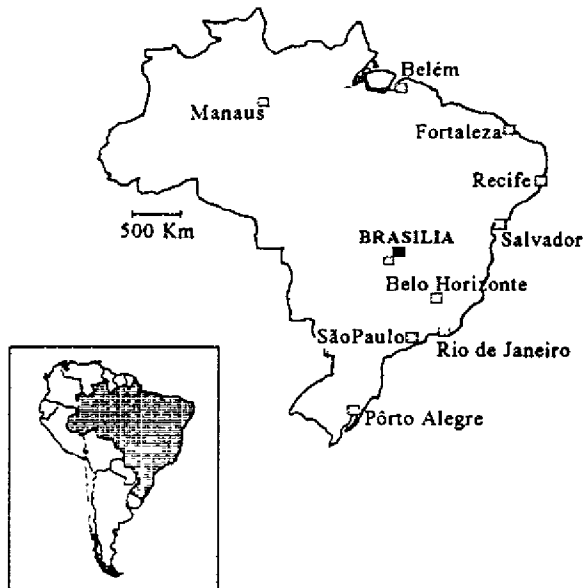

BRAZIL



Capital: Brasília
Area: 8,511,966 km²
Population: 150,368,000 (1990) (a)
Population density: 17.6/km²
Urban population: 75 %
Per-capita GDP in US\$: 2,160 (1988) (b)
Life expectancy at birth: 65.6 years (c)
Infant mortality rate: 60‰ live births (d)
Illiteracy: 19% (e)
Population under poverty line: 45% (1987) (f)
Human Development Index 1992: 0.739 (59th) (g)¹

The challenges of equity, social development, and environmental preservation

The magnitude of the realities, problems, and challenges in Brazil first becomes clear from its physical characteristics and its enormous size and population. Brazil occupies almost half of South America—47.7%—and has more than 150 million inhabitants, which makes it the world's sixth largest country in population. That figure cannot hide the fact that the population density is very low and that, relatively speaking, Brazil is among the globe's least populated countries. Brazil also has two of the world's eight largest cities, the megalopolis of São Paulo with 20 million people and Rio de Janeiro with 15 million in 1990. Two of the planet's largest water basins are found in

Brazil, the Amazon, with 7,000 tributaries and 23,000 navigable kilometers, and the Plata. Brazil's geographic location means that most of the country is in tropical and subtropical areas and that it has a large part of the planet's biggest rain forest, the Amazonian jungle. Nevertheless, and despite these colossal magnitudes, it is believed that only a quarter of Brazil is suitable for agriculture.

Brazil is also one of Latin America's most industrialized countries and has one of the world's largest economies. Since the mid-1980s, indeed, it has been considered the world's tenth largest economy on the basis of its overall gross

domestic product (GDP). The development strategy promoted by its military regimes in recent decades, with high GDP growth indices, led to the so-called "Brazilian miracle" and had an unquestionable impact on the country's modernization. Modernization, which created a large middle class and a significant industrial worker sector, nevertheless bore an enormous cost in external debt, which reached \$114,000 million in 1989, and environmental devastation. It also left behind the most backward regions, such as the Northeast, and large masses of the population, which were pushed into marginalization. As a consequence, the world's tenth largest economy was in 47th place globally in 1987 in per-capita GDP and in 59th place in 1992 in "human development," according to the indicators used by the United Nations Development Program (UNDP).²

The 1980s were marked by the country's democratization, economic instability, an increase in social inequality and poverty, and the Amazonian environmental drama which put Brazil in the focus of international public opinion. A civilian Government headed by José Sarney assumed power in 1985, ending the military regime that had ruled the country since 1964. The behavior of the economy has fluctuated: after the crisis of the early 1980s the Brazilian economy experienced a period of strong growth, especially in the industrial sector. In 1985 the GDP grew by 8.5%, the highest index of the decade. Up to now, however, the dominant feature of the Brazilian economy—in addition to the enormous external debt—has been inflation. It was 162% in 1983, 209% in 1984, and 234% in 1985. The Sarney Government developed plans to combat it: the Cruzado Plan of February 1986, the Second Cruzado Plan of November 1986, the Bresser Plan of May 1987, and the Verano Plan. Even the adoption of these drastic measures, which were unpopular and bore a heavy social cost (a price and wage freeze, two changes in currency, and suspensions of and moratoria on external debt payments), did not result in lasting effects. In

1988 and 1989, inflation reached historic yearly levels of 933% and 1,765%, respectively, and the public deficit rose to 6.5% of the GDP. In 1990 a new Government, headed by Collor de Mello, launched another plan which was more audacious than its predecessors and included a new change in currency, freezing of bank assets, liberalization of broad sectors of the economy, and a drastic reduction in public spending. These measures had a strong recessive effect on the economy. In 1990 the GDP fell by 3.3%, industrial production by 8.5% (the largest decrease since 1982), and the agricultural GDP by 3.7%, the worst decline in 25 years. The Collor Plan's measures increased unemployment and poverty but did not succeed in reducing the public deficit or curbing inflation. Inflation at the end of 1990 was 1,198%, and at the end of 1991 it threatened to reach 500%.³ The effects of inflation on the real wages and purchasing power of Brazilians have been very negative, especially in 1983-1984, 1987-1988, and again in 1990-1991. Urban violence and the hopelessness of the population, of which 45% lives in poverty and which is seeing its income eroded by an inflation exceeding 1.5% *daily*, are the direct results of economic instability.

In sum, Brazil's development in the 1990s is compromised by the weight of debt, and shows deep social contradictions: between cities and the countryside, between different regions, between the rich and the poor. But the challenges that Brazil faces in coming years have to do not only with the inequality and poverty which characterize the country today. To achieve an adequate level of human development, the country will also have to apply a strategy of sustainable development which conserves for future generations its enormous natural heritage, now menaced by destruction. Confronted by these difficult challenges, Brazil nevertheless has an enormous economic, technological, and human potential without parallel in Latin America.

