossly outpace total emissions from the other major «deforesting nation», Indonesia, or the per capita emissions of other countries with large natural forests (World Resources 1992:348-49, table 24.2, Fearnside 1992). Furthermore, reports based on improved methods for measuring deforestation concluded that the years 1987-1988 were exceptional years in terms of deforestation. Special economic factors had contributed to a climax of biomass burning in the Amazon region just when global attention to the problem of climate change emerged.<sup>7</sup>

A more general problem connected to Brazil's position as a developing country, was its inability to influence the situation of the disappearing tropical moist forests at the top of the international agenda. For Brazilian citizens, local pollution problems are much more of a threat to the population than the spectre of climate change, perhaps with the lack of basic sanitation for the majority of the population as the most important problem (Viola 1992:4). The biased representation of human needs represented by the ascendancy of climate change to the top of the global agenda was also reproduced by the currents of international environmental financing. It is far easier for Brazilian NGOs and researchers to obtain funding on forest-related projects than on projects related to improvements of basic sanitation.<sup>8</sup>

The outcome of the conflict over realities was, however, that Brazilian Amazonia came to occupy a very high position on the global ecological agenda. The region's contribution to global warming was one of the chief reasons for this. In the next turn, this led to very strong international pressure on Brazil to change the country's policies in the region in a more environmentally benign direction. As we shall see, the development of Brazil's policies on climate change took place in the intersection between this pressure and domestic politics.

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<sup>7</sup>More recent estimates conclude that annual average deforestation during the years 1978-1988 was 22,000 km<sup>2</sup>. Between 1989 and 1990, the deforestation rate declined to 13,800 km<sup>2</sup>/year, and has since declined further to just above 10,000 km<sup>2</sup>/year (Fearnside 1992:5).

<sup>8</sup>Own interviews with Brazilian NGOs October 1992 and November 1993. For a more general discussion of this topic, see Agarwal & Narain 1991 and Beckerman 1992.

### **3. The Sarney government and climate change**

Deforestation in the Amazon region is heavily influenced by development policies initiated in the early days of the military regime (1964-1985). In 1966, the military introduced a regional development policy for the Amazon region characterized by infrastructure extension and huge subsidies and tax breaks for of industries, cattle ranching and mining (Hecht & Cockburn 1989, Branford & Glock 1985, Pompermayer 1984). This policy was continued with only minor changes through the 1970s and early 1980s. The main political motive was territorial security. The vast and unpopulated Amazon region was perceived as vulnerable to attacks from hostile foreign powers or as a potential nest for communist subversion (Allen 1992).

In addition to huge public investments in roads and hydroelectric plants, the military development policy inspired a wave of private investments in cattle ranching, mining and industry. While investments in industry were spatially concentrated in the Manaus free-trade zone, investments in cattle ranching and mining were more dispersed, having a stronger ecological impact.<sup>9</sup> The most important initial investors were large companies from São Paulo, Brazil's south-eastern industrial powerhouse, and to a smaller extent, transnational companies based in the US and Europe. In addition to the distribution of generous incentives to private investors, public investments in road-building tended to encourage private investments as land values increased dramatically when road access was assured. In combination with strong general tax incentives for agricultural investments and rules of land allocation that provides land title after the size of cleared forest area, these policies contributed to massive forest clearing in the Amazon region (Binswanger 1991). From the 1970s, the prospects of huge speculative profits increasingly also attracted investors from the Amazon region itself, independent of the subsidy programmes. Though being of local and regional origin, the majority of these investors were also large-scale ranchers, manifesting the tendency towards land concentration in the Amazon region.<sup>10</sup> This makes assumptions about

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<sup>9</sup>The extension of cattle ranching is seemingly closely linked to deforestation in the Amazon region. May & Reis (1993:13-15) correlate planted pastures to Amazonian deforestation and found a very strong spatial covariation between concentrations of planted pasture and deforestation. However, as they based their calculations on IBGE data only covering agropastoral establishments, these data do not give information about non-agricultural causes of deforestation else than the construction of hydroelectric dams, which takes a quite modest share of total deforestation. But generally, there is a long-standing and broad consensus on the very strong effects of pasture expansion on deforestation, and that the deceleration of such expansion is the main prerequisite for a decrease of deforestation rates. (Serrão & Toledo 1990:196, Fearnside 1989).

<sup>10</sup>The increase of land-use in Amazonia in the period until the late 1980s was first and foremost the outcome of the expansion of planted pastures (May & Reis 1993:13, table 4). There has also been a strong tendency towards the concentration of rural establishment in larger units. In the North Region and Mato Grosso in 1985, large agropastoral establishments (area greater than 500 hectares) covered 73,6 percent of the North Region and Mato Grosso, while small (area below 100 ha) and medium sized (area between 100 and 500 ha) establishments by and large divided the remaining area between them (May & Reis 1993:19). However, the predominance of

a close covariation between poverty and greenhouse gas emissions in Brazil much more problematic than commonly assumed.

In the middle of the 1980s, this trend of regional development reached a climax through two very large projects. The first project was the Great Carajás project which included a broad-based development of industries and agriculture in the eastern Amazon region. This project was organized around the infrastructure constructed in connection with the establishment of the extremely large Carajás iron mine.<sup>11</sup> In addition to the extension of large-scale ranching and agriculture, the Great Carajás project included a proposal for the construction of a series of pig-iron smelters utilizing virgin rain forest as its source of energy (Hall 1989). The net impact of the project, which was fuelled by special subsidies, on the forests of the region was predicted to be extremely devastating in terms of deforestation (Fearnside 1986). The second project was the POLONOROESTE immigration project, which consisted of the construction of the pavement of a 1,500 km road connecting Cuiabá at the south-western fringe of the Amazon region with the capital of the capital of the western Amazonian state of Rondônia, Porto Velho. In connection to this road, 39 centers for planned agricultural immigration were established to attract thousands of immigrants to an area covering the whole state of Rondônia and the northern section of the state of Mato Grosso; an area equal to about 75 percent of the surface of France (Rich 1988:9). The outcome was a totally uncontrolled process of immigration into the region. From 1980 to the peak year of 1986, the annual number of immigrants entering Rondônia increased from 28,320 to 165,899 (Martine 1990:30). Between 1978 and 1989, deforested area of Rondônia increased from 1.78 percent of state area to 13.34 percent, implying the removal of about 27,000 km<sup>2</sup> of forest (INPE 1992). Both the POLONOROESTE project and the Carajás central mining project which was the cornerstone of the Greater Carajás Project, received World Bank financing.

These megaprojects continued uninterrupted during the first years of the Sarney government. In addition to its alliance with the military (Flynn 1993, Zirker & Henberg 1994), the conservative Sarney government had important political allies among federal deputies, senators and governors from the Amazon region.<sup>12</sup> As the Brazilian electoral system favors votes from remote regions like Amazonia, these allies enjoyed an influence out of

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planted pastures on medium-sized and its substantial share of small agripastoral establishments suggest that livestock is an important source of income among all strata of Amazonian producers.

<sup>11</sup>In addition to the establishment of the mine south of the city of Belém, this included the giant Tucuruí hydroelectric dam, the Ponta da Madeira deep sea port near the city of São Luis, and a 900 km. railroad connecting the mine and the port.

