

Brazil Case Study

Analysis of National Strategies for Sustainable Development

This document is one of 19 country case studies that form the knowledge base for a synthesis report entitled “National Strategies for Sustainable Development: Challenges, Approaches, and Innovations Based on a 19-country Analysis.” The synthesis report and country case studies are available electronically at:

<http://www.iisd.org/measure/capacity/sdsip.asp>
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Notice to Reader

Information in the country case studies was obtained primarily from publicly available sources (e.g., Internet and literature sources) and, where possible, was supplemented through interviews with government officials. The information was up-to-date as of May 2004. Every effort was made to ensure that official national sustainable development focal point contacts had the opportunity to provide feedback on the research, but such contacts were not successful in all cases. **This case study is in an unedited, working paper format.**

These case studies are made publicly available to add to the national sustainable development strategy knowledge base. The project’s research partners accept responsibility for any inaccuracies or omissions. The views expressed in this working paper do not necessarily represent the views of the funding partners.

The research partners welcome your comments on this country case study. Please e-mail comments to Darren Swanson at dswanson@iisd.ca.

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1 Introduction: Brazil Description

Brazil is the fifth-largest country in the world, located in eastern South America, with a population of approximately 170 million people (CIDA 2001). “Brazil is a country of contrasts. It contains not only two of the largest cities in the southern hemisphere – Sao Paulo and Rio de Janeiro, but also the majority of the Amazon and Pantanal, the largest remaining tropical forest in the world and one of the world’s largest and most spectacular wetland systems, respectively. These contrasts are also evident in Brazil’s social realities. Despite extensive natural resource reserves, many Brazilians suffer under poverty, inequality and other social ills” (Wilson Centre 2003).

Economy

Brazil is the ninth-largest economy in the world (CIDA 2001). It exploits its vast resources and large labour pool to create this strong economic position (CIA 2003). However, it faces many economic challenges. Brazil continues to battle against inflation, an economic response to several developments arising from the efforts to service Brazil’s large account deficits (CIA 2003). Brazil also has extreme inequalities particularly with respect to income distribution. Only 10% of the population has control over 50% of the income, whereas 50% of the population is limited to 8% of the income (MMA 2002, Ch. 3, p. 14). Brazil’s per capita income, which places it between the richest and poorest countries of the world, hides the fact that many Brazilians are among the world’s poorest while a few are among the richest (Hochstetler 1999, p. 69). The GDP per capita in 2002 was US\$7,600 (CIA 2003). The GDP is estimated at \$1.376 trillion (purchasing power parity). Its annual growth rate averaged 2.5% between 1990 and 1999 (World Energy Council 2001). Agriculture, cattle-raising, forestry and the manufacturing industry are the main engines of Brazil’s economy (CIDA 2001). The labour force by occupation is 53% services, 24% industry, and 23% agriculture (CIA 2003). Unemployment was 6.4% in 2001 (CIA 2003).

Society

Brazil returned to civilian rule in 1985 after two decades of military rule. Brazil is a federative republic. There are three levels of government: federal, state and municipal. The President is both the Chief of State and the head of the government. The National Congress consists of the Federal Senate and the Chamber of Deputies (513 seats elected by proportional representation for four year terms). There are a total of 26 states and 1 federal district.

Brazil faces many social challenges, of which the most significant are the inequities in the distribution of income, low educational attainments, poor health, and limits to the decision-making participation of its citizens (CIDA 2001). Portuguese is Brazil’s official language. Brazil’s human development index is 0.777, and is ranked 65th out of 175 countries in 2001 (UNDPa 2003, p. 238). Brazil ranked 18th in the human poverty index of 2001 with a rating of 11.4 (UNDPb 2003, p. 245). Approximately 50 million Brazilians live below the poverty line, which is defined as US\$1 per a day (1993 PPP US\$) (Wilson Centre 2003). The life expectancy at birth is 67.8 (UNDPa 2003, p. 238).

Environment

With a surface area of approximately 8.5 million sq km, Brazil's terrain is dominated by the Amazon Basin and central highlands, but there are also desert areas, hills and rolling plains. Brazil's climate is mostly tropical, but temperate in the south. The country is susceptible to extreme weather events such as droughts and floods (CIDA 2001). Brazil has an environmental sustainability index of 59.6 (ranked 20th out of 142) (Yale & Columbia 2002, p. 3). CO₂ emissions per capita were 1.9 tonnes in 2001 (World Bank 2001, p. 204).