The employment situation, the labor market, and the informal sector

During the growth phase of the "Brazilian miracle," and in contrast to other countries in Latin America, Brazil experienced an industrialization in which the proportion of the economically active population (EAP) in the tertiary sector—services—grew at a rate similar to that in the urban industrial sector. This process occurred in both the formal and informal economies. From 1960 to 1980 the proportion of the formal EAP occupied with production of "nonagricultural goods"—industry and construction—increased from 25% to 30%, while in the informal sector it rose from 2% to 4%. The formal EAP employed in the service sector grew from 41.8% to 46%, while in the informal sector it fell from 20.6% to 11.6%. Overall, the formal sector of the economy increased from 67.4% to 75.7%, while the informal EAP declined from 22.6% to 16%.⁴

During the 1980s the informal sector grew at a faster pace, however, particularly during the periods of sharpest crisis, 1983-1984 and 1987-1989. During that period there was an increase in the number of self-employed workers and the rate of participation of women, children, and adolescents in the workforce in order to compensate for family income's loss of buying power—50% between 1980 and 1990. In 1990 the Brazilian Institute of Geography and Statistics (IBGE) calculated the country's EAP at more than 62 million persons. Of that number, 64.4% were men and 35.6% were women,⁵ which is one of the highest proportions in Latin America and is exceeded only by Colombia, El Salvador, and Paraguay. While the rate of male participation in the labor market changed only from 74.6% to 75.8% between 1981 and 1989, the female rate rose from 32.9% to 38.7%.⁶ Job entry in the informal economy especially affects children and young people. In the formal work market, only one of every 25 jobs is held by a young person; most are "unremunerated family workers," particularly in agriculture.

The other face of the "Brazilian miracle": inequality, poverty, and social policy

According to World Bank (WB) estimates in 1990, the per-capita GDP in 1989 was \$2,450, one of the highest in Latin America. Brazil's ranking in the Latin American context as a country of intermediate to high income bears no relation to real distribution of income, which is characterized by enormous inequality and inequity, and is deeply rooted in Brazil's social structure and regional characteristics. Although in small measure, the crisis of the 1980s helped deepen these inequalities. Data from the most recent national survey confirm this: between 1980 and 1990, the wealthiest 10% of the population increased its share of the national income from 46.6% to 53.2%, while the poorest 50%'s share declined from 13.4% to 11.2%, and the poorest 10%'s fell from 0.9% to 0.6%.⁷

As a result of all these factors, Brazil is today the country with the worst income disparities in the world: the richest 20% of the population earn 26 times the income of the poorest 20%.⁸ By some estimates, though the average income in Brazil is more than \$2,000, 40% of families had per-capita incomes of about \$15 monthly.⁹

The lack of equity and structural inequality in Brazilian society is closely related to the high proportion of the population which is poor—persons whose income is inadequate to meet their basic needs. According to estimates by the Economic Commission for Latin America and the Caribbean (ECLAC), poverty affected 45% of the country's population between 1979 and 1987. Although the proportional burden of poverty has remained relatively stable (after falling somewhat during the 1970s), there was a sizable increase in the number of poor, which grew from 51 million to 61 million people, or from 10 million to 13 million households, during the period in question as a result of population growth. In addition, the population living in extreme poverty or indigence, i.e., those whose family income does not allow them to buy the foods needed to meet daily

minimum nutritional requirements, was 24.7 million (22%) in 1979 and 30.5 million (23%) in 1987.¹⁰ Other estimates made in Brazil, based on family income, and identifying as poor those households with incomes less than two minimum wages, generally agreed with these data and found a close relationship between the crisis periods—1982-1984 and 1987-1989—and the increase in the number of poor families.¹¹

When ECLAC's 1987 figures are broken down it becomes apparent that the proportion of the population living in poverty differed according to area: in the metropolitan areas of Rio de Janeiro and São Paulo it was 28%, or 7,270,100 people; in the rest of the urban areas it was 41%, or 29,880,000 people, and in rural areas it was 45%, or 23,882,100 persons. In the case of extreme poverty, the disparities between urban and rural areas are even more acute: in the metropolitan area the indigent population was 9%, or 2,364,800 people; in all urban areas it was 16%, or 15,507,000 people, and in the countryside it was 41%, or 15,003,000 people. This leads to the conclusion that, though the number of indigents in urban and rural areas is almost the same, the latter have a higher relative proportion of indigents.¹²

Analysis of the figures on poverty during this period enables certain significant trends to be identified: both poverty and indigence increased in urban areas and decreased in rural ones, both numerically and as a proportion of the total population in both areas, though in rural areas and among indigents the decline was less. The growth in the number of poor in urban areas has been directly related to the deterioration in minimum real urban wages in the formal sector more than to growth of the informal sector. The proportion of the EAP working in the informal sector, as noted above, is not related to the existing levels of poverty. In sum, this confirms that urban poverty is closely linked to wages in the formal economy, which do not guarantee the income necessary for family subsistence. During the decade the minimum real wage underwent significant reductions between 1983 and 1984 and between 1987 and 1989. As a result, the value of

the wage in 1990 was approximately half that of 1980; in 1980, 65% of the minimum wage sufficed to meet family food needs, but in 1990 those needs represented 92%.¹³

Urban poverty is concentrated geographically in peripheral municipalities, districts, and *favelas*. The *favela* world is characterized by its diversity, but there is a strong correlation between extreme poverty and the condition of recent migrants to cities. The marginal districts are home to both families which have recently arrived in the city from rural areas and families already working in the urban economy in both informal occupations and formal-sector jobs whose remuneration is below the poverty line.

Brazil's continental size and profound regional differences make it hard to grasp the reality of poverty as a whole, however, and an analysis broken down by distinct social groups and geographic areas is necessary since the distribution of poverty and wealth show very marked regional patterns. A new indicator, the Social Development Index (SDI), was used in a recent study¹⁴ to gauge the country's regional differences. The SDI, which is similar to the Human Development Index used by the United Nations, includes life expectancy at birth, illiteracy, and income distribution, and assigns values between 0 and 1. The entire country's SDI is 0.52, on the basis of which the study differentiated three major regions: (a) the South and Southeast, the latter including the cities of Rio de Janeiro and São Paulo, with SDIs of 0.61 in the South and 0.65 in the Southeast and incomes of \$2,186 and \$2,889, respectively; (b) the Central-West and North, with SDIs of 0.54 and 0.53 and incomes of \$1,324 and \$1,642, respectively; and (c) the Northeast, with an SDI of 0.34 and an income of \$841.

Indeed, the Northeast is the region with the greatest poverty and least ability to meet basic needs in Brazil. ECLAC has noted that in 1980 somewhat more than half of the country's rural poor—57%—were Northeasterners. The states of Piauí, Paraíba, and Ceará have the largest proportions of rural poor.¹⁵ A significant indicator is the incidence of child malnutrition, which in

the Northeast affected 86.5% of children less than five years old compared with 55% nationally. At the root of this problem is the high proportion of land ownership in the form of latifundios descending from the colonial period and their difficult growing conditions: this is the *sertão*—semi-arid tablelands with sparse vegetation which are periodically scourged by drought.