<sup>12</sup>Sarney was a former top figure of the military's party ARENA, but created his own right-wing party, PFL (The Liberal Party) during the process of democratization. He became president because the first non-military president which was elected by the 1985 electoral college, Tancredo Neves, died of heart attack the same year. While Neves was a highly respected democrat and was elected by an electoral college that sensationally chose to act against the advice of the military, Sarney served as a military alibi in this «package solution».

proportion with the region's demographical and economic importance.<sup>13</sup> This influence contributed mainly to improve the basis of right-wing allies of the military forces, and to guarantee a very strong coalition in favour of continuation of the commercial «development» of the Amazon region (Hurrell 1992, Zirker & Henberg 1994:266-267). In 1985, before the relevance of Amazonia for global environmental problems was fully recognized by the international community, a comprehensive strategy for increased environmental protection in the Amazon region had been proposed as a federal bill to the congress in 1985, after discussions dating back to 1979. Apparently, the mentioned coalition was already operative in the national assembly. The bill was never voted upon by Congress, probably due to fierce resistance by business interests in the region (Vieira 1994:108).

As the connection between deforestation and global environmental problems became well-known, and the surprisingly high estimates of Amazonian deforestation exploded in media all over the world, the Sarney government was exposed to mounting international pressure. The emergence of such pressure was facilitated by transnational channels connected to an ongoing campaign of international NGO protests against World Bank financed projects in developing countries. These channels emerged during the 1980s. In this period, US environmental NGOs started to inform the two chambers of the US Congress about the destructive effects of a series of projects in rainforest areas financed both by the World Bank itself and other regional development banks.<sup>14</sup> 24 Senate hearings in which the policies of the Multilateral Development Banks were main topics, were held in the US Congress from 1983 to 1986 (Rich, undated:20). Both the POLONOROESTE and the Carajás mining project were focussed upon in these hearings. The campaign was supported by a strategy of networking between US NGOs and NGOs both in Western Europe and in developing countries. In Brazil, a broad network of activists including prominent individuals like José Lutzenberger<sup>15</sup>, NGOs organized around Amazonian rubber tappers<sup>16</sup>, like *Instituto de Estudos Amazonicos* and *Conselho Nacional de Seringueiros*, and NGOs organized around Amazonia's

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<sup>13</sup>This was a deliberate strategy to increase right-wing influence by the retreating military regime in the early 1980s. The poor and peripheral regions of Brazil are characterized by the dominance of right-wing rural oligarchies who dominate through electoral clientelism.

<sup>14</sup>Greenpeace International, Friends of the Earth, Natural Resources Defense Council, Environmental Defense Fund, the Sierra Club, Environmental Policy Institute and Cultural Survival were important NGOs participating in the campaign. The campaign was coordinated by Bruce Rich (Natural Resources Defense Council), Barbara Bramble (National Wildlife Federation) and Brent Blackwelder (Environmental Policy Institute) (Arnt & Schwartzman 1992:112).

<sup>15</sup>Lutzenberger was leader of the first modern ecological movement in Brazil, *AGAPAN*, founded in Porto Alegre (capital of the state of Rio Grande do Sul) in 1971. This required great personal courage, as it was done in the most repressive period of the military regime (Viola 1988:214).

<sup>16</sup>The rubber tappers are independent collectors of latex from the dense stands of rubber trees of Western Amazonia. Especially in the state of Acre, they oppose the expansion of cattle ranching.



indigenous populations like *União das Nações Indígenas* (UNI).<sup>17</sup> As World Bank and Interamerican Development Bank projects were revised to include firmer environmental obligations mainly because of the activity of US directors in the board, pressure against the bank was translated as pressure against the Brazilian government from the bank. From 1985, this included temporal discontinuations of funding for the POLONORESTE programme, demands for detailed environmental provisions in energy programmes, temporal discontinuations of funding for further road extension in the Western Amazon region and demand for improved environmental plans. A very important blow to the Brazilian government was the indefinite discontinuation of negotiations on a very important USD 500 mill. loan for a series of energy projects in early 1989. This energy programme included the construction of a series of very large hydroelectric dams in Amazonia that threatened to flood vast areas of pristine forest (Arnt & Schwartzman 1992:115-116).<sup>18</sup>

The pressure from NGOs also activated bilateral pressure from Brazil's main trading partners and investors. US politicians like senator Al Gore tried to link environmental reforms in Amazonia to a more liberal debt regime and the inflow of fresh investments in the Brazilian economy (*Correio Braziliense*, 18. January 1989:12, Hurrell 1992:406).

The response of the Sarney government to this pressure may be divided into two periods. The period until the second half of 1988 was characterized by the government's uncompromising refusal to recognize and address the environmental problems created by its policies in the Amazon region. Then a period of cautious reform was introduced with the introduction of some planning study groups for the region set up in October 1988, ultimately ending up in a series of reform in 1989 and early 1990. Though some of these reforms implied significant breaks with former policies, the government's foreign policy positions on climate change and the environment, as well as policies related to Amazonia's indigenous populations, remained unchanged.

### **3.1. The Sarney government before 1988 - intransigency and increasing pressure**

Before the second half of 1988, the Sarney government refused altogether to accept the relevance of its policies in Brazilian Amazonia for the global environment. This refusal was based on two main perceptions of Amazonia's position in the international system.

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<sup>17</sup>According to Albert (1992:36), Amazonia is home to about 60 percent of the 236,000 Brazilian Indians. 98 percent of the total area of Indian lands (794,000 km<sup>2</sup>) is located within the region. Large areas of Indian lands in the Amazon are heavily forested and among the most interesting sections of Amazonia because of their richness in plant and animal species (World Bank 1994:283).

<sup>18</sup>The message about the closure of negotiations on the power sector loan became publicly known in Brazil the same day as the Sarney government was insulted in public by an UNEP leader for its defensive environmental policies. In the newspaper *O Globo*, 31. March 1989:7, these events are reported on the same newspaper page, providing a striking impression of the intensive pressure on the Brazilian government.

First, the government tended to perceive international considerations over the greenhouse effect and Amazonia as an international plot to challenge Brazil's sovereignty over the region. Such considerations were based on the military's assumption that the region was threatened by foreign powers. Seemingly far-fetched in the international context of the 1980s, this position was grounded on a longer historical view. When Amazonia was the center of the soaring world trade in rubber around the turn of the century, a joint plan by the United States and Bolivia to break Brazilian control over transportation by declaring the Amazon river as international area provoked strong tension in the region, ultimately leading to Brazil's successful overtaking of the Bolivian region of Acre in 1903 (Hecht & Cockburn 1989:66-72). Also during World War II, worries over Amazonia's sovereignty surfaced. As Brazil declared war against Germany in 1942, the United States and Brazil joined forces to prevent German infiltration of the region. This cooperation involved the construction of airfields and the launching of a Brazilian expedition into the Amazon region (Cowell 1990:17-22).

Second, there was also a feeling that the environmental campaign was launched by the industrial nations to prevent Brazil from becoming a world power assisted by the natural resources of Amazonia (Miyamoto 1989, Hurrell 1992:405). This position was especially connected to the north-south perceptions of the traditionally very strong and influential Brazilian Ministry of Foreign Affairs (also called the *Itamaraty*). The Itamaraty perceived several international issues through the lenses of a broad north-south conflict over global resources; a perception which included the exploitation of Amazonia's natural resources (Miyamoto 1989).

These perceptions motivated a very defensive policy on the Amazon before the second half of 1988. The scheme of fiscal incentives for cattle ranching, pointed out by foreign and national critics as unprofitable and a main motive for deforestation, continued unchanged in spite of its costs in a situation of debt-imposed fiscal austerity. The forest policy for the Amazon region outlined in the 1965 forest law and later amendments remained unimplemented, and the agency responsible for its implementation, the Brazilian Forest Institute (IBDF) paralyzed by decreasing funding (Prado 1986:13-14) and a continued lack of political backing. Also policies relevant to preservation of forest areas for Amazonia's indigenous populations were shaped with an eye to commercial interests. The National Indian Foundation (FUNAI), responsible for the Indian tribes of the Amazon region, was widely known as a corrupt bastion for military and mining interests (Albert 1992).