With regards to biodiversity, the Amazon alone holds the largest biodiversity in the world and accounts for 40% of the Brazilian territory. To date, 55,000 species of plants, 428 of mammals, 1,622 of birds, 467 of reptiles and 516 types of amphibians have already been identified. Many species are still unknown and will need to be identified.

Brazil has a wide variety of environmental legislative instruments. The 1988 Constitution of the Federative Republic of Brazil devotes a full section (Chapter VI, article 225) to the environment, and includes conservation areas.

Brazil's main environmental problems are deforestation (particularly of the Amazon and the Atlantic forest), air pollution, waste and sewage disposal, and water and coastline issues (Hochstetler 1999, p. 73). For instance, Brazil's frontier forests comprise 17% of the world's remaining frontiers, making it the third highest ranked country in terms of remaining frontier forest. Since 1995, Brazil has averaged an annual loss of 17,600km²/year in Amazonian forest cover (Global Forest Watch). With regards to sanitation, of the 113 million people who live in urban Brazil (in 1995), 75 million have no sewage treatment, 20 million do not have running water and 60 million do not have their trash collected (Hochstetler 1999, p. 73). To overcome these environmental problems will require years of diligent and consistent work, and cannot be expected in the short term. Brazil's efforts to mitigate environmental problems are hindered by a variety of reasons, but one of the most substantial problems, as demonstrated in this report, is the national focus and priority on economic stabilization policies at the cost of other priorities such as environmental initiatives.

Note to Readers

Research sources for this report are primarily Brazil government reports, as well as some additional input from NGOs, ENGOs, and academia.

Brazil's Profile by Selected Indicators

Indicator	Value
Human Development Index (and ranking) – 2001	0.777 (65 th)
Human Poverty Index (and ranking) – 2001	11.4 (18 th)
Environmental Sustainability Index (and ranking) – 2002	59.6 (20 th)
GHG Emissions -2001	1.9 tonnes per capita of CO ₂
GDP and GDP per capita – 2002	US\$1.376 trillion and US\$7,600

2 Content of the National Sustainable Development Strategy

The Brazilian Agenda 21 was signed in July 2002 by the Brazilian president, Fernando Henrique Cardoso, in preparation for the World Summit on Sustainable Development. This comprehensive strategy is not classified as an official government document. Rather, it was created through years of extensive consultation across all sectors of society, and is consequently classified as a “social pact” (MMA 2002, Ch. 7, p. 1). The extent to which the government is bound by this pact is unclear.

Strategy Content

The Brazilian Agenda 21 provides an overview of the development process of this strategy, acknowledging the challenges, lessons learned and actors involved. The Agenda expands upon the concept of sustainable development, and how Brazil’s situation fits into the international context. The bulk of the Agenda outlines 21 objectives (see Appendix A), including actions and recommendations. The objectives are organized under the following five priority areas:

- The economy of savings in the society of knowledge
- Social inclusion for a solidarity society
- Strategy for the urban and rural sustainability
- Strategic natural resources: water, biodiversity and forests
- Governability and ethics for the promotion of sustainability

The final components of the Agenda include a discussion on implementation mechanisms and instruments, accompanied by an overview of accomplishments already undertaken in this country.

Coordination and Linkages with Other Strategies or Planning Processes

Under the Brazilian Constitution, the government’s multi-year plan (Pluriannual Plan - PPA) must be prepared every four years and approved by the National Congress. The PPA includes the programs that are to receive funding. In 1999, when the 2000-2003 PPA was prepared, it incorporated information on consultations undertaken and documents written to date which pertained to the basic themes of the Brazilian Agenda 21. It was hoped that by incorporating these themes at the national planning level they would, in turn, eventually be incorporated into public policies (MMA 2001, p. 2).

The latest PPA, for 2004-2007, created under President Lula resulted in a major budget cut for the environmental sector. However, “the great innovation of the new PPA is the insertion of the environmental dimension on the National Development Strategy. As published by *Agencia Folha*, the new government wants to integrate environmental questions with Brazil’s development policy. The other four dimensions of the Plan are: social, economic, regional and democratic” (JICA 2003, p. 5).