These data illustrate what some authors have called the "schizophrenia" of a Brazil in which wealth coexists with extreme poverty, high consumption levels with hunger, research in cutting-edge technology with illiteracy, a first-world Brazil with a Brazil whose parallels are only to be found in a few of the poorest countries of Asia and Africa.

Directly related to rural poverty and the migratory movements of landless peasants is the serious inequality in land ownership that characterizes Brazilian agriculture. In 1985, 0.9% of agricultural holdings exceeding a thousand hectares made up 51.5% of the arable land, while 83% of the holdings comprised only 13.2%.¹⁶ Four hundred holdings in themselves comprise an area equivalent to 85% of Great Britain. At the same time, there are a large number of landless peasants. A study by the United Nations Food and Agriculture Organization (FAO) estimated their number in 1980 at more than 4 million.¹⁷ The spread of the farming frontier, in which small peasants who migrated as spontaneous colonizers played an important role, benefited large-scale capitalist agriculture in the medium to long term and did not change the unequal pattern of land distribution. Between 1970 and 1980 Brazil increased its farm lands by 75 million hectares, of which 53 million belonged to holdings of more than a thousand hectares.¹⁸ All this has led to strong social conflicts in the countryside; landless peasants' organizations have been staging takeovers and other protest activities which make the Southeast, Rondônia, Pará, and Mato Grosso areas of continuous social conflict.

Confronted by these realities, the federal Government invested 40% of its budget—the equivalent of 9% of the GDP—in the social area (education, health, welfare, and social assistance)

from 1981 to 1987.¹⁹ Health received 17.6%; education and culture, 16.1%; housing, 3.8%, and social welfare, 56.5%. If the expenditures of municipalities, states, and the federal Government are considered, the proportion of the GDP allocated to the social area in 1986 was between 18% and 25%, which is one of the highest in developing countries. In per-capita terms, however, the outlays were still small given the population's needs, and there is evidence that they were badly invested due to their orientation and the burden of bureaucracy. In fact, countries with similar expenditures such as Chile, Mexico, and South Korea have obtained better results from their policies.²⁰ In the health sphere, 78% was allotted to curative medicine, the most expensive kind. In education, only half of the spending was invested in schools, and bureaucracy consumed the other half. Among other reasons, this is due to the bureaucratic centralization of the federal Government's services.²¹

The Fund for Social Investment (FINSOCIAL) has been operating since 1982, in partnership with the National Economic and Social Development Bank, its purpose is to intervene in all areas of social policy concerning extreme poverty. Still, the approximately \$40 million it has been making available annually is very small given the magnitude of poverty in Brazil. According to some estimates, dealing with the problem effectively would cost \$4,000 million per year for at least 10 years.²²

Population movements and urbanization

The "Brazilian miracle" has had a strong impact on the population's dynamics and geographic distribution. In 1960 the urban population was 45% of the total and in 1990, 75%, and it is thought that by 2000 it will be 81%.²³ This quickening urbanization has been based above all on the heavy rural-urban migration that Brazil has experienced since the 1950s, which originated in the enormous socioeconomic differ-

ences between regions and social groups, the scarcity of land caused by the inequality in its ownership, and the distinct demographic dynamics in the different parts of the country.

During the 1950s the construction of Brasília served as a pole attracting migrants; in the 1960s the opening of the highway linking Belém and Brasília led to a heavy northward migratory flow from the southeastern and central part of the country; in the 1970s migration was to Amazonia because of the new highways such as the Transamazônica, the Cuiabá-Santarém branch, and the highway to Rondônia penetrating that region. In the 1980s there was a heavy flow to the area of Carajás and of landless southern peasants toward the agricultural colonization frontier in Rondônia, a flow which also had seasonal characteristics. Gold fields have also resulted in major population movements to the *garimpos*. In addition to these permanent resettlements there are seasonal migrations. This is true of southern peasants who move northward and of peasants who migrate to cities, from which they travel daily to the countryside in times when labor is in great demand there; the latter are known as *bóias frias* for the cold noonday meals they carry with them. Because of their size and intensity, the migratory flows have created major demands for infrastructure, basic services, health care, and education. In the most remote parts of the agricultural frontier and in marginal urban areas where migrants concentrate, shortfalls are very acute and are also associated with the violence and insecurity to which indigenous people are often prey. As will be noted below, domestic migrations are also closely associated with the environmental problems of Brazil and especially the Amazon basin.

Data from the 1980 census revealed the chief areas of departure and arrival of migrants in previous decades. Between 20% and 27% of the population born in the states of Piauí, Paraíba, Pernambuco, Alagoas, Sergipe, and Bahia in the Northeast lived in other areas. In 1970 the island of Fernando de Noronha had a very high emigration rate: up to 72% of its native-born population. The southeastern states of Minas Gerais and

Espírito Santo, near Rio de Janeiro and São Paulo, had seen the departure of a quarter of the people born in them for other areas. While departures were mostly from the Northeast and Southeast, they were basically to three areas. (a) northern states open to colonization, in which the proportion of immigrant population (calculated as that of residents in one state born in another) was 66% in Rondônia, 33% in Pará, and 27% in Amapá; (b) the metropolitan areas of Rio de Janeiro (22%) and São Paulo (23%); and (c) the central-western states. In the Federal District the proportion of migrant population was 67%; in Mato Grosso, 41%, and in Mato Grosso do Sul, 36%.²⁴

Demographic projections show that between 1990 and 2000, if present trends continue, there will be 16 million people migrating to Brazil's major cities, which in 10 years and for comparative purposes represents a new São Paulo metropolitan area. This poses an enormous challenge to the country in terms of basic infrastructure and services

Housing and urban marginalization: environmental sanitation and basic services

The shortage of adequate housing and lack of access to basic services is shown by the existence of *favelas* in most of the country's cities. According to the National Household Sampling Survey of 1989, 5.8% of the dwellings in the country could be called *favelas* because of their makeshift materials.²⁵ This situation, perhaps the best known, should not conceal the major housing deficiencies in rural areas. Other estimates, however, note that 60 million Brazilians—four of every 10 people—live in ramshackle housing.²⁶ In 1986, housing needs for the period 1986-1990 were calculated at 17.3 million dwellings, of which 13.6 million would be in urban areas.²⁷ This housing deficit is obviously concentrated in the population with the least income; 70.5% of families whose incomes were

equal to or less than three minimum wages in 1988 lacked adequate housing.