The foreign policy of Brazil on the Amazon issue and its effects on the global climate was extremely defensive and anti-cooperative, and continued to be so during the whole Sarney presidency. The government's attitude to Amazonia's contribution to climate change was entirely shaped with an eye to the region's importance for the military. For example,

president Sarney withdrew his participation in the global conference on the protection of the atmosphere in Hague in 1989 after a meeting with his military ministers (Zirker & Henberg 1994:266). Furthermore, the Brazilian delegation to the meeting argued against any references to Amazonia in the final communique and against president Mitterand's suggestion to provide the UN with authority to intervene in cases in which global environmental interests were threatened (Hurrell 1992:406). Proposals suggesting debt-for-nature swaps as a combined remedy for Brazil's debt-burden and the country's contribution to global environmental problems were forcefully denounced by the government as attempts of foreign intervention. The refusal of the World Bank to continue negotiations on the energy sector loan in 1989 was met by furious protests by Brazil, deviating from the rules of diplomatic conduct in such cases (*O Estado de São Paulo*, 7. March 1989:47). Foreign NGOs were suspected to be spearheads of an imperialist take-over of the region by the military (*O Estado de São Paulo*, 9. February 1989:13). Though mostly focussed on foreign influences, the classical army «think-tank», the Superior War College (ESG) also identified Brazilian artists, intellectuals, the church and transnational companies as a possible «fifth column» behind the international campaign against Brazil (*Folha de São Paulo*, 29. May 1990:A-4).

### **3.2. The Sarney government from the second half of 1988 - cautious action**

In the second half of 1988, the Brazilian government started to respond to external pressure, which was perceived to have reached a climax in the middle of 1988. It was clear that Brazilian trade, the debt regime and a revitalization of foreign investments in the country was dependent on improvements of Brazil's record in Amazonia.

In October 1988, president José Sarney held his first speech related to the environment, in which broad policy changes related to Amazonia were introduced (Hurrell 1992:409). A new plan related to environmental protection in Amazonia was decreed the 12th of October 1988 and called «The Programme for the defence of the complex of ecosystems in Legal Amazonia». It was marketed under the label «*Nossa Natureza*» (Portuguese for «Our Nature»). The aims of the programme were addressing Amazonian problems broadly, including to restrain predatory actions, to discipline the exploitation of the region, to regenerate the region's ecosystems and to protect indigenous populations and the region's rubber tappers (Decree No. 96.944/88). Most remarkably, concerns for the global climate emerged as environmental policy motives for the first time with the *Nossa Natureza* plan. In the report from the executive committee of *Nossa Natureza* in February 1989, this is stated clearly (SADEN 1989:26, my translation from Portuguese):

«The destruction of tropical moist forests, in particular the Amazon forest, attract the interest of industrialized countries, not only because they constitute the ecosystems with the most biological species, *but above all because of their possible influences on the global climate.*» (my Italic).

The core of the first phase of the programme was the establishment of six interministerial working groups on topics related to environmental problems in Amazonia.<sup>19</sup> The groups were coordinated by an executive interministerial committee headed by a general from the National Defense Secretariat (SADEN).

The establishment of the interministerial working groups was introduced together with a decree that also prohibited the approval of fresh fiscal incentives for ranching and agriculture in Legal Amazonia and the Atlantic Rainforest for a period of 90 days, later on indefinitely. The decree also banned the disbursement of official agricultural credit for new ranching projects in these areas. In the light of Sarney's earlier reluctance to change this set of incentives, and the protests it provoked from important organizations of ranchers in the region, this move was a highly significant retreat.<sup>20</sup>

In February 1989, the final report from the working groups was delivered to president Sarney. During the following months, several laws, decrees and administrative acts were approved. A package of actions by the government was published on 10. April 1989, of which only the most important are mentioned here. One decree prohibited the disbursement of official rural credit and fresh fiscal incentives for agricultural and ranching enterprises in forest areas in Legal Amazonia until a definitive zoning of Legal Amazonia into various user purposes had taken place. A second decree prohibited the use of fire for the clearing of new land. A third decree made it obligatory for companies that consume timber as a raw material, such as sawmills, metal industries and cellulose industries to present integrated plans for meeting their demand with planted raw material to the newly created environmental body IBAMA.

IBAMA, the Brazilian Institute for the Environment and Renewable Resources (IBAMA), was also created in February. IBAMA emerged by merging a set of already existing small and neglected<sup>21</sup> federal bodies responsible for resource exploitation and the environment. This was the Special Secretariat for the Environment (SEMA), the Brazilian Forest Institute (IBDF) and two other agencies responsible for fishing and rubber production. For the first time, an executive body dealing both with urban pollution and the use of natural resources was established. The new body was an autarchy under the Ministry of the Interior, a legal status that made the body able to add income from the distribution of fines and other

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<sup>19</sup> The groups addressed the following topics: Forest cover in Amazonia, Chemical substances and inadequate processes in mining, Structure of the administrative system for environmental protection, Environmental education, Research and Protection of the environment, indigenous communities and populations involved in extractive activities.

<sup>20</sup> For protests against Sarney's cancellation of fiscal incentives, see for example the article: «Empresários criticam as restrições impostas a projetos agropecuários», *Folha de São Paulo*, 12 October, 1988:C-2. Confirmed in own interview with Fernando Mesquita, president of IBAMA under Sarney, November 1993.

<sup>21</sup>For a further analysis of the neglect of these bodies, see Guimarães' (1991) and Foresta (1991).

activities to its government funding. The new body was also decentralized, with the majority of its employees in special state branches. IBAMA was put under the command of Sarney's press secretary, Fernando Mesquita, who was also a close political ally of Sarney from the state of Maranhão.

The main accomplishment of IBAMA in 1989 was the implementation of a surveillance and inspection programme for the Amazon region called the Emergency Programme for Legal Amazonia (PEAL). PEAL was co-financed by transferring 30 percent of World Bank funding for the POLONOROESTE programme in Rondônia/Mato Grosso to IBAMA. 70 inspection groups (of them 50 mobile) consisting of about 1,000 persons from the Federal Police, the Road Ministry, the Marine Ministry, state environmental secretariats and the Forest Police patrolled the Amazon region. The programme was assisted by observations from the meteorological satellite NOAA (which is especially suitable for fire detection) channeled through the Brazilian Space Agency, and by observations from airline pilots. Nine helicopters assisted the surveillance activities and increased the mobility of the inspection groups (Arnt & Schwartzman 1992:287). Before November 1989, 838 penalties had been applied in the Legal Amazon (IBAMA 1989:3, undated). Rondônia was the state which attracted the highest number of penalties with 382 (Arnt & Schwartzman 1992:287).<sup>22</sup> The PEAL programme provoked strong protests among ranchers and their organizations in the Amazon region. Complaints from governors and federal deputies from the Amazon region representing farmers and commercial interests talking about a «massacre of fines» from IBAMA indicate that the new surveillance programme constituted a major, qualitative change of government attitude to law enforcement.<sup>23</sup>

Other areas of reform under Sarney related to Amazonia were of a more contradictory nature. Though a series of new national forests, extractive reserves for rubber tappers and reserves for indigenous populations was created, these decisions do not expose

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<sup>22</sup>Also other key regions received increased attention. In 30 days of monitoring and inspection, the 6 teams that accomplished the so-called "Operation Carajás" started legal proceedings against 3 pig iron producers (which had not carried out their required reforestation plans), 22 sawmills (which had acquired timber illegally) and 1.110 vehicles (for not having licences for timber transport and for carrying species which exploitation was prohibited) (Arnt & Schwartzman 1992:287). According to Hall (1991:298), in July 1989, the SIMARA pig-iron smelter in the city of Marabá was fined the equivalent of USD 0,5 million by IBAMA for buying illegally cut timber, and was forced to suspend its operations (see also Margolis 1992:127). The larger COSIPAR smelter (owned by the Minas Gerais steel company Itaminas), also in Marabá, was fined the equivalent of USD 25.000 for similar offences, but continued its operations (Hall 1991:298).

