# INTEGRATING THE ENVIRONMENT AND DEVELOPMENT IN THE DECISION-MAKING PROCESS

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## Contents



## Summary

This chapter examines the integration of environmental variables into the decision-making process of Brazilian governmental institutions and private businesses. It starts with a brief historical overview, pointing out the major events of the process of regulation of human activities that use and/or degrade environmental resources. The text shows that, starting in the early 1970s, environmental management is increasingly brought under the scope of public institutions. Many agencies, policies and instruments of environmental management were created.

Brazilian practices are extensively examined in the text, in such dimensions as: conservation units, licensing system, environmental impacts assessment, auditing, economic instruments, monitoring, water resource policy, forest policy. Other items discussed are the institutional framework and the legal-normative basis related to environmental matters in Brazil. Some of the most important governmental programs in environmental management are described, together with examples of experiences and breakthroughs in the process of sustainable development. The text closes with a discussion of the conditions for successful environmental management in Brazil.

## 1. Evolution of the Public Decision-Making Process in Environmental Issues

### 1.1. Historical Background—From the 1930s to the 1972 Stockholm Conference

Environmental policies, to be effective, require three major foundations: (i) solid environmental legislation; (ii) strong public institutions responsible for coordinating and implementing this legislation; and (iii) social legitimacy, in the form of popular support.

In Brazil, although much ground remains to be covered, many important steps have already been taken in the direction of such foundations. A process that began in the 1930s has brought property and the use of natural resources under an increasing degree of regulation. The laws that expressed this process referred basically to specific environmental resources. One of the first pieces of legislation was a 1932 decree that created the possibility of preventing factories from damaging public health.

Among the most important legal instruments that are part of the historical background of public regulatory action in relation to the environment, we can mention the following:

- The 1934 "Water Code" defined property and user rights over water resources for the purposes of supply, irrigation, navigation, industrial uses and energy production, and set out rules for the protection of the quantity and quality of territorial waters.
- The 1934 "Forest Code" created four classes of forests: protective (conserving water, soils, dunes, public health, scenic landscapes and rare species), native (located in national, state and municipal parks to be created), model (replanted for commercial purposes) and productive (native forests subject to commercial logging). This last one represented the vast majority of Brazilian forests. National Parks started to be created in 1937, the first one being Itatiaia National Park (located between the states of Rio de Janeiro and Minas Gerais). In 1944 a National Parks Bureau was created inside the Federal Forest Service, and until 1967 parks remained under the authority of the Department of Agriculture. The new 1965 Forest Code defined forests and all other types of native vegetation as goods pertaining to the common interest of all Brazilians. It also established criteria for the delimitation of areas in which native vegetation should be permanently preserved, besides areas for the creation of parks and biological reserves, commercial exploration of forests, and logging.
- The 1938 "Fisheries Code" declared all animals and vegetation in Brazilian territorial waters to be of public domain, and spelled out the principles and manners by which fishing and other forms of exploiting biological resources living in the water should be conducted.
- The National Health Code of 1954 established general norms for the protection of health.
- The Sanitation National Policy and the National Council for the Control of Environmental Pollution, both from 1967, had the goal of promoting and coordinating pollution control activities.
- The Fauna Protection Law of 1967 considered wild animals to be public goods, and regulated their protection.

At about the same time, several federal agencies dedicated to specific issues or sectors of the environment were created: DNAEE (1965), linked to the Mining and Energy Ministery, was created to enforce the Water Code and stimulate the production of electric energy; IBDF (1967), under the Ministery of Agriculture, was created to implement forest policy, enforce the Forest Code, and protect and conserve renewable natural resources; SUDEPE (1967) was entrusted with drafting and implementing the National Plan for the Development of Fisheries and to aid in the control of territorial waters; SUDHEVEA (1967) was responsible for framing and executing rubber production policies.