Housing policy has been implemented through the National Housing Bank (BNH), financed through the Length of Service Guarantee Fund, and is based on the granting of credits to build houses. In practice, its benefits have not reached the social strata whose income is lower than five minimum wages and have focused on the middle and upper-middle classes. It has been noted that the housing policy is thus regressive in nature.²⁸

IBGE data showed that in 1988, 70% of dwellings had access to potable water from mains supply system. In urban areas the proportion was greater—88%—while in rural ones only 13% had such service and most rural households depended for water supply on wells, springs, or other sources.²⁹ Rural-urban differences are even greater in the area of environmental sanitation. According to Pan American Health Organization (PAHO) data, also for 1988, 42% of the urban population and 1% of country residents had access to sewerage.³⁰ Waste collection services still have low coverage rates. In urban areas, waste collection covered 60% of households; in rural ones, only 8%. Two-thirds of rural households throw waste onto vacant lands or into rivers and streams.

Ethnocultural problems

Contemporary Brazilian society is characterized by three fundamental divisions: between rich and poor, between regions, and between various ethnic groups, especially between whites and blacks. Although there is some degree of mutual acceptance and coexistence in Brazilian society, this split is manifested in the ethnic conflict underlying all orders of social, political, cultural, and occupational life, even in the organization of urban space, though the existence of racial barriers and discrimination is customarily denied. Daily life reflects this through language, jokes, and subtle but vigorous kinds of Afro-Brazilian organizational and cultural expression of

the "Samba Schools" or the *Afros* and *Afoxés* of Bahia.

Brazil's population springs from three basic ethnic groups, whites, blacks, and indigenous. The intermingling of these three groups has in turn produced different mixtures: mulattoes, of whites and blacks; *cafuzos*, of blacks and indigenous, and *caboclos*, of indigenous and whites. These various combinations have led to a true ethnic mosaic. The population of the North and inland Northeast, the poorest, is predominantly mixed, as is that in the Central-Western region, because of internal migrations of poor peasants from the Northeast, in part due to droughts and in part to the lack of land caused by the extreme inequality of its ownership. The black and mulatto population is found predominantly in coastal areas, but genetic features of African origin are noticeable in most of the Brazilian population including many who consider themselves "whites." The population of European origin is greatest in the Southern and Southeastern states because of immigration in the 19th and first half of the 20th centuries.

During the 1980s various studies showed the relationship between color and child mortality, social status, educational levels, and occupation, as spheres in which racial discrimination is manifested in Brazilian society. A recent study showed how young white people obtain better jobs while blacks or "browns" earn less income (on average a third of that of whites³¹), work longer hours, and hold less desirable jobs.³² The participation of ethnic groups which are discriminated against in management positions is greater in the public than the private sector, in which the highest occupational and wage categories are usually reserved for whites.

Today, Brazil's indigenous population does not exceed 130,000—less than 0.1% of the population—in 143 tribes which speak languages which belong mostly to the Tupi, Arauak, Karib, Jê, Pano, and Xirianá linguistic families, and are subject to various kinds of contact with the rest of society. For the most part they are groups of forest dwellers who maintain a tribal organization. The largest populations are in Roraima and

northern Amazonia, Solimões, the Northeast, and Maranhão. Because of their wealth in natural resources or because of agricultural, development, or demographic expansion projects, indigenous lands are coveted by a wide range of different groups and interests; 45,000 gold diggers, or *garimpeiros*, settled on Yanomami lands in Roraima alone in 1989. As a result, coexistence is almost always fraught with conflict and has led to an age-old process of expulsion of indigenous people from their land, the loss of cultural identity, and on occasion the disappearance of certain indigenous groups.

In this context, killings of indigenous people have been occurring which have led to accusations of genocide being waged against native groups.³³ The case of the Ueru-Wau-Wau Indians in Rondônia in 1963,³⁴ various assassinations of indigenous leaders, such as that of Marçal de Souza Guaraní in 1983, the case of the Tikuna Indians along the Solimões River in Benjamín Constant (Amazonas State) in 1988,³⁵ are a chain of events the latest of which are the massacres, first reported in 1987, of Yanomami and Macuxí Indians carried out by the *garimpeiros*, or illegal gold prospectors in Amazonia. According to data from the Indian Missionary Council (CIMI), which is linked to the Catholic Church, 194 Indians were killed between 1988 and 1992.³⁶ The most recent killings occurred in August 1993 in a border area with Venezuela. According to available data, some 70 Yanomami Indians were slaughtered by the miners.³⁷ Such killings have echoed widely not only in Brazil but also in international public opinion, though to date Government promises to expel the *garimpeiros* have not been completely successful, despite interventions by troops of the Federal Police, as in the "Free Forest" operation of January 1990. In addition, the Yanomami are threatened by communicable diseases transmitted by the gold prospectors. It is estimated that between 1988 and 1990 more than 1,500 Yanomami died from malaria.

Other indigenous groups have been affected by major governmental projects which threaten their existence and the possibility of maintaining

their traditional lifestyles. Among them are mining projects in southeastern Amazonia, Mato Grosso, and Rondônia embracing 400,000 hectares and the huge mining project at Carajás in the state of Pará, which affects the Paracanhas. Some groups, such as the Xokleng in Santa Catarina and groups affected by development projects in the Xingú area, have actively resisted such projects and the penetration of Western population and lifestyles. In 1988, the action of the Caiapó chiefs brought about cancellation of WB credits for the Xingú hydroelectric scheme.

Governmental policies have tried to mitigate these conflicts. In 1960 the federal Government created the National Indian Foundation (FUNAI) after the dissolution of the discredited Indian Protection Service (SPI). Among its activities, FUNAI began marking the boundaries of native lands, sometimes confronting large land owners, *garimpeiros*, and mining companies. It also involves itself in protecting numerous Indian groups in Paraná, Santa Catarina, and Rio Grande do Sul, among other states. For that purpose it has been creating "extractive reserves" in various areas. The 1988 Constitution includes a long section on the rights of indigenous peoples which, among other positive aspects, recognizes their land rights and requires a two-thirds vote in Congress for launching hydroelectric and mining exploration or exploitation projects on such lands.³⁸ However, the demarcation of the Indian lands established by the Constitution is advancing at a very slow pace and has been delayed for lack of funds.

In 1982, at the time of the First Meeting of Indigenous Leaders and the election of Indian representatives to the Federal Congress, the Indian communities began to undertake more vigorous political activities. Many indigenous groups belong to the Coordinating Committee of the Organizations of Indigenous Peoples of Amazonia (COICA), a coalition established in March 1984 which represents 1.2 million indigenous people in Bolivia, Brazil, Colombia, Ecuador, and Peru. COICA has demanded recognition of the right of Indian peoples to preservation and control of their lands, and has called on interna-

tional ecological organizations to pay greater attention to the living conditions of indigenous peoples in the region and not just its fauna and flora.