<sup>23</sup>Though these actions involved a clear step-up of law enforcement in Amazonia, legal barriers curbed the effects of government action. According to Fernando Mesquita, IBAMA only managed to collect about 2 percent of the fines given to trespassers of the forest law (*Jornal do Brasil*, 11 October 1990:12). This happened because the routines for collection were excessively bureaucratic. The offenders first turned to IBAMA for reassessment, and after that tried the cases for the court. Until a year could pass before the fine was paid by the offender (Arnt & Schwartzman 1992:289). This problem was tried solved during the last months of the Sarney government. Laws and provisory measures gave IBAMA the authority to collect fines without waiting for court decisions from February 1990. However, bureaucratic and judicial problems have continued to hamper IBAMA's capacity in this respect (interviews with IBAMA presidents 1990-1993).

the same willingness to discipline private investors as the monitoring and surveillance programme. The establishment of a series of national forests between 1986 and 1990 should not be considered as involving a strong priority of environmental concerns over commercial interests. National forests in general permit limited extraction of natural resources, like minerals, and are generally badly policed. In addition, the establishment of national forests in areas belonging to Indians according to the 1988 Constitution and was used as a deliberate instrument to secure the access of small-scale placer mining as well as other commercial interests to indigenous reserves (Albert 1992, Allen 1992). This was most pronounced in decisions regarding the huge Yanomani reservation in Roraima. Sarney's response to the gold rush of placer miners into the Yanomani reserve, poisoning the forest ecosystem with mercury pollution and mistreating its native inhabitants, was a 1989 decree that broke the reserve up in 19 pieces and encouraged further immigration (Albert 1992, Allen 1992).<sup>24</sup>

### **3.3. Sarney's Policies: Evaluation and Explanation**

Though introducing important changes to curb greenhouse gas emissions from 1988, the Sarney government's policies were perceived as half-hearted by the international community. A key reason for this was the lack of reform related to some of the focal points of external pressure. In contrast to institutional and legal reform related to the forest code and the environmental bureaucracy, as we have seen, neither foreign policy positions nor policies related to indigenous populations were changed. The *Nossa Natureza* environmental plan was wrapped up in a nationalist hard-line rhetoric that tended to overshadow the substantial progresses in the new policy.<sup>25</sup> In addition to continued international outcries regarding the situation of Amazonia's indigenous populations because of the unwillingness of the Sarney government to reform this section of policies in the region, the lack of foreign policy reform precluded any substantial decrease of pressure on Brazil.<sup>26</sup>

Thus, the policy shift under Sarney may be analysed from two angles. First, we may ask why reforms emerged at all. Second, we may ask why the strong reluctance to push on with reforms in certain areas persisted.

The partial shift away from intransigent hard-line nationalism that emerged in 1988 is almost completely explained by external pressure. Though there was an important

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<sup>24</sup>The fragmentation of the Yanomami territory was formulated in Interministerial Directive 160 of September 1988 and Interministerial Directive 250 of November 1988.

<sup>25</sup>The following statement from IBAMA's first president, Fernando Mesquita, during a visit to Amazonia in February 1989 is typical for the Sarney government's position (my translation from Portuguese): «(-) the Brazilians do not permit the improper interference of strangers in the preservation of the ecology of Amazonia and consider this as an offense to our sovereignty» (*Correio Braziliense* 10. February 1989:9).

<sup>26</sup>Bad luck also played a role. In December 1988, Chico Mendes, the world famous leader of the rubber tapper movement in Acre, was brutally murdered by ranchers. This event provoked an international outcry that associated the murder with the Sarney government and the military's policies in the region.

environmental opposition which had emerged after the end of the military dictatorship in 1985, this movement was clearly not strong enough neither to put the problem of climate change on the Brazilian political agenda, nor to exert effective pressure on the government. In the context of economic crisis and hyper-inflation after 1986, it was very difficult for Brazilian NGOs to raise the issue of climate change to a significant position on the political agenda. In the wake of the national debate on Amazonia, there was an increasing interest in environmental issues in general in the media, but the environment and Amazonia assumed only moderate importance in the presidential campaigns in 1989, and seemed to assume only secondary importance for the electorate (Hurrell 1992:413). In addition, global problems like climate change were victims of the heterogeneity of the Brazilian NGO movement. While some new, middle-class based NGOs like FUNATURA<sup>27</sup> and SOS Mata Atlantica (both created in 1986) were addressing global environmental problems, other environmental NGOs had a socio-environmental view based on the needs of the urban poor and political loyalties to parties on the left. On occasions, these NGOs supported parts of the anti-imperialist rhetoric of the Sarney government, for example by denouncing debt-for-nature swaps.<sup>28</sup> Such cleavages made it difficult to establish an united environmental stance (Hurrell 1992:413, Viola 1988).

However, the environmental movement had real impact on one important aspect of the environmental policy-making process under Sarney. A «green block» of federal deputies from a broad spectrum of political parties was successful in putting several articles on environmental protection into the new 1988 constitution. In one of these articles (art. 225, § 4), Amazonia was mentioned as a «national patrimony» demanding special federal attention along with 4 other major Brazilian biomes (Pantanal, the Atlantic Rainforest, the Coastal Zone and the Serra do Mar mountain range). Other articles (231-232) also demanded a protective attitude towards indigenous populations and confirmed the property rights of these populations to their territories; clauses most relevant to the preservation of Amazonia as the overwhelming majority of Indian lands is situated in this region.

But it is difficult to argue that the constitutional clauses on the environment were decisive for the adoption of the “Nossa Natureza plan”. Fernando Mesquita, president of IBAMA from its creation until the end of the Sarney administration and a close associate of Sarney, emphasizes that neither national NGOs nor the constitutional requirements had any

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<sup>27</sup>Of the two organizations, FUNATURA has the most extensive focus on Amazonia as it has done research for sub-sections of the PMACI (The Plan for the Protection of the Environment and Indigenous Communities) for the pavement of the Porto Velho-Rio Branco highway financed by the Interamerican Development Bank (Arnt & Schwartzman 1992:303). FUNATURA also arranged a series of seminars on Amazonia in 1988-1989, bringing together NGOs and scientists to make suggestions to guidelines for environmental management in the region (FUNATURA 1990:2).

<sup>28</sup>For this conflict, see the interview with FUNATURA’s president Maria Tereza Jorge Padua in *Jornal do Brasil*, 30. March 1992:3.

significant impact on this decision. Foreign pressure was the dominating motive of the government.<sup>29</sup> This is also illustrated by comparing with the case of indigenous populations. Constitutional requirements for the protection of the lands of indigenous populations were much clearer than the requirements for protection of the Amazon. However, while the constitutional articles on indigenous populations were sabotaged in the name of national security, as described in more detail below, the more general article on Amazonia was followed up to a surprising extent.

A second possible candidate as a force behind the change under Sarney, the environmental bodies of SEMA and IBDF, were possibly even a weaker national impetus behind environmental reforms than the environmental movement. SEMA was established in 1973 to provide an environmental image for Brazil and to satisfy needs for an environmental agency as a required counterpart for international financing. Both bodies were extremely peripheral in the Brazilian bureaucracy (Guimarães 1991:143-211, Viola 1992:9). The head of SEMA, Messias Franco, quitted in 1988 because the Minister for Social Questions, Prisco Viana, refused to sign a decision prohibiting the use of mercury in mining in Amazonia (*Folha de São Paulo*, 20. September 1988:2). More generally, Franco justified his request for dismissal by pointing to the lack of political will to deal with the environment in a serious way (Guimarães 1991:200, *O Globo*, 25. September 1988:18).<sup>30</sup> The IBDF was in a state of disarray and economic crisis during the late 1980s, and was hardly able to maintain its internal regime, let alone to exert influence on the government (Foresta 1991:163-188).