Brazil is also actively involved with other Latin American countries on a variety of sustainable development initiatives, such as the Latin American and Caribbean Initiative (ILAC), and the “Presidential Statement regarding the World Summit on Sustainable Development”, which was jointly presented in July of 2002 by the Presidents of South

America. This statement reiterated these countries' commitment to implementing Agenda 21, and their confidence in the WSSD (Andean Community). President Lula is also demonstrating commitment to Latin American relations in an effort to ensure that South American countries can gain a respectable and competitive position in a globalized world (JICA 2003, p. 2).

With regards to poverty, although there appears to be nation-wide consensus as to the need to combat poverty and social inequalities, as of March 2000 Brazil did not have an explicit National Poverty Reduction Strategy. The nearest substitute is the *Comunidade Solidaria Program*, which consists of two components: a federal agency which is used primarily in compensatory policies, such as the distribution of free food to very poor communities affected by adverse shocks; and a set of 'partnerships' between the government, civil-society associations and private sector companies which mobilizes and/or supports interesting poverty reduction programs (Camargo & Ferreira 2000, p. 17).

Integration of Sustainable Development Principles

Although the Brazilian Agenda 21 is not named as a national sustainable development strategy per se, the Agenda notes that "the common objective to be achieved is not restricted to the preservation of the environment alone, but to a progressive and expanded sustainable development, which brings into discussion the search for balance between economic growth, social equity and environmental preservation" (MMA 2002, Forward, p. 2). Further the three target dimensions of sustainability are embedded in the objectives addressed in the Agenda, ranging from natural resource management and conservation issues, to social inclusion and income distribution, through to economic mechanisms, governance and international relations.

The concept of responsibility towards the future is not a central theme in the objectives and corresponding actions, although it is alluded to in the overall context-setting of the Agenda. However, the timeframe around which the actions and recommendations outlined in the Agenda are to be implemented is a 10 year period (i.e. 2002 – 2012).

3 Institutional and Procedural Aspects of the National Sustainable Development Strategy

3.1 Development and Institutional Aspects

The Commission of Policies for Sustainable Development and of the National Agenda 21 (CPDS), coordinated by the Ministry of the Environment and comprising 10 members evenly distributed between the civil society and the government, has been working since 1997 on the creation of the Brazilian Agenda 21 document, in response to the 1992 Rio Conference (MMA 2002, Forward, p. 3).

Six central themes were selected as a basis for the initial consultation process including: sustainable agriculture; sustainable cities; infrastructure and regional integration; natural

resources management; reduction of social inequalities; and science and technology for sustainable development. In June 2000, a document entitled *Agenda 21: Basis for Discussion* was delivered to the President of Brazil, summarizing all of the consultations completed on the six themes (MMA 2002, Forward, p. 3).

From September 2000 to May 2001, the CPDS and the Ministry of the Environment (MMA) conducted state-level discussions in 26 states of the Federation. Partners in this process included the state governments via their Environment Secretariats as well as their official lending and development institutions in Brazil. Regional meetings took place from June to October 2001 with the aim of identifying the key elements among the proposals presented in the various states of each macro-region in the country (MMA 2002, Forward, p. 3).

The last stages of consultation of the Brazilian Agenda 21, concluded with a national seminar which aimed to define priority actions, discuss implementation mechanisms, and commit to implementation, via a consensus among major sectors at State, market and civil society levels. Also, meetings were held with representatives of the Executive and Legislative Powers, as well as of the scientific community, non-governmental and productive organizations (MMA 2002, Forward, p. 4).

Finally, in July of 2002 the CPDS proposed its action platform and defined the means and commitments for implementation of the Brazilian Agenda 21 with leaders from each sector. Through this document, the CPDS presents its synthesis and commitments, inviting the different segments of government, the scientific community, the private sector, the non-governmental organizations and civil associations to implement the sustainability measures found in the Agenda (MMA 2002, Forward, p. 3).

3.2 Participation Aspects

The Commission of Policies for Sustainable Development and of the National Agenda 21 (CPDS) is the body responsible for responding to Rio's Agenda 21. The CPDS is presided by the Minister of the Environment, and is composed of representatives from the Ministry of Planning, Budget and Management, the Ministry of Foreign Relations, the Ministry of Science and Technology, the Civilian Cabinet, and members of the civil society, including NGOs and academia (Socioambiental 2002, p. 1).