The health and nutrition situation

Public health reform was undertaken in 1986 to establish a Unified Health System based on the principles of justice and equity, as provided for in the new Constitution, promulgated in October 1988. One of the immediate results of the reform was an increase in public-sector health facilities in a much greater proportion than in the private sector, where they are more numerous. There was also a decrease in agreements between the public and private sectors, while those between the public sector and nonprofit organizations increased.

In 1989, PAHO diagnosed the principal problems which, despite the reform, still burdened the Health System: a very costly bias in favor of hospital care to the detriment of primary care activities (it is estimated that the ratio of expenditures on hospital care to primary care is six to one); inequality of access to health services based on socioeconomic status and their geographic distribution; the gap between the needs of the population and the provision of services (11% of the urban and 6% of the rural population received medical care in 1984); the low productivity of existing services (it is thought that 40% of the public network is underutilized); lack of training (in 1987, 60% of health workers had completed only the first primary grade); very low pay, and—finally—the absence of coordination among federal, state, and municipal levels and between different departments, as well as the lack of planning. There is also dependence on foreign drugs and technology, together with little control of pharmaceutical products.³⁹ The system's hospital orientation and administrative top-heaviness are very pronounced, as shown by the fact that in 1988, 60% of health workers were in hospitals and only 16% in primary health services belonging to municipalities. Imbalances in

resource distribution also exist between the Northeastern states and the Southern and Southeastern states, and between rural and urban areas. Extreme cases are Piauí, with 1.3 physicians per thousand population, and Rio de Janeiro, with 3.15.⁴⁰

Given such problems, health care reform stresses service integration, social control, a comprehensive and not merely curative approach, and decentralization favoring what are becoming the system's basic units—states and municipalities. The smallest progress has been made in local bodies and the places which have historically had the least access to services—the Northeast and rural areas.

In 1987 the country had 5,761 hospitals and 501,000 beds (376,500 were private and 125,000 were public); proportionally, 39% were in private, profit-making care centers, 36% were in nonprofit centers, and 25% were in public establishments. This indicates that only part of the population has access to public hospital services. There is great disparity between the Northeast and South in the number of beds per thousand population—1.9 and 3.6, respectively.⁴¹

According to IBGE data, the National Social Security Institute (INSS) covered 48% of the EAP in 1988.⁴² Studies by the Inter-American Development Bank (IDB) in 1990 revealed that the coverage of Brazil's various social security schemes was among the highest in Latin America: 96% of the total population in 1980.⁴³ Social Security has extended its coverage to rural workers through FUNRURAL. The Brazilian social security system is among the most progressive in the region in the proportion of spending it devotes to low-income sectors, despite which urban pensioners are a group more favored than others.⁴⁴

Public spending on health comes from the federal budget, the National Social Insurance and Assistance System (SINPAS), in this instance through the National Institute of Social Security Medical Care (INAMPS), state and municipality budgets, and—finally—the Social Development Support Fund (FAS) and FINSOCIAL. State and municipality expenditures represented about

30%, and the social insurance sector—the proportion of insured workers is high—contributed 60%. Public outlays on health care and social security declined sharply during the decade: in 1980 they amounted to 7.5% of the GDP, and in 1990, 4.4%. Annual per-capita spending fell almost by half, from \$148.70 to \$86.30,⁴⁵ all of which is related to the adjustment measures. A characteristic of the decade's spending was its low investment proportion, which was less than 3% of the total.⁴⁶

At first glance, vital statistics express the most important features of the health situation during the 1980s: the progress Brazil made in this area during the decade, despite which a high proportion of childhood deaths as well as geographic disparities between the richest and poorest areas still persist. In the country as a whole, deaths in infants under one year declined from 24% to 16% of total deaths between 1980 and 1986, while in the one- to five-year age group they fell from 4.6% to 3.1% and among persons older than 50 years mortality increased from 49% in 1980 to 56% in 1986.⁴⁷

The Northern and Northeastern regions have had an above-average proportion of deaths in infants under one year of age; in 1986, for example, they were 27% and 24%, respectively, compared with 16% nationally. In the South and Southeast, the wealthiest areas, they were 11.7% and 13%, respectively. Similar differences are found in the proportions of deaths in persons older than 50 years: in the Northern region they were only 39% of all deaths, but in the South, in contrast, 63.5%.⁴⁸ In sum, newborns in the North and Northeast have a considerably lower life expectancy than in the South and Southeast. According to the 1980 census, life expectancy in the whole country was 60 years, but 67 years in the South and 51 years in the Northeast. In some Northeastern states such as Paraíba, Ceará, Rio Grande do Norte, and Alagoas it was even lower, varying from 44 to 47 years.⁴⁹

The six leading causes of death in the population at large in 1986 were, in order of importance, cardiovascular diseases, which caused 33% of deaths; external causes (accidents and homi-

cides), 14.7%; malignant tumors, 11.4%; diseases of the respiratory system, 10.3%; infectious and parasitic diseases, 7.8%, and conditions of the perinatal period, 7.1%. "Poorly defined causes" represented 20% of the deaths. In sum, Brazil combines pathologies associated with urbanized and industrialized societies—cancer, car accidents, and heart conditions—with the "diseases of poverty" found in a developing country. This dual reality is reinforced by the fact that these causes of death are also distributed unequally by region. In the most developed regions, the South and Southeast, the proportion of deaths from cardiovascular diseases and malignant tumors is above the national average and that from communicable and parasitic diseases below it. In the North and Northeast the situation is just the opposite. It is also noteworthy that both regions have a very high proportion of deaths attributed to "poorly defined causes"—45% in the Northeast—because of the widespread absence of control and registration.⁵⁰

Among adults aged 20 to 49 years there has been a significant increase in deaths from accidents and violence, which in 1986 accounted for 40% of deaths in that age group. Diseases of the circulatory system represent the second cause of death among adults (22%) and are related to the wide prevalence of hypertension, especially in men and in urban centers.⁵¹ This is related to the country's intense urbanization and the population dislocation that has occurred in areas to which migrants move. Despite the fact that Brazil's population is extremely young, the aging which has accompanied urbanization has also translated into a rise in chronic and degenerative diseases such as hypertension, cancer, and diabetes. It is predicted that this trend will persist and become even more pronounced since projections of the population in 2000 are that life expectancy will increase to 68 years and that the proportion of persons older than 60 years, which was 7.5% in 1989, will double. According to PAHO estimates, 80% of the elderly suffer from some chronic ailment of multiple pathology.⁵² This will place new demands on the health system.