Now, given that the change of policies related to climate change under Sarney is most adequately explained by pointing to external pressure, we may ask why reforms were so unevenly distributed over various areas? While parts of the policy related to environmental monitoring and incentive changes were rather progressive, foreign policies and the policies related to Indians very much resembled policies under the military dictatorship. Most of the answer to this question is to be found in the persisting influence of the military. The military enjoyed a very high degree of influence over the policy-making process under the Sarney government, and especially so in relation to Amazonia (Allen 1992, Flynn 1993, Zirker & Henberg 1994).

Both the Nossa Natureza plan and other regional planning in the Amazon region was in the hands of the military. The main military actor behind the shaping of this policy was general Rubens Bayma Denys from the Secretariat for Defence and Strategic Affairs (SADEN/PR). Bayma Denys, the Secretary-General of SADEN/PR, headed the executive

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<sup>29</sup>Own interview with Fernando Mesquita, December 1993

<sup>30</sup>For details of Franco's more general criticism of the Sarney government's and Minister of the Interior, João Alves Filho's environmental policies, see «Messias Franco reafirma criticos a Ministro em simpósio», *O Globo*, 25 September 1988:18. Two years before, the former leader of SEMA, Paulo Nogueira Neto, had quitted as head of SEMA for the same reasons as Franco (Guimarães 1991:200).



committee responsible for the Nossa Natureza plan. Five other members of this body also participated in the executive committee (Albert 1992:50). SADEN/PR was represented in all the interministerial planning groups. Bayma Denys and SADEN/PR were already involved in the planning of the Calha Norte project; a project that aimed to increase military and civilian presence in border areas in the Amazon region. The body was generally perceived as a staunch supporter of the military's grand vision of a conquest of Amazonia justified by a need to decrease border vulnerability (Allen 1992).

The persisting influence of the military's vision was especially significant for policies related to indigenous areas. Albert (1992) demonstrates how SADEN was able to take full control over this policy area and implement a *de facto* fragmentation and opening of the lands of the Yanomani tribe in the state of Roraima for gold miners and the prospecting activities of the larger mining companies. These acts were guided by a strategically motivated fear that indigenous populations inhabiting the border regions could pose a threat to security in Amazonia's border areas through subversion and alliances with foreign powers. A later statement (1990) from the military commander of Amazonia that «the presence of the *garimpeiro* (gold miner) has strategic importance for the occupation of the territory» clearly reveals the motive for this policy (*Isto é*, 4. April 1990).

The foreign policy of the Sarney government was shaped through the cooperation of the military, most notably SADEN, and Itamaraty. For Amazonia, this cooperation was especially clear, as the official reactions to the pressure on Brazil in this period both touched upon the perceived strategic vulnerability of Amazonia and the region's importance for growth and development. Cooperation in the 1980s between the Ministry of Foreign Affairs and the army regarding a complex of diplomacy and military policies directed to decrease the vulnerability of the border regions of the Amazon confirms this picture of foreign policy making (Miyamoto 1989). Miyamoto (1989) analyses both the military Calha Norte border project and the revival of the Brazil-initiated Amazon pact (1978) in the 1980s as an unitary political initiative, shaped by the cooperation between Itamaraty and sections of the armed forces. This interpretation is supported by the fact that a revitalization of the Amazon Pact was included in the report from an interministerial group responsible for outlining the Calha Norte project in further detail (Allen 1992:74). The Amazon Pact is a treaty between Brazil and its neighbouring countries in the Amazon region which basic idea was to pre-empt territorial disputes and rivalry. Under president Sarney, it was revived both as an instrument under the Calha Norte project and as a tool for the construction of a coalition of Amazon states against ecological criticism from the industrialized countries (Santilli 1989). In May 1989, an Amazon pact summit was held in Manaus on Brazilian initiative. Here, Brazil's nationalist position was restated in a declaration supported by all the members of the pact, also including a rejection of strings and

conditionality on multilateral financing motivated by considerations for global environmental problems (Hurrell 1992:407, Cleary 1991:25).

Zirker & Henberg (1994:264-265) discuss these findings in the light of Alfred Stepan's (1988) observations of the military and politics in Brazil. Stepan describes the Brazilian political regime after 1985 as being on the margin of not being a democracy because of the existence of far-reaching military prerogatives, providing privileged military access to decision-making in the government, the legislature and state companies. In the light of the definition of democracy put forward by Rueschemeyer et al. (1992:43-44), where the accountability of the state to an elected parliament is one of three key indicators of a democracy, such doubt on the democratic nature of the Brazilian political regime under Sarney may be justified.<sup>31</sup> However, as we have seen, other segments of the state also enjoyed privileges over environmental decision-making in this period. The Itamaraty shaped policies related to Amazonia and climate change to a large extent on the basis of their own initiative and their cooperation with the military. Also, the resistance to change in other centers of the Brazilian bureaucracy should not be played down. The military's geopolitical vision of Amazonia may have penetrated the Brazilian bureaucracy in a more general way as lots of technocrats and government advisers have participated in courses in «politics and strategy» held by the military «think-tank» ESG (the Superior War College) (*Folha de São Paulo*, 25. July 1991: A-12).

However, these observations on the continued influence of the military over policies related to the problem of climate change may also suggest that the first democratic presidential elections in Brazil since 1960 held in 1989 might provide an impetus for change. And this is exactly what happened.

#### **4. The Collor presidency 1990-92 - reforms in a context of waning state power**

The first democratically elected president in 20 years, Fernando Collor de Mello, was inaugurated in March 1990. His presidential period, 1990-92, is marked by vigorous reforms related to Amazonia essentially motivated by concerns for global environmental problems, of which climate change was the most predominant.

The first document on the environmental policies of the Collor government was a 77 page document presented between the first and the second round of presidential elections in 1989 (Collor, undated). The document was written by Helio Setti, an activist from the

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<sup>31</sup>Rueschemeyer et al. (1992:43) define the two other key indicators as regular, free and fair elections of representatives with universal and equal suffrage and the freedoms of expression and association as well as the protection of such individual rights against arbitrary state action.

environmental movement focused on the protection of Brazil's Atlantic rainforest. The document provided the main background for the environmental reforms of the Collor presidency (1990-92) also in relation to Amazonia, and was written with more than one eye at global environmental problems. Priority areas were effective zoning efforts in the region aiming to identify areas for protection and economic exploitation, a system of permanent monitoring of the most vulnerable regions, creation of new conservation units and better inspection services in these areas, development of less predatory agricultural systems, strengthened state and municipal environmental administration, cancel the natural forest-based iron production poles in the Great Carajás programme, increase the amount of extractive reserves and accelerate the demarcation of indigenous areas with a special priority on the Yanomani reserve (Collor undated:17-22). These propositions were not implemented through coherent «policy packages» to the same extent as under the Sarney government. Rather, reforms came in uneven clusters.

The first step taken by the Collor government was to establish a secretariat for the environment, SEMAM/PR. SEMAM's status as a secretariat directly connected to the president of the republic implied that Brazil for the first time got an environmental agency with a voice at the level of government. IBAMA was transferred from the Ministry of the Interior, and was now the executive body of the new secretariat. The new secretary of the environment was José Lutzenberger; deep-ecologist and a world famous veteran from the Brazilian environmental movement.

The system for incentives encouraging deforestation was further revised in the 1990-92 period. The suspension of fiscal incentives for ranching in the forest areas of Legal Amazonia was continued until a new law for the application of regional fiscal incentives was decided in January 1991. The new law together with subsequent decrees made the approval of fiscal incentives for crop and livestock activities dependent on the previous consent of the Secretariat of Strategic Affairs (SAE, the inheritor of SADEN), the National Institute of Colonization and Agrarian Reform (INCRA), IBAMA, SEMAM and the National Indian Foundation (FUNAI). It also gave IBAMA the authority to inspect the environmental aspects of all projects and eventually cancel them. This implied a notable extension of power for IBAMA, SEMAM and FUNAI.