Conflict management is identified and addressed in the Brazilian Agenda 21. The consultation process found countless conflicts of interest among different social actors and between public institutions and private organizations. "In such cases, in order to make the implementation process viable around the strategies and recommendations proposed, it is recommended that short and long term negotiations be conducted" (MMA 2002, Introduction, p. 3). The Brazilian Agenda 21 seeks to establish a negotiated balance between its objectives, environmental policies, and the economic and social development strategies in order to consolidate them into a sustainable development process (MMA 2002, Introduction, p. 3). The Brazilian Agenda 21 also identifies some measures that must be taken in order to overcome these competing economic, political, institutional and cultural restrictions, such as: raising the level of environmental

awareness; having the entrepreneurial sector take a positive stand towards their social and environmental responsibilities; opening the national political system structure to policies aimed at reduction inequalities and eradicating poverty; and identifying viable sources of financial resources” (MMA 2002, Introduction, p. 4).

3.3 *Monitoring Aspects*

The Brazilian Agenda 21 highlights some of the sustainable development accomplishments that have occurred over the past decade. However, the Agenda only makes one reference specifically to monitoring, alluding to the creation of an implementation report (MMA 2002, Ch. 6, p. 1). No reference is made to the responsibility of monitoring and reporting.

With regards to sustainable development indicators, the Ministry of Environment in Brazil is working on this area. The Ministry stated that it was preparing a specific seminar on indicators, and that an initiative called “Dialogues for Sustainability” would be launched. As well, the ministry indicated that the subject of indicators would be a high-priority topic during the discussions at the 1st National Conference on Environment to be held in November 2003 (Langone).

Environmental Impact Assessment (EIA) was formally introduced in Brazil in 1981 as one of the instruments of the National Environmental Policy and as part of the Environmental Permit requirements. EIA was also included in the Federal Constitution of 1988 and describes the application of EIA to any activity likely to cause environmental degradation. EIA are primarily the responsibility of the State Environmental Agencies in the decentralized Brazilian system. Many States and large municipalities such as Rio de Janeiro, Sao Paulo and Belo Horizontal have passed their own EIA legislation (Commission for EIA, p. 1).

3.4 *Implementation Aspects and Specific Initiatives*

As alluded to earlier, the Agenda 21 “was never thought of as a government document, with directives and strategies to guide only government policies” (MMA 2002, Ch. 7, p. 1). As such, the Agenda places the onus of implementation directly on the various sectors of society, including: governments of all levels, private sector companies, and civil society organizations. Participation is also demanded from the legislative power at the three government levels, the Public Ministry, and all society in general. The Agenda identifies its strength as the “wide participation that it reached during the elaboration and in the construction of a process of co-responsibility for the implementation phase of its actions and recommendations. It is, in fact, a social pact” (MMA 2002, Ch 7, p. 1).

The Brazilian government itself has committed to incorporating the priorities described in the Brazilian Agenda 21 into their policies, thus giving continuity to a process initiated in 1999, when the “PPA 2000-2003” was prepared (MMA 2002, Forward, p. 4).

Underlying the entire Brazilian Agenda 21 is the reality that Brazil has been struggling and continues to struggle to stabilize its economy. This struggle has implications on all facets of the Agenda’s implementation, and there continue to be restrictions based on the

government's priorities. For instance, the control of public expenditures and restrictions on sub-national planning decisions has taken away autonomy of decision-making.

Recognizing this fiscal reality, the Agenda states that in order to implement the strategies embodied in the Brazilian Agenda 21, "it is paramount that there is an explicit incorporation, in its decision-making process, of the main conditionalities of economic-financial and political-institutional nature in the short, medium and long terms" (MMA 2002, Ch. 4, p. 1). Further, the Agenda places emphasis on the importance of managing the financial crisis that the country faces. In fact, it goes so far as to state that "to put emphasis in the implementation of sustainable development policies – in detriment of additional maintenance costs and of investment expenditures – can be a misleading decision, full of risks and uncertainties, as they will compromise fiscal funding sources that are not available, due to the indispensable structural changes in the public sector" (MMA 2002, Ch. 4, p. 2).