### 1.2. The 1970s: Political and Institutional Consolidation

In 1973, following a world trend that grew stronger after the 1972 Stockholm Conference, the issue of the environment gained deeper institutional roots in Brazil, becoming a specific area of governmental action. SEMA, the first federal agency specifically dedicated to environmental matters, was created in 1973. Among other missions, it was mandated to monitor the changes occurring in the environment, support agencies and entities responsible for environmental conservation, aid the agencies charged with environmental control, promote environmental education on a national scale, and establish norms and standards for the preservation of environmental resources, especially water resources.

In 1975 a specific legal base for environmental matters started to be pulled together, in the form of two decrees pertaining to the control of industrial pollution. Decree-Law 1413/75 dealt with the control of pollution caused by industrial activities and mandated industries to promote the methods required to prevent or correct inconveniences and losses caused by environmental pollution and contamination. Decree 76389/75 dealt with preservation and industrial pollution control, among other things, and ordered agencies that handled fiscal incentives to take into account, in project evaluation, the prevention of industrial pollution, creating serious penalties for violators. This led to Law 6938/81, creating the country's National Environmental Policy, its National Environmental System (SISNAMA), integrated among other institutions by the CONAMA – National Environmental Council.

State environmental agencies started to emerge in the 1970s. Their origins are strongly linked with the area of public sanitation. In other words, public sanitation agencies were transformed into pollution control agencies. One of the major missions of these agencies, together with control and monitoring, is to issue licenses for potentially polluting or environmentally destructive activities.

The states also established their environmental councils, with missions analogous to those of the CONAMA.

The early 1980s witnessed the emergence of the first municipal environmental councils (CONDEMAs). They were to receive executive support from city governments. These councils have two important functions: to control small-scale productive activities and to promote community participation.

Table 1 offers a summary of different arenas of public decision-making agencies, at the three levels of government.

| | Federal Level | State Level (27 federative units) | Municipal Level (almost 6000 municipalities) |
|---|---|---|---|
| *Political Arena* | Ministry of the Environment (MMA) | State Environmental Secretariats | Municipal Environmental Secretariats(*) |
| *Participatory Arena* | National Environmental Council (CONAMA) | State Environmental Councils | Municipal Councils for Environmental Protection (CONDEMAs) |
| *Executive Arena* | Brazilian Institute for the Environment and Natural Resources (IBAMA) | State Environmental Agencies (OEMAs) | Municipal Environmental Agencies |
| *Judicial Arena* | Federal District Attorney Office | State Prosecutor and District Attorney Offices | – |

(*) Not much more than 100 Brazilian municipalities have created a special agency dedicated to environmental problems.

Table 1. Arenas of public decisions in environmental matters in Brazil.(Simplified sketch)



Brazil's National Environmental Policy aims at "the preservation, improvement and reclamation of the environmental quality adequate to life, in order to ensure in our country the conditions for socio-economic development, for the interests of national security, and for the protection of the dignity of human life". This law went through a few changes in 1990, especially concerning the Evaluation of Environmental Impact and Environmental Licensing. It also created the SISNAMA, responsible for the execution of the National Environmental Policy. This council is composed of representatives of agencies from the three levels of government, and public agencies responsible for improving environmental quality. The SISNAMA has the following composition:

- **Superior Body**: Governing Council that should assist the President of the Republic in the formulation of the national policy and governmental guidelines regarding the environment and natural resources.
- **Consultative and Decision-Making Body**: CONAMA, that should assist, study and propose to the Governing Council the official political guidelines for the environment and natural resources. Its mission is to decide, in its sphere of competence, about norms and standards that are compatible with an ecologically balanced environment. CONAMA is composed basically of three sectors: (i) the Federal Government, through representatives of several Departments and Secretariats linked directly to the Presidency of the Republic; (ii) representatives of state governments and of the Federal District; and (iii) several segments of civil society, through representatives of organizations of the productive sectors and citizen's groups dedicated to environmental issues.