The Great Carajás area programme was also revised further under the new government. After the initiative of the government, directives were established for the Great Carajás programme, significantly altering the legal basis of the programme. These directives demand that the steel and iron companies in the Great Carajás project have to comply to a new set of regulations to be eligible for regional fiscal incentives. The new regulations implied the obligation to fuel factories with other energy sources than native forests and to use energy conserving technologies in production. Together with the general environmental

criteria for approval of SUDAM fiscal incentives for projects, these detailed provisions for the provision of fiscal incentives for wood-consuming steel industries implied a considerable change of incentives for ecologically devastating projects connected to wood-consuming industries and agriculture. In addition to these incentive changes, a 1990 decree also charged IBAMA with the obligation to give priority to the Great Carajás area in their surveillance and monitoring operations.

Surveillance and monitoring efforts were also further increased in the 1990-92-period. In June 1990, the Collor administration introduced a programme to combat deforestation and fires in Amazonia popularly called «Operation Amazonia» (*Gazeta Mercantil*, 5. June 1990:15). It implied a more sophisticated connection between inspection and satellite monitoring. In cooperation with the Brazilian Space Agency, a new system that linked satellite fire observations with IBAMA's regional offices within hours was successfully introduced (Cleary 1991:39). Field personnel and journalists reported an increase of IBAMA inspection in Amazonia in the dry season of 1990 compared to the previous year (Margolis 1992:308).<sup>32</sup> The amount of fines distributed increased and routines for their collection were considerably improved.<sup>33</sup> Politicians from Amazonia speaking on behalf of economic interests punished by IBAMA in 1990 and 1991 complained about the change.<sup>34</sup> According to IBAMA sources, the body was able to detect and punish trespassers of prohibitions of deforestation at an area of 96,305 hectares in the dry season before 30. October 1991.<sup>35</sup> This was just below 9 percent of estimated deforested area this year according to the Brazilian Space Agency (INPE), a number which strengthens the assumption that «Operation Amazonia» had a substantial demonstration effect in many areas. Several large companies got heavy fines.<sup>36</sup> However, though monitoring received high priorities, it is also clear that funding for the environmental bureaucracy declined substantially under Collor. In 1992, this

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<sup>32</sup>According to Dr. Luis Alberto Vieira Dias at the Brazilian Space Agency INPE, «Operation Amazonia» used an improved methodology. In PEAL, weather satellites (NOAA) for fire detection were used, while «Operation Amazonia» used more detailed images from the land monitoring satellite LANDSAT. Personal communication March 1995.

<sup>33</sup>Interview with former IBAMA leader Tania Munhoz November 1992. On the improvement of the collection of fines, see *Jornal do Brasil*, 11. October 1990:12.

<sup>34</sup>Jarbas Passarinho, senator from Pará, concluded in interview that there had been a change and that the implementation of rules became stiffer from 1990. See also the discussion later on in this paper regarding the opposition against «Operation Amazonia». Dr. Luis Alberto Vieira Dias at INPE emphasizes that even though funding for «Operation Amazonia» was far from sufficient, the programme represented a strong improvement compared to previous years: «...to put ten helicopters available to this program was an unheard effort in Brazil. Previously we had none!»

<sup>35</sup>Sources at IBAMA.

<sup>36</sup>Examples of this are the company Mineração Taboca, a subsidiary of the Brazilian mining giant Paranapanema, and the Jerdau logging company. Mineração Taboca was fined with about USD 1,1 million for its operations in the cassiterite mine at Pitinga in the state of Amazonas (*Jornal do Brasil*, 11 October 1990:12). The company had been infamous for years because of its unpunished ecological disturbances of the Waimiri Atroara Indian reserve close to the mine (Fearnside 1990:210).

also hampered monitoring and surveillance operations as funding dried out.<sup>37</sup> The Collor government's general record with reference to protected areas other than indigenous reserves must be characterized as poor. Though the definition of new conservation units continued, large budget cuts for IBAMA rendered the already underfunded national parks in a state of disarray.<sup>38</sup> At this level, policy changes under Collor were more rhetorical than substantial (Viola 1992:14).

Another area of reform under Collor, the increased attention to the demands and rights of Amazonia's indigenous populations, marks a very clear contrast to policies under Sarney. Though the first year of the Collor government was characterized by only symbolic policies like the detonation of the airstrips of gold miners in the Yanomani-reserve in Roraima without further action to improve the legal status of the reserve, this changed quite rapidly after Collor sacked FUNAI's president in June 1991 and put the respected career Indianist, Sidney Possuelo, in this position. Possuelo launched a more determined policy of definition and demarcation of areas for indigenous populations, backed up by president Collor and the Minister of Justice, Jarbas Passarinho.<sup>39</sup> In addition to the famous decision to recognize and demarcate the whole Yanomani reservation in Roraima as exclusively belonging to the indigenous populations in November 1991, a long series of other reservations were defined and decided demarcated in the 1991-92 period. Even though demarcation of the areas has proceeded slowly, the contrast with the Sarney government is substantial and clearly recognized by Brazilian NGOs supporting indigenous populations and other observers.<sup>40</sup>

Foreign policy positions on the environment in general, and on climate change were also dramatically revised. Collor's position in this field was a profound contrast to the position of the Sarney government from the outset. In his inaugural speech, only the economic liberalization programme received priority over environmental questions (Cleary 1991:117). The change of positions under Collor is demonstrated by the following statement by Ambassador Marcos Castrioto de Azambuja, secretary-general for foreign policy, in December 1990 (Brazil 1991:9):

«It is precisely because these are also concerns of the Brazilian society and of Brazil's Government that we understand that the international community has a right to be concerned by the violation of human rights and by the damage done to the environment wherever they may occur. In dealing with these and other issues, Brazil *no longer* [my Italic] resorts to allegations of sovereignty to deflect criticism. Instead, it shoulders its responsibilities, conscious that its actions have repercussions for the whole planet.»

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<sup>37</sup> See *Correio Braziliense* 24. May 1992:18. The state superintendent of IBAMA in Pará, Reginaldo Anaisse, complained that funding for air surveillance had decreased to a very low level in 1992 (own interview November 1992).

<sup>38</sup> Between 1989 and 1992, federal expenditures on conservation units seem to have been reduced by more than 75 percent (World Bank 1994:280).

<sup>39</sup> Own interview with Possuelo, July 1994. Possuelo's cooperation with Collor was remarkably intensive, given the peripheral position of FUNAI in the bureaucracy. He had personal meetings with Collor more often than once a month where questions related to FUNAI and indigenous populations were discussed.

This also involved a new willingness to admit the necessity of actions to address and counteract the problem of climate change. A specific forest protocol under the Climate Convention was also supported to address the problem of deforestation (in both boreal, temperate, subtropical and tropical forests); a marked change of position from the Sarney government. The Brazilian government now also officially supported joint implementation of the Climate Convention; providing states with the opportunity to obtain credits under the convention by investing in measures against greenhouse gas emissions also in other countries.

Preparations for the UNCED conference, which the Collor government worked hard to locate to Brazil, also involved unique opportunities for influence for environmental NGOs, who participated in the groups that prepared Brazil's positions.

However, it is also important to be aware that the foreign policy change was partially neutralized by the negotiators from the Itamaraty. Both the interim Secretary for the Environment, José Goldemberg and Brazilian environmental NGOs were dissatisfied with the operationalization of the Brazilian position in the negotiations on climate and biodiversity.<sup>41</sup> This brings us from mere descriptions of policy change under the Collor government to analysis.