So, within this context of very limited financial options, the Agenda emphasizes the need to integrate into the existing and evolving bureaucratic structure. A variety of implementation mechanisms and instruments that can be considered are discussed and evaluated (MMA 2002, Ch. 4). Examples of some of these measures include:

- Improving and politically strengthening regulatory structures and mechanisms
- Renewing sources of funding
- Using fiscal and financial instruments and incentives
- Constructing cooperative government / society partnership
- Using market instruments and mechanisms (e.g. green tax, subsidies, refundable deposits, etc.)

The Brazilian Agenda 21, as well as several other documents written in advance of the final Agenda, is available on the Ministry of Environment's website. All documents are available in Portuguese, and several have English translations and/or summaries.

Table 1 highlights some of Brazil's innovative initiatives undertaken to implement sustainable development.

Table 1: Selected Sustainable Development Initiatives

Initiative	Outline
Law of Environmental Crimes (Law 9605)	Brazil has in place a wide array of environmental legislation instruments. One particularly critical piece of legislation is the Law of Environmental Crimes which was passed in February 1998. This law establishes a series of administrative infractions and crimes against the environment as well as their corresponding sanctions. It sets fines of up to \$50 million and jail sentences for crimes ranging from illegal logging and killing wild animals to industrial pollution and graffiti. The degree to which this law has been implemented is unclear. In addition, several articles in the law were vetoed six months after its passing, which have taken away much of the power that this law was

	designed to have.
Amazon Deforestation Control	To guide public policies and private decisions regarding the promotion of development of the Amazon without giving up its natural heritage, Brazil determined that it was necessary to know the extent and location of deforestation. The Space National Research Institute (INPE) implemented the Prodes project with the objective of guaranteeing continuity in the generation of official deforestation estimates. The project is based on the analysis of 229 Landsat satellite images that cover the region (approximately 4 million sq km). This project not only provides a visual image of the rate of deforestation in the area, it also enables unauthorized exploitation activities to be identified (MMA 2002, Ch. 6, p. 4).
Commission of Policies for Sustainable Development and of the National Agenda 21 (CPDS)	The CPDS was established in 1997. This Commission is presided by the Minister of the Environment. It has representatives from the Ministry of Planning, Budget and Management, the Ministry of Foreign Relations, the Ministry of Science and Technology, the Civilian Cabinet, and members of the civil society, including NGOs and academia (Socioambiental 2002, p. 1). This Commission successfully created the Brazilian Agenda 21 with input from over 40,000 people. Consultations were held with all society sectors, and at all levels of government.

Box 1 highlights one of Brazil's particularly innovative sustainable development initiatives:

Box 1: Ecological Value-Added Tax (ICMS Ecológico)

ICMS is Brazil's tax on sale of goods and services. In Brazil, 25% of ICMS is reallocated to local government. Each state may determine further redistribution criteria. The ecological criterion was adopted in 1990, and is now operative in 6 states. Legislation is under discussion in other states. The ICMS Ecológico acts as a "fiscal compensation mechanism", such that municipalities that have protected areas from traditional economic activities are rewarded. Factors that are incorporated to determine how much compensation is received include territorial restriction (protected area), conservation (level of protection) and quality.

The results of this initiative include:

- Increase in the number and size of protected areas and recuperation of degraded forestlands
- Improvement in the quality of conservation: local infrastructure and services (electrification, roads, water...)
- Public dissemination of the debate
- Promoting fiscal justice
- Incentive to eco- and rural-tourism (Monzoni 2002 & May 2000).

Four states have been particularly active with this program. Since the programs were adopted, about 1 million hectares have been placed under environmental zoning restrictions in Parana, and about 800,000 in Minas Gerais. While the ICMS Ecológico represents only a small proportion of the total ICMS disbursements, it constitutes a relatively large incentive by the standards of conservation programs (World Bank 2003, p. 173).

"Field interviews suggest that municipal authorities deploy local incentives to induce landholders to undertake these restrictions, in order to attract state funding. The ICMS Ecológico is thus an interesting mechanism because it affects landholder incentives without incurring the large transactions costs associated with payments directly to landholders. Its effectiveness, however, depends on the ability of the state to monitor and enforce land-holders' compliance with conservation commitments" (World Bank 2003, p. 173).