- **Central Body**: The Ministry of the Environment (MMA), charged, as a federal agency, with planning, coordinating, supervising and controlling federal environmental policy and guidelines.
- **Executive Body**: IBAMA, charged, as a federal agency, with carrying out and making other actors carry out federal environmental policy and guidelines.
- **Sectional Bodies**: state government agencies and entities responsible for the execution of programs and projects and for the control and oversight of activities that can potentially cause environmental degradation.
- **Local Bodies**: municipal agencies or entities responsible for controlling and overseeing these activities in their respective jurisdictions.

SEMA, IBDF, SUDEPE and SUDHEVEA were extinguished in 1989, when IBAMA was created. IBAMA took over their responsibilities and duties. The new agency, at its inception, inherited the institutional (and bureaucratic) "culture" of its predecessors. After more than a decade, IBAMA had not yet achieved the effective integration of the duties of its predecessors, reproducing poor practices that can be credited to their original missions.

CONAMA's major responsibilities are: to propose guidelines for governmental policies for the environment and natural resources; to issue norms for the implementation of the National Environmental Policy; to issue norms and criteria for the licensing of potentially or effectively polluting activities; to decide about the drafting of environmental impact studies (EIAs); to rule about appeals in reference to administrative fines applied by IBAMA; to undersign agreements transforming monetary fines into measures that enhance environmental protection; to rule about the limitation or the loss of fiscal incentives; to create national norms, criteria and standards for pollution control and the control and maintenance of environmental quality; to create general norms in reference to conservation units; to create criteria for the designation of critical, saturated or nearly saturated areas; to create or extinguish its own Technical Committees and approve their internal rules; its Technical Committees may be permanent (Judicial Matters, Environmental Control, Water Resources, Ecosystems, Eco-tourism and Transportation) or temporary (Environmental Education, Energy, Coastal Management, Mercosul Affairs, Mining and Placer Mining).

CONAMA's *modus operandi* has been criticized because of the loose ends that compromise its decision-making process. There have been many challenges to its ability to represent diversified social interests, because government controls most of the seats of the council's plenary. Another frequently criticized aspect of CONAMA is its focus on urban environmental issues, as opposed to a more encompassing view of environmental policies.

SEMA was created in 1973, absorbed by IBAMA in1989, and again in 1992 by the Ministry of the Environment. In 1995 this Ministry was transformed into the Ministry of the Environment, Water Resources and Legal Amazonia. In 1999 it returned to being the Ministry of the Environment. These changes attest the volatile character of the institutional apparatus created by Brazilian government to deal with environmental issues. The swift turnover of directors of the several governmental agencies dedicated to

environmental issues has been even more impressive than the institutional changes.

The specific offices that are currently part of the Ministry of the Environment are: National Environmental Council, National Council for Legal Amazonia, National Council for Renewable Natural Resources, National Environmental Fund Management Committee, Secretariat for Water Resources, Secretariat for Sustainable Development, Secretariat for Environmental Quality of Human Settlements, and the Secretariat for the Coordination of Legal Amazonia.

The National Environmental Policy created several instruments for its implementation, among which we may mention:

- *Environmental quality standards*, a preventive instrument that is of crucial importance for pollution control. There are two basic types of environmental standards: emission standards, maximum allowable values for the release of pollutants, and quality standards, indicating the normal conditions of natural recipients of pollution (air, water and soil).
- *Environmental zoning*, that seeks the adequate distribution of human activities in selected territorial areas, taking into account physical and socio-economic variables.
- The *environmental impact assessment*, an instrument that aids the decision-making process by allowing the participation of all social actors affected by proposed interventions; it is linked to the process of licensing productive activities.
- *Licensing and control* of polluting or potentially polluting activities, aiding in the implementation of specific interventions, through the instrument of environmental permits.
- The creation of *specially protected areas* by federal, state and municipal authorities, such as Environmental Protection Areas, Ecological Stations and Extractive Reserves.
- The *national information system about the environment*, that collects, stores, processes and publicizes information about environmental quality.
- The *national register of activities and instruments of environmental protection*, that records the names of professionals and companies dedicated to environmental consulting and of companies that manufacture and sell environmental control equipment.
- The *national technical register of potentially pollutant and/or resource consuming activities*, that records the names of people and companies dedicated to potentially pollutant activities, or to the extraction, transportation and sale of hazardous products or products generating from fauna and flora.
- *Disciplinary or compensatory punishments* applicable to those who do not comply with the measures required to preserve the environment or reverse environmental degradation.
- The *Report on Environmental Quality*, that records the general status of the country's environmental resources. It was supposed to be published regularly by IBAMA, but on account of the lack of systematic data collection, and also of administrative discontinuity in the responsible agencies, only two reports have been published so far (for the years 1984 and 1993).