### **4.3. Collor's policies: evaluation and explanation**

Most commentators conclude that the main motive for the development of a more cooperative position on the environment and climate change under Collor is to be found in his economic programme. Collor's core political project was to modernize Brazil through extensive privatization, trade liberalization and increased cooperation with the industrialized countries. Both in his inaugural speech as a president, and in the introduction of the environmental planning document, the change of positions on the environment is explicitly linked to an improvement of Brazil's relationship with the industrialized world and the economic reform programme (Collor, undated:4, my translation from Portuguese):

«I am conscious that if Brazil does not confront the environmental question internally and externally, this will make our programmes for economic development and international financing difficult.»

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<sup>41</sup> See the article «ONGs pressionam por posição oficial», *Jornal do Brasil*, 14 November 1991:7. Goldemberg, who participated in the groups that defined Brazil's international positions in the preparations for the UNCED conference and was actively involved in the shaping of Brazil's official positions, describes the ministry's role in the negotiations like this: «(..) Itamaraty was always defensive and at one point they were ordered to follow instructions on the Climate Convention and take less confrontational attitudes to the industrialized countries.» Personal interview with Ana Maria Fonseca (FBCN) who confirmed Goldemberg's statement, and complained about Itamaraty's defensive attitude on patents in the biodiversity negotiations. The generally negative impression of Itamaraty's ability to respond to the positions defined in the groups was also confirmed by Cesar Victor do Espírito Santo, adjunct leader of the environmental NGO FUNATURA, in interview in November 1993. See Viola (1993:18) for a slightly more sympathetic evaluation of the Brazilian position.

Most commentators conclude that the main explanation of the *change* of environmental policies is to be found in this connection between the environment (especially Amazonia) and the new economic programme, and not in internal pressure from NGOs, which influence on Collor and his presidential campaign was quite low (Hurrell 1992, Viola 1993). This version is also explicitly supported by key members of the government.<sup>42</sup> In addition, the prospects of the Rio-conference, increased this motivation as it increased the international attention to environmental policies in Brazil. However, to see this pressure as external pressure of the same kind as the pressure on the Sarney government is misleading, as the decision to place the UNCED in Brazil was wholeheartedly supported by the Collor government itself. Thus, UNCED was rather the hallmark of a less defensive environmental policy than a new source of external pressure.

Alternative explanations pointing to the strength of environmental NGOs or the environmental bureaucracy as explanations of the Collor reforms are more difficult to defend. For environmental NGOs, some of the IBAMA presidents, most notably Edouardo de Souza Martins (1991-92), who was also adjunct secretary of SEMAM, had an extensive informal dialogue with the NGO movement.<sup>43</sup> Of course, also the choice of Maria Tereza Jorge Padua, leader of the environmental NGO FUNATURA, as president of IBAMA during a few months in 1992 demonstrated a willingness to involve NGO representatives in decision-making. But none of these NGO representatives were involved in Collor's *initial* decision to change Brazilian policies related to Amazonia. The political resources controlled by environmental NGOs were still too modest to make these organizations able to push successfully for major changes.

Neither was the environmental bureaucracy influential enough to bring about policy change. Though it was strengthened through the establishment of SEMAM, this strengthening was a symptom, not a cause of the policy change. IBAMA experienced serious organizational difficulties, and demonstrated low activity as an environmental lobby.<sup>44</sup>

There were also strong economic forces that hampered reform efforts. In 1990, Collor introduced a draconic austerity plan to curb inflation and deal more effectively with the huge deficit of the public sector. As part of these policies, funding for public bodies like IBAMA was considerably decreased (Carvalho 1991). These cuts did not damage policies like the changes in fiscal incentives and foreign policy, but they reduced the capacity of IBAMA, FUNAI and SEMAM to accomplish their day-to-day duties, not to mention the long-term construction of viable public environmental sector. Though the drastic economic measures

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<sup>42</sup>Own interviews with the ex-ministers José Goldemberg and Jarbas Passarinho November/December 1992.

<sup>43</sup>Own interviews with Edouardo de Souza Martins, November 1993, and Ana Maria Fonseca (FBCN) November/December 1993.

<sup>44</sup>Various interviews at IBAMA October 1992 and December 1993.

chosen by Collor were exaggerated and also ineffective as solutions of the country's major economic problems (inflation rates continued to skyrocket), they were perhaps also symptoms of the very narrow range of options to developing countries that are charged with the necessity of environmental reform and fiscal austerity imposed by the hostile economic climate of the 1980s (Altvater 1987).

Continued protests from the military and their civilian allies also contributed to hamper reforms. It was demonstrated that though the military was in a much more peripheral position under Collor than under Sarney, this section of the bureaucracy still commanded substantial political resources. In the Collor government, the military ministers were main opponents of reforming policies in Amazonia.<sup>45</sup> But military opposition was not limited to intra-governmental protests. The army and regional politicians orchestrated a campaign against what they called the «internationalization of Amazonia». These accusations were promoted both by regional politicians like Gilberto Mestrinho, the governor of Amazonas, and military bureaucrats like the commander of the general staff of Amazonia, Thaumaturgo Sotero Vaz. ADESG, a diplomatic affiliate of the war college ESG joined in the campaign against environmental reforms with their support to the campaign against the «internationalization of Amazonia» in 1991 (*Folha de São Paulo*, 25. July 1991:A-12). So did also the military institutions *Escola de Comando e Estado Maior do Exército* (ECEME) and *Centro Brasileiro de Estudos Estratégicos* (CEBRES) by hosting a seminar on the external threat to Amazonia in October 1991 in which high-ranking officers as well as regional politicians participated (*O Globo*, 14. October 1991:7).

The campaign against the «internationalization» of Amazonia was rhetorically centered on foreign policy and the demarcation of indigenous territories, but was of course also inspired by resistance from commercial interests. These interests pressed for favors like the cancellation of fines, licenses for environmentally dubious projects and the appointment of easily controlled political clients in positions as IBAMA state superintendents (Kasa 1994).

Amazonian politicians were involved in the dismissal of Tania Munhoz from the position as president of IBAMA in 1991<sup>46</sup> and the firing of Lutzenberger as Secretary for the Environment in 1992.<sup>47</sup>

A special congressional investigation (CPI) on the «internationalization» of Amazonia in 1991 was led by Atila Lins, deputy from Amazonas. The CPI was widely supported among Amazonian politicians. Among the proposals of the CPI were the reduction of indigenous territories, limitations on IBAMA's surveillance and inspection activities in the region, the creation of new investment funds and the revitalization of the Calha Norte military

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<sup>45</sup>Own interview with former Secretary of the Environment, José Goldemberg November 1992.

<sup>46</sup>*Folha de São Paulo*, 3. October 1991:A-10, own interview with Goldemberg November 1992.

<sup>47</sup>*Correio Braziliense*, 23. March 1992:5, interviews with Feldman and an anonymous SEMAM adviser.



border protection project (*Jornal do Brasil*, 29. November 1991:4). During the investigation, the special committee also demanded the dismissal of Munhoz and Lutzenberger (*Folha de São Paulo*, 10. September 1991:A-14). The military was heavily involved in the CPI as ghostwriters of the first draft of the report from the investigation for the Amazon congressional group (Bernardo & Bastos 1993:18-19).