In 1988 the three leading causes of death in women aged 15 to 49 years were diseases of the circulatory system (28% of deaths), accidents and violence (16%), and malignant tumors (15%), especially cancers of the genital system (cervix) and breast. Complications of pregnancy, delivery, and the puerperium represented almost 6%. The maternal mortality rate was quite high in the Latin American context (25 per 10,000 live births in 1988), even though the rate of institutional delivery coverage was 95%.⁵³ There are no precise data about deaths from abortion.

The characteristics of the Amazonian basin, together with deficiencies in health services there, favor the spread of diseases such as malaria and dengue. Six million people live in areas of high risk of malaria infection. In 1981, 197,000 malaria cases were recorded; in 1984, 378,000; in 1988, more than 565,000, and in 1990, more than 560,000. The annual parasite incidence (API) was 3.7‰, though there are major regional variations; malaria is concentrated in the Northern (IPA, 46‰) and Central-Western (13‰) regions. The states and territories most affected were Roraima (146‰), Rondônia (128‰), Amapá (43‰), Acre (38‰), and Mato Grosso, Pará, Amazonas, and Maranhão, with IPAs of between 7‰ and 28‰. In 1990, however, there were municipalities in Rondônia, Pará, and Mato Grosso in which the incidence of malaria was 550‰. As PAHO has noted, malaria is closely linked to the intense and disorderly migrations to remote mining areas and subsistence farming zones.⁵⁴ Seven states—Alagoas, Bahia, Ceará, Minas Gerais, Pernambuco, Rio de Janeiro, and São Paulo—have experienced dengue epidemics since 1986.

Chagas' disease is endemic in 18 states and around 2,220 municipalities. The infected population in rural areas is about 4 million and, as a result of rural-urban migration, the disease has appeared in urban areas. The infection affects a half-million people in Rio de Janeiro and São Paulo alone. At the end of 1991, 913 cases of cholera occurred, a very low figure when compared with neighboring countries. The disease's transmission has followed the course of the Ama-

zon River, and it has been concentrated in areas bordering on Colombia and Peru as well as in the cities of Manaus and Belém.⁵⁵

Brazil is in fourth or fifth place in the world in AIDS cases and has the largest number in all Latin America and the Caribbean. More than 24,700 cases (19,950 in men and 2,630 in women) had been recorded by March 1992, which is almost half (46%) of the cases recorded in the entire region. The disease's incidence rate is also very high, 171 cases per million population, though it is not among the highest in the region since it is below the rates in Haiti, Guyana, Honduras, the Dominican Republic, and small countries in the English-speaking Caribbean. The Southeastern region has most of the cases; Rio de Janeiro and São Paulo by themselves account for about two-thirds of the total. The municipality of Santos in the state of São Paulo, and Brazil's chief maritime port, has an incidence rate well above the national average. Transmission routes have changed. In 1985, 80% was attributable to homosexual and bisexual behavior, while in 1990 only 40% was. Infection through the heterosexual route has increased (it accounted for 22% of cases in 1991), which has caused perinatal transmission to appear, as has transmission from intravenous drug use. The National AIDS Prevention and Control Program also believes that there are around 750,000 HIV positive persons, though the data are no more than estimates.⁵⁶ AIDS support and prevention groups have sprung up to provide support to patients, combat their marginalization, and create public awareness of the disease.

During the past decade there was a significant decrease in the infant mortality rate, which was 60‰ live births in 1990.⁵⁷ In this field, regional disparities were similar to other indicators of "human development": in 1986 the Northern and Northeastern regions had rates of 81.7‰ and 70.7‰ live births, respectively, while the South and Southeast had rates of 27.4‰ and 35.8‰ live births.⁵⁸ The worst situations, according to the 1980 census, were in the northeastern states of Ceará, Rio Grande do Norte, Paraíba, Pernambuco, and Alagoas.⁵⁹

Some marginal districts and municipalities in Greater São Paulo such as Ferraz de Vasconcelos had rates of 124‰ live births in 1984, higher than in Bangladesh. In all, the probability of death before the end of the first year of life in Brazil is 6.7%, one of the highest in Latin America and exceeded only by Honduras (6.8%), Peru (8.7%), Bolivia (10.9%), and Haiti (11.6%). In the Northeast the proportion reaches 10.3%;⁶⁰ most deaths in infants less than one year old in that region are due to intestinal infections, especially diarrhea. Many deaths in infancy result from preventable causes such as infectious intestinal diseases (especially diarrhea), diseases preventable by vaccination, acute respiratory infections, malnutrition and anemia, and prematurity. Together these are responsible for about half of all deaths in this age group. In the North and Northeast, infectious intestinal diseases are the cause of a third of the total, compared with 8% and 10% in the South and Southeast, respectively.

Vaccination campaigns, especially those conducted since 1984, with the multivaccination (poliomyelitis, DPT, and measles) method have helped reduce infant mortality rates, though coverage in the Northern region is appreciably lower than the national average, 31.7% compared with 87.6%, respectively. In direct relation to this, cases of polio and measles have been concentrated in the Northeast and North. Measles, whooping cough, tetanus, and diphtheria have also declined nationally in recent years.

Brazil's paradoxes and inequalities are seen most clearly in its nutritional situation. In 1985 and 1986, Brazil was the world's leading producer of soy products, coffee, and orange juice, the second of cocoa, and the third of chicken, but two-thirds of its population had an inadequate caloric intake. Though the average satisfaction of minimal calorie requirements was 113% in 1987 and 1988, according to governmental data,⁶¹ 90 million Brazilians suffered from nutritional deficit.⁶² Eight percent of infants are born with low birth weight, and 16% of children fall into the category of "developmental deficiency" or severe malnutrition.⁶³ In Greater São Paulo in 1988,

malnutrition was the cause of 6% of deaths in infants less than one year of age in the city's central districts, 16% in outlying ones, and 30% in the municipalities surrounding Greater São Paulo.⁶⁴ Hunger is endemic in the Northeast since that region has the worst average indicators of weight and height in childhood. Widespread malnutrition is, in conclusion, the other side of the coin in the country's orientation toward agricultural exportation, which has been developed to deal with external debt payments.

The situation and problems of education

According to the 1980 census, 32% of the population older than five years was illiterate. The illiteracy rate increased by age group: it was 11% in the population aged 15 to 19 years and 46% in that older than 60 years (in which it was 70.2% in rural areas). The situation had improved significantly by the end of the decade. In 1988, according to governmental data, illiteracy in the population older than 15 years was 19%. In the Northeast, however, the proportion of illiteracy was 36.5%.⁶⁵ A major literacy scheme, the National Literacy and Citizenship Program, was begun at the end of 1990 and aimed at both adults and children not in school.