3.5 Summary of National SD Strategy

The table below summarizes Brazil's sustainable development strategic initiatives.

Table 2: Summary of Brazil's National Sustainable Development Strategy

Criteria/Aspects	Outline
Content of SDS	
- Typology	- Comprehensive strategy
- Content	- Contains discussion on development process and current Brazilian situation. Includes 21 objectives, and supporting actions and recommendations. Presents implementation options
- Linkages with other strategies and planning processes	- Agenda links to Pluriannual Plan. Other indirect SD connections include Latin America and Caribbean Initiative, and some poverty reduction initiatives
Development Aspects	
- Legal basis, state of process	- Brazilian Agenda 21, completed in 2002, is "not a government document, but a social pact"
- Institutions, responsible agencies	- Commission of Policies for Sustainable Development and of the National Agenda 21 (CPDS) coordinated development of Brazilian Agenda 21
- Decisions and negotiation	- More than 40,000 people participated in development process. Conflicts between all sectors of society are expected, and negotiations to resolve were integral to development of Agenda, and are to be built into implementation process
- External Support	- Unknown
Participation	
- Coordination	- Commission of Policies for Sustainable Development and of the National Agenda 21 (CPDS) coordinated development of Brazilian Agenda 21
- Inter-governmental actors	- CPDS includes representatives from a variety of federal ministries; Consultations at state and regional levels were held in development stage; All levels of government are expected to take up implementation measures
- Civil society, NGOs actors	- CPDS includes representatives from civil society, NGOs, and academia
Monitoring, Reporting and Adaptation Aspects	
- Responsibilities & Mechanisms	- Responsibilities for monitoring not clearly delineated in Agenda 21
- Compliance mechanisms	- Compliance mechanisms not defined
- Learning and Adaptation	- Learning and Adaptation strategies not identified
- Application of Strategic Environmental Assessment	- SEA – unknown; EIA is a state responsibility and is built into the National Environmental Policy and the Federal Constitution
Implementation of SDS	
- Responsibility and Coordination	- Implementation of Agenda 21 objectives is the responsibility of each individual sector of society
- Financing and capacity	- Financing options are presented, but cautionary restrictions are identified given the tenuous financial situation in Brazil
- Communication	- Brazilian Agenda 21 is available on-line, as are documents which were written in advance of the Agenda
Specific SD Initiatives	
	- Law of Environmental Crimes
	- Amazon Deforestation Control
	- Commission of Policies for Sustainable Development and of the National Agenda 21 (CPDS)

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Appendix A – Brazil’s Priority Actions and Objectives

Priority Action: The economy of savings in the society of knowledge	
Objective 1	Sustainable production and consumption against the waste culture
Objective 2	Eco-efficiency and social responsibility of companies
Objective 3	Recovery of the strategic planning, infrastructure and regional integration
Objective 4	Renewable energy and biomass
Objective 5	Information and knowledge for sustainable development
Priority Action: Social inclusion for a solidarity society	
Objective 6	Permanent education for work and life
Objective 7	Promote health and prevent diseases by the democratization of “SUS”
Objective 8	Social inclusion and income distribution
Objective 9	Universalisation of environmental sanitation to protect the environment and health
Priority Action: Strategy for the urban and rural sustainability	
Objective 10	Management of the urban space and the metropolitan authority
Objective 11	Sustainable development of rural Brazil
Objective 12	Promote sustainable agriculture
Objective 13	Promote the local Agenda 21 and integrated and sustainable development
Objective 14	Implement mass transportation and sustainable mobility
Priority Action: Strategic natural resources: water, biodiversity and forests	
Objective 15	Preserve the quantity and improve the quality of the water in the hydrographic basins
Objective 16	Forestry policies, deforestation control and biodiversity corridors
Priority Action: Governability and ethics for the promotion of sustainability	
Objective 17	Decentralization and the federative pact: partnerships, consortiums, and local power
Objective 18	State modernization: environmental management and economic mechanisms
Objective 19	International relations and global governance for sustainable development
Objective 20	Civic culture and new identities in the communication society
Objective 21	Pedagogy of sustainability: ethics and solidarity