The high importance of the combination of external pressure and a liberalist economic programme as explanations of the Collor reforms was demonstrated by the government that followed Collor's impeachment in September 1993.<sup>48</sup> After the UNCED, a certain fatigue seems to have overcome the global environmental movement. This is also the case for the issue of climate change. This decline of attention called attention away from Brazil and the country's contributions to global environmental problems. At the same time, Itamar Franco, Collor's vice-president, emerged as a very conventional and weak president. This implied closer cooperation with the military and the Ministry of Foreign Affairs. The appointment of Coutinho Jorge, senator from the Amazon state of Pará, to the new position as Minister for the Environment in 1992 confirms this. Though Coutinho Jorge did not turn out to represent a full return to the destructive policies of the military regime, his administration was marked by a considerable decrease of initiatives related to Amazonia. Together, these impulses produced a breakdown of Brazil's wave of reforms in Amazonia.<sup>49</sup> This has also been the case for policies on the issue of climate change. At various conferences on climate change, like the recent conference of the parties in Berlin or the UNDP conference on joint implementation in Rio in December 1994, Brazil was once again adopting non-cooperative and confrontational positions.<sup>50</sup> The reversal of environmental policies also seems to have hurt the capacity of the environmental bureaucracy. Following the takeover of Franco, political parties regained control over employment policies in some of the most important regional branches of IBAMA, like the Amazon state of Pará. State superintendents were once again selected on the basis of connections to political parties (most notably the Brazilian

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<sup>48</sup>Collor was impeached by the Congress after the disclosure of an enormous corruption scandal, see Flynn 1993.

<sup>49</sup>The following may provide a good example of the negative role of the Itamaraty. According to Sidney Possuelo at FUNAI, the Itamaraty refused to receive grants of 18 million USD from Germany to facilitate the demarcation of indigenous territories in February 1994. Personal communication with Possuelo August 1994. In 1993, FUNATURA top staff complained about the negative attitude of Itamaraty to the ITTO 2000 rules on sustainable forestry, which were perceived as threats to Brazil's sovereignty. Personal meeting with FUNATURA staff in November 1993.

<sup>50</sup>Own interviews with CICERO observers present at both conferences. There are still proponents of international cooperation in Brazil: At the UNDP conference, former Secretary of the Environment José Goldemberg was seen taking a nap in full public to demonstrate his dissatisfaction with the representative of the Itamaraty who was delivering his speech.

Democratic Party, PMDB), making the implementation of any forest policy motivated by concerns for climate change very difficult.<sup>51</sup>

## 5. Conclusion

Since the military demonstrated a strong interest in a continuation of a development policy for the Amazon region which would also imply massive emissions of greenhouse gases, a weakening of military prerogatives also opened opportunities for a revision of the hard-line nationalist position adopted by the Sarney government. Collor used the power that was given to him by an electionary majority to exploit this opportunity. However, for Collor, a revision of Brazil's policies and positions on climate change were predominantly perceived as preconditions for his economic programme. Under Collor, environmental reforms became as much a subsection of foreign policies and economic policies as a policy in itself. This implied both continuity and change related to the Sarney government. *Continuity* because the environment was still perceived as an element in a much broader set of policies, and *change* because it advanced from being a subfield of security policy to be a precondition for an economic programme. Partially, this reflects the nature of environmental policies, cutting across most sectors of public activities (Guimarães 1991:175-76). And partly it reflects changes in the global context, as the perception of Amazonia's vulnerability by the Sarney government was inspired by the military's perception of the ever-present danger of communist infiltration and subversion typical for the US-Soviet conflict, while Collor's perception of Amazonia was connected to considerations for international trade and investments which assume importance in an unchallenged capitalist global political and economical order. But the lack of an independent environmental policy also reflects the weakness of Brazilian social movements with an interest in the preservation of Amazonia and a revision on positions of climate change versus a still centralized and autocratic state-apparatus. Thus, on a topic like global environmental problems, and especially in relation to the vast and sparsely populated Amazon region, Brazil has yet to reach the stage in which civil society may effectively challenge the state apparatus and change policy outcomes without the assistance of external pressure.<sup>52</sup>

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<sup>51</sup>This point is only based on interviews with employees at the headquarter of IBAMA in Brasília in December 1993, and needs further documentation to be presented as a fact.

<sup>52</sup>In this respect, the NGO campaign to save another important Brazilian forest biome, the Atlantic rainforest, may be a good comparative case. The Atlantic rainforest is situated along the Brazilian coast from the North-East to the South. It represents an unique ecosystem with very high biological diversity, but has been reduced to cover only small patches of its original extent because of agricultural extension and logging. Especially in the economically advanced and populated southern and south-eastern states of Brazil, well organized NGOs have enjoyed a high degree of influence over environmental decision-making both at state and federal level and been strongly involved with IBAMA at different levels regarding surveillance and law enforcement as well as definition and protection of conservation areas. But it should be noted that a more advanced civil society is not

## List of abbreviations:

**ADESG:** *Associação dos Diplomados da Escola Superior de Guerra - Association of Diplomats* of the Brazilian War College. School for diplomats and high-ranking bureaucrats connected to the Brazilian War College (ESG).

**CEBRES:** *Centro Brasileiro de Estudos Estratégicos* - The Brazilian Center for Strategic Studies. Military research center.

**ECEME:** *Escola de Comando e Estado Maior do Exército* - the School of the Staff of the Army.

**ESG:** *Escola Superior de Guerra* - The Brazilian War College. Important military «think tank». Main intellectual base of the generals behind the 1964 military coup. Established in 1949, modeled on the US National War College.

**FUNAI:** *Fundação Nacional do Índio* - The National Indian Foundation. Federal Agency established in 1967 to protect Brazil's indigenous populations.

**FUNATURA:** *Fundação Pro-Natureza* - Pro-Nature Foundation. Important and professional NGO established in 1986. Based in Brasília.

**IBAMA:** *Instituto Brasileiro do Meio Ambiente e dos Recursos Renováveis* - The Brazilian Institute for the Environment. Created by Sarney in 1989 as the main federal executive body for environmental affairs under the Ministry of the Interior. Under Collor transferred to SEMAM.

**IBGE:** *Instituto Brasileiro de Geografia e Estatística* - the Brazilian Institute for Geography and Statistics. The Brazilian census agency.

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the only contrast between Amazonia and the Atlantic Rainforest that may explain stronger and more successful political mobilization over the latter issue. Mobilization over the Atlantic Rainforest is also facilitated by the absence of military interest in the region. Interview with Ana Maria Fonseca, FBCN and staff member of the Atlantic Rainforest Network (Rede da Mata Atlântica), December 1993. The Atlantic Rainforest Network is a consortium of more than 70 NGOs and research institutions with strong activity on issues connected to the preservation of the Atlantic rainforest.

**IBDF:** Instituto Brasileiro do Desenvolvimento Florestal - The Brazilian Institute for Forest Development. Forest development agency established in 1967. Since 1989 integrated in IBAMA.

**INPE:** *Instituto Nacional de Pesquisas Espaciais* - the Brazilian Space Agency. Earth station for satellite observations of the Brazilian territory. Responsible for estimates of Brazilian deforestation rates based on satellite observations. Also important as supplier of ground information supporting IBAMA's environmental inspection campaigns in the Amazon region.

**SAE/PR:** *Secretaria de Assuntos Estratégicos/Presidência da República* - The Secretariat for Strategic Affairs. Superior military planning secretariat directly connected to the president's office. Established by Collor in 1990 as the inheritor of SADEN/PR.

**SADEN/PR:** *Secretaria de Assessoramento da Defesa Nacional/Presidência da República* - The Secretariat for National Defence. Superior military planning secretariat directly connected to the president's office. Established in 1988 by changing the name of the former Secretariat-General of the National Defence Council.

**SEMAM/PR:** *Secretaria do Meio Ambiente/Presidência da República* - The Secretariat of the Environment. Superior environmental secretariat directly connected to the president's office. Established by Collor in 1990. Closed down in 1992 and substituted with the Ministry for the Environment.

**SUDAM:** *Superintendência do Desenvolvimento da Amazônia* - Superintendency for the Development of Amazonia. Agency established by the military in 1966 to implement development efforts in Legal Amazonia. Headquarter in the city of Belém.

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