IBAMA, besides being responsible for promoting federal actions to implement all the above mentioned instruments, has other missions: inspection and supervision; intervention in serious environmental accidents and emergencies; personnel training; promoting environmental education; promotion of the sustainable exploitation of environmental assets; controlling access to and use of genetic resources; reclamation of degraded areas; and implementing internationally accorded procedures and agreements in the field of environmental management.

A particularly important piece of legislation was Law 7347/85, known as the law of "pervasive interests". It created the possibility of *public civil law suits* for the protection of the environment, consumer rights, and goods and interests with artistic, aesthetic, historical, scenic, and touristic value. District Attorney's offices and other public agencies, besides private foundations and associations, can initiate civil lawsuits against those responsible for aggressions against the natural, historical and artistic heritage, besides consumers' rights.

The 1998 Brazilian Constitution has an entire chapter (number 6) dedicated to the issue of the environment. It specifies a set of rights, prerogatives and obligations. Certain areas (the Amazonian Forest, the Atlantic Forest and the Mato Grosso Swampland) were considered to be part of the national natural patrimony. The Constitution upholds laws by which public lawsuits can be initiated against parties responsible for environmental damages. It also established that environmental impact studies must precede all actions and interventions potentially harmful to the natural environment. Environmental policies are upheld also in other sections of the Constitution that deal with health, cultural heritage and agricultural policy.

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**Biographical Sketches**

**Maria Augusta Almeida Bursztyn** was born in Goiânia (state of Goiás, Brazil) in 1953. Her undergraduate degree was obtained in Civil Engineering, at the Universidade de Brasília (1975). She also holds a Specialist degree in Sanitation and Environmental Engineering, from the Ecole Nationale de Santé Publique (Rennes, França, 1978). In 1981 she concluded her Doctoral degree in Water Sciences, at the Université de Paris VI (France). She held the positions of Coordinator of Water Resources at Brazil's Secretaria Especial do Meio Ambiente, Environmental Coordinator at the Companhia de Desenvolvimento do Vale do São Francisco, and Planning Coordinator of the Secretaria de Meio Ambiente da Presidência da República. Since 1992 she has been a professor at the Universidade de Brasília, first in the Department of Civil and Environmental Engineering (until 1995) and later in the Department of Geography (since 1996). She is also associated with the university's Centro de Desenvolvimento Sustentável (Center for Sustainable Development), as researcher and professor. She has published several texts about the management of water resources and environmental management in general.

**Marcel Bursztyn** was born in Rio de Janeiro (Brazil) em 1951. Obatined his Undergraduate degree in Economics (1973) and his Master degree in Urban and Regional Planning (1976), both at the Universidade Federal do Rio de Janeiro. At the University of Edinburgh (Scotland), he gained the Diploma in Planning Studies (1977). He holds Doctoral degrees in Economic and Social Planning from the Université de Paris I (Sorbonne, France, 1982), and in Economic Sciences from the Université de Picardie (France, 1988). He was professor at the Universidade Federal do Rio de Janeiro and the Universidade Federal da Paraíba (Brazil) and the Université de Paris I (Sorbonne, France). Since 1992 he has been professor and researcher in the Sociology Department of the Universidade de Brasília, and since 1996 he has been associated with the university's Centro de Desenvolvimento Sustentável (Center for Sustainable Development), of which he is the current director. He held several positions in the federal government and in the government of Brazil's Federal District, in the areas of science and technology, environment and planning. He regularly publishes books and articles about public policies, regional development, sustainable development and social exclusion.