Although primary education between the ages of 7 and 14 years is mandatory, only 85% of children in that age group actually attend school. School dropout and absenteeism are very widespread, which is reflected in a 20% rate of primary school repetitions—among the highest in Latin America—and in the fact that only a third of the children who enter primary school finish it. In the poorest households the school attendance rate is only 72.7%, and in parts of the rural Northeast it is only 54%, which is related to the early entry of many children into the work market. This is why some international agencies have talked about the "failure" of the Brazilian educational system,⁶⁶ which inherited severe deficiencies and problems from the previous decade. Some states and municipalities, which

are responsible for primary education under the new Constitution of 1988, have adopted promising policies such as lengthening of the school day and a "basic literacy cycle" to resolve these problems.

Only 15% of young people between 15 and 19 years of age attend secondary school. Secondary education suffers from serious problems of teaching quality which are creating growing problems of access to universities. Technical education, which is the responsibility of the National Industry Service (SENAI), the National Trade Service (SENAC), and the Ministry of Agriculture, still has low coverage. Ten percent of young people between 20 and 24 years old enter higher education. A twofold process is underway at this level: on one hand, some growth is taking place in university matriculation in private centers with a commercial orientation; on the other, public universities are modernizing, which is clear in postgraduate studies and research, which are being strengthened.

The situation of women

The fertility rate has fallen significantly in recent decades. In 1970 it was 5.7 children per woman, and by 1990 it had declined to 3.4. This major decrease is due to the use of contraceptives. Seventy-one percent of Brazilian women aged 15 to 45 years use one of these methods;⁶⁷ sterilization is so widely used that it is estimated that four of every 10 Brazilian women have chosen it. In some Amazonian provinces and Northeastern states such as Maranhão, female sterilization is even more widespread. Mass sterilization has led to major controversies; the Catholic Church is among its opponents, while private family planning agencies, many of which receive significant financial support from international agencies, are among its proponents. Various women's organizations have criticized this method because it is irreversible and because it is not accompanied by educational and promotional campaigns about other contraceptive methods.⁶⁸

The Brazilian Penal Code permits abortion when the mother's life is at risk or rape has occurred.

As in any society that discriminates against women, the difficulties they face in entering the social and work spheres are greater than those facing men; though women constitute 35.6% of the workforce, they account for 45% of the urban informal sector. Twenty percent of the female EAP consists of domestic workers. While 40.5% of men work without a work card, 49% of women do so. As to pay, 74.3% of women earn less than two minimum wages, a proportion that for men is 54%. This inequality is accentuated as we go down the occupational scale: 27% of working women earn less than half the minimum wage, compared with 7.7% of men. Thirteen percent of working women do not receive any pay, compared with 8% of men.⁶⁹

Female heads of household have responsibilities that exceed their participation in the labor market. In 1990, 20.3% of Brazilian households had women heads. The phenomenon of women heads of household increased during the decade since in 1981 the proportion of households with female heads was considerably less, 16.9%.⁷⁰

An indicator of the progress in awareness about the struggle for women's rights is the existence of around 2,400 women's organizations in the country.

The situation of children and young people

Children and youths between 0 and 17 years represented 40.7% of the population—60 million people—in 1990. The Northeast has a greater proportion, 47% of the population. In the Southeast, in contrast, the proportion is less—37.3%.

Children and young people are particularly affected by poverty. According to governmental data, about 55% of Brazilian children and adolescents are members of poor families and 27.4% belong to extremely poor ones whose incomes are less than a quarter of the minimum daily wage. In the Northeast, almost three of every

four children and adolescents belong to families that earn only about half the minimum wage.⁷¹

Child labor is common. Between 1981 and 1989 the proportion of children between 10 and 17 years of age in the workforce fell from 14.2% to 12.1%, though the rate of activity in this group remained almost constant at 29%. That is, almost one of every three children and youths began working. The largest number are unpaid family workers, especially in the urban informal sector and agriculture, in both subsistence farming and on large cotton, tobacco, sugarcane, and similar plantations. On the latter, companies often contract for harvesting on the basis of specific tasks to be performed not only by paid agricultural workers but also their families. Depending on the succession of harvest periods, families become nomads for long periods, something that particularly affects their children.

In Brazil's urban sphere, 17.9% of children between 10 and 14 years and 57.2% of those between 15 and 17 years worked in 1989.⁷² These figures include children and adolescents who perform domestic work hindering their school attendance, who represent 3.2% of children between 10 and 14 years and 8.8% of adolescents aged 14 to 17 years. The socioeconomic characteristics associated with child labor are a high number of children per family unit, the father's low level of education, the family head's occupation as a self-employed worker or in the informal sector, low income, and family units in which the father is absent.⁷³

Children living in a situation of marginality warrant special attention and may be divided into three categories: "institutionalized" children, children *in* the street, and children *of* the street. On the basis of studies conducted in Brazil, there is yet another category—children who live with their families in the street. With regard to the first category, various studies since the end of the 1970s⁷⁴ noted the inaccuracy of the phrase "abandoned children" to designate the thousands of children living in orphanages, asylums, or care centers in Brazilian cities. "Abandoned" children are not actually abandoned: they have families. Contrary to what was generally thought, they

come from extremely poor but not necessarily broken families. A significant portion of children in this situation came from families which could not keep them (in many instances such families depended only on the mother), and despite being institutionalized they kept in regular contact with their families. Institutionalization, in sum, was more a survival alternative for such families. Most came from the poorest strata and marginal areas, and those of the "white race" were in the minority. Some of the children had been institutionalized for "delinquent behavior" in accordance with the provisions of the Children's Code in effect from 1927 to 1979. Institutionalization had serious psychological consequences—loss of identity, development of a negative self-image, etc.—for the development of such children and adolescents, made their adaptation to society difficult, and in extreme cases was a "school in delinquency" for many of them.

Other children from the poorest strata have taken on responsibility for maintaining themselves or even contributing to the family income as children *in* the street; or if their ties with their families are broken, they may live *in* the street with a "group of peers." Children working in the street come from *favelas* or the outer areas of major cities where the population with the lowest income is concentrated. They are mostly males; girls usually stay at home, either to help in domestic tasks or so that they will not fall into prostitution networks. The age at which they enter the labor market is between 7 and 12 years, and most do so at 9 years. The children customarily leave the street at 15 or 16 years to look for more secure, better paid jobs which enhance their self-esteem and feeling of acceptance by society. Most usually live with both parents, though a large proportion of children live in families in which only the mother is present. As for occupations, most are in the informal economy as "informal wage earners," generally as itinerant vendors, though some children are also self-employed as bootblacks, car watchers or cleaners, or market bearers.

In addition, there are other marginal occupations which are criminal (robbery, thievery, prostitution, drug trafficking) or noncriminal (begging). These are performed to a greater extent by children of the street, but they are also customarily practiced by other children. Because of these facts, children of the street have very hostile relations with the police and children's court judges. Drug consumption is very common and usually takes the form of inhalants such as industrial glues.⁷⁵

The Children's and Adolescents' Statute was promulgated in 1990, repealing the Children's Code in effect since 1927. The new law defines the rights of children and adolescents, redefines the duties of the state and society toward children, and reorganizes the areas of responsibility of federal, state, and municipal authorities by putting priority on the municipalization of care.⁷⁶

Violence and human rights

Following the return of civil Government in 1985, the human rights situation could improve significantly. Nevertheless, the persons found responsible in the investigations of the "Brazil, Never Again" project for practicing torture during the military regimes of preceding years were never brought to trial. The decline in human rights violations by the state did not mean that they had disappeared, however. Thus, the United Nations sent a commission of jurists in 1989 to investigate the murders of Brazilian lawyers linked to the landless peasants' movement.

In rural areas the main cause of violence and human rights violations is the conflict springing from inequalities in land ownership and the existence of thousands of landless peasants, as well as the abusive practices of large land owners, or *fazendeiros*, and their armed groups. From 1964 to 1986 there were almost a thousand documented murders of peasant leaders which produced only three judicial convictions. This situation, which still continues and is a very common pattern in

the Brazilian hinterlands, gained notoriety through the murder of Chico Mendes, leader of the National Union of Seringueiros.⁷⁷ It is thought that since 1984, an average of one agrarian reformer has been murdered *per day*. Amnesty International reported that in 1988 alone more than 50 peasant leaders and priests had been assassinated. The Movement of the Landless, which receives strong support from sectors of the Catholic Church, has been the main target of the activities of gunmen in the pay of large estate owners.⁷⁸

Violence in urban areas, which has come to be a daily event in major cities, is associated with delinquency and the activities of "death squads." These gangs, which are suspected of being in league with security forces and merchants, as the Government itself recognized,⁷⁹ daily murder street children, who are always poor, almost always black or mulatto, and are thought to be delinquents. From 1988 to 1990 alone, 4,611 violent deaths of children and adolescents aged 5 to 17 years were recorded, of whom 82% were black and 3,943 were in the states of Rio de Janeiro, São Paulo, Pernambuco, and Bahia.⁸⁰ Because of this, nonaccidental violent deaths have come to be the chief cause of death among young people in Brazil's main cities.

The environment and vulnerability to disasters

Sixty-one percent of Brazil is covered by forest. Although the rate of deforestation (1.8% annually⁸¹) is not among the highest in Latin America, in absolute terms it represents an area deforested every year of such size that, in addition to being the world's largest within a single country, it may be called a true ecological catastrophe. The devastation of Amazonia became one of the most widely noted environmental disasters in recent years in both Brazilian and international public opinion, especially from 1988, the year in which Chico Mendes was assassinated.⁸² Although Amazonia has monop-

olized the attention of the media, there are other problems threatening the environment and ecosystems in Brazil: such is the case with the Atlantic forest, considered one of the world's greatest biodiversity reserves and in an advanced stage of destruction; the gradual desertification of the Northeastern region; the extinction of species; contamination of surface waters by heavy metals and agricultural chemicals, and air pollution, which in industrial centers such as São Paulo has one of the highest levels in Latin America, comparable only with that in Mexico City and Santiago, Chile.

Amazonia embraces the states of Acre, Amazonas, Goiás, Mato Grosso, Pará, Rondônia, Tocantins, and Maranhão as well as the territories of Amapá and Roraima, an enormous hydrological basin whose area—5.8 million square kilometers—is equal to Western Europe and whose ecosystem is home to a third of the planet's living species and tropical forests.

A decade of colonization began with the construction of the Transamazonian Highway, started in 1970, in which the Brazilian state and international financial institutions, especially the WB, invested more than \$10 billion in the region in tax incentives and by financing infrastructural programs (penetration highways and hydroelectric power plants), agricultural schemes (huge *fazendas* devoted to extensive cattle raising), and mining enterprises, to a large extent oriented toward export and improving capacity to pay Brazil's huge external debt. All these development projects have been carried out without consideration of their environmental impact. The best-known example is the Greater Carajás Program of which the Tucuruí dam is part. The dam, completed between 1984 and 1986, led to the displacement of 4,300 families and flooded 216,000 hectares of previously unfelled jungle. This meant that more than 13 million cubic meters of lumber, previously sprayed with dioxin (Agent Orange), lay rotting in the water, thus changing its chemical composition.⁸³ The Greater Carajás Program, located around the city of Marabá in Pará State, includes a major mining area, an 890-kilometer railroad right-of-way to

the San Luis de Maranhão port complex, and a group of metallurgic facilities which use charcoal from 3,500 square kilometers of forest annually as fuel. All this is having devastating ecological and social effects on 895,000 square kilometers of Eastern Amazonia, an area larger than France and Germany combined. The development projects and railroad attracted massive migration, caused large population displacements, and led to the deforestation of extensive areas in the states of Pará and Maranhão.⁸⁴ In this respect, the close relationship between deforestation and agricultural policies must be noted. Over a long period the Government granted subsidized credit and tax incentives to major producers, so that livestock farms have enjoyed tax exemptions of up to 90%. This has led to the deforestation of large areas which are now taken up by degraded pasturelands for large-scale livestock raising.⁸⁵

In addition to the environmental impact of these projects are the effects of colonization, which has been spontaneous or encouraged by the Government and consists of thousands of poor and landless peasants who have migrated from areas characterized by land concentration in latifundios. Their farming is "slash and burn," which when applied to the generally poor soils in Amazonia has helped devastate extensive tracts of tropical forest. In July and August 1990 a U.S. satellite identified 55,000 fire foci in Amazonia, in spite of the fact that laws limit this practice. The most significant example of inadequate colonization, acknowledged by the Government itself, is the Northwestern Pole program in Rondônia, which by 1986 had attracted thousands of immigrants from the Southwest. Destruction of tropical forest has already affected half of the state, although only 17% of its land is suited to agriculture.

In 1988 a WB report revealed that deforestation had already affected 12% of Amazonia. That figure was rejected by the Brazilian Government, which estimated that the amount destroyed by fires and clearing was 9.3%, or 343,900 square kilometers. In 1990, however, new figures for 1989 based on photographs by the Landsat 8 satellite were released which showed