

CHAPTER 7

MAIN POLICIES AND PLANS FOR RECUPERATION OF DEGRADED AREAS

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7.1 Policies Related to Recuperation of Degraded Areas

7.1.1 Transition of the Environmental Policies

Until the 70's, the environmental management in Brazil was very precarious, with priority to development activities. This management started to be strongly criticized by the Brazilian society after the second half of the 70's. As a consequence, the Government adopted in 1981 the National Policy of Environment (Law no. 6938), with the objective of organizing the administrative execution institutional framework, and with the basic guidelines of improving and recuperating the environment. Furthermore, CONAMA (National Council of Environment) and SEMA (Special Secretariat of Environment) were implemented to compose the national system of environment. The legislation related to this policy was formulated until 1989. Through the Forestry Code, the appropriate method as for the ecosystem for the extraction of wood, the adoption of reforestation, the system of previous authorization for wood extraction, and the reinforcement of the legal reservation regulation were decreed (Forestry Code Art. 44), besides the re-evaluation of other non environmental laws. The fiscal incentives for agricultural projects in the Amazon region were suspended in 1989, and then extinct in the following year of 1990. Therefore, there was a great change in the environmental management policy.

The institutional framework related to the environmental management was re-evaluated, with the creation of IBAMA – Brazilian Institute of Environment and Renewable Natural Resources. This organization is the responsible for planning and executing the environmental management, being under the jurisdiction of the Ministry of Environment. IBAMA was created through the integration of the former IBDF (Brazilian Institute of Forestry Development), SUDEPE (Superintendency of Fishery Development), SUDHEVEA (Superintendency of Hevea Development) and SEMA (Special Secretariat of Environment). However, the forest exploitation once slowed down in the 80's started to recover the pace in the 90's due to the policy of fostering of agricultural areas expansion that was necessary for the support of the economic stabilization policy. Under these circumstances, the obligation of sustainable forest management in the Amazon region was decreed in 1994, through the Decree no. 1282. Following this, through the Provisional Measure no. 1511 of 1996, the legal reservation percentage in the Amazônia Legal region that was stipulated in the Forestry Code was raised.

7.1.2 Environmental Policy of Pará State

The correct use and effective protection of the State natural resources were reinforced with the regulation and approval of specific laws for the sector. In 1995, the Pará State Environmental Law (Law no. 5887) that disposes about the state environmental policy was sanctioned. This law is a reinforcement of the existing federal laws, taking into consideration the specific characteristics of the State natural resources, and with the objective of protecting the Pará State forests, thus avoiding the disappearance of extinction threatened species.

At the State level, the Executive Secretariat of Science, Technology and Environment

(SECTAM) is the responsible agency for the planning, coordination, execution, supervision and control of the State government environmental policies. It is also the agency responsible for the implementation of development activities, without altering the rules adopted by the State government. The inspection and control actions developed by SECTAM encompass all the environmental activities that represent risk of environmental pollution and degradation.

7.2 Plans Related to Recuperation of Degraded Areas

7.2.1 Forestry Complex - PROECO Program of Ecological Compensation for the Use of Forest and Altered Areas in Pará State

This program is planned to be implemented in 68 municipalities of Pará State, with a total area of 727,606 km², with the aim of reducing the pressure for the occupation of new areas of native forests in regions not much utilized, in special those regions supplied with social infrastructure, improving their productivity and economy.

The program basically proposes 2 alternatives: the introduction of the agroforestry system and reforestation in degraded areas whose owners are large- and small-scale producers; and the implementation of sustainable forestry management by companies and rural communities. The applied methodologies are as follows: 1) reforestation of 50,000 ha/year (20,000 ha of annually implemented reforestation with dendê; 20,000 ha of annually implemented reforestation in forestry consortiums for the production of wood; 5,000 ha of reforestation implemented for firewood; and 5,000 ha of agroforestry systems implemented with forest species; and 2) implementation of forestry management in 10,000 ha/year of native forest; and the re-composition of exploited forest in the rate of 10,000 ha/year.

The program also stimulates the entrepreneurial reforestation in degraded areas, with wooden native and exotic species of which there are already technological knowledge and successful concrete experience, and with species which are fundamental for the regional economy. Besides this, the program shall foster the agroforestry system in consortium with forest species and agricultural crops for small- and medium-scale producers. The institutional framework for the Program implementation includes the participation of SECPRO (Secretariat of Production), SECTAM, EMATER, Bank of Pará State, EMBRAPA, FCAP, BASA, among others.

7.2.2 Pilot Program for the Protection of Brazilian Tropical Forests (PPG7)

The program encompasses several projects and subprograms. The ones in execution are as follows: Subprogram of Demonstration Projects, Integrated Project of Protection to the Amazônia Legal Indigenous Land and Population, Project of Extraction Reservations, Subprogram of Science and Technology, and Subprogram of Natural Resources Policies. Those in preparation stage are as follows: Project of Support to the Sustainable Forest Management in Amazon, Project of Support to the Management of Natural Resources in Lowland (Várzea), Project of Support to Monitoring, Control of Deforestation and Forest Fires in Amazon, Project Ecological Corridors, and Project of Support to Monitoring and Analysis.

The PPG7 carried out in 1994 a *workshop* about the recuperation of degraded areas. In this *workshop*, the migratory agriculture carried out by small-scale farmers through the slash-and-burn method was identified as the main cause for forest fires. As strategy for the

recuperation of degraded areas, the following themes were considered important: reduction of the pressure for deforestation and fires over the remaining natural forests; improve the production system and promote the permanence of producers at the same place; and the introduction of the agrosilvipastoral system mainly for the small-scale producers.

7.2.3 Private Reservation of Natural Patrimony (RPPN)

The RPPN – Private Reservation of Natural Patrimony – is a program regulated by the Federal Decree no. 98.914 of 1990, with the objective of conserving the biodiversity of private properties. The Decree no. 1.992 of 1996 regulated the creation and management of RPPNs. The RPPNs can not be deforested and the development activities are forbidden. The area is strictly protected as a genetic bank, with total and irrevocable protection. These protected areas shall remain private and are considered conservation areas forever. The owner can transform his property entirely or partially into a RPPN. The RPPNs owners are exempt of the land tax in the property portion that was transformed into a RPPN.

7.2.4 Control of Natural Resources

Another adopted measure to slow down the deforestation and to promote sustainable management practices was the introduction of the “Green Protocol” that releases available resources for agriculture, animal husbandry and forestry activities that can fulfill the requirements of Legal Forest Reservation maintenance. In collaboration with the Army, Air Force and the Federal Policy, IBAMA launched a large-scale operation in Amazon, the “Macauá Operation”, during 1997, which resulted in the apprehension of 533,000 m³ of illegally logged wood. Identical operations have been carried out annually during the dry season.

One of the measures defined by IBAMA to rationalized and regulate the exploitation of wood resources is a project to grant concessions that allow the extraction of wood through the sustainable management of National Forests (Project of Sustainable Management of National Forests). This project also foresees an increase of 30 millions of ha of the National Forests area allowing the sustainable exploitation of 1.3 millions ha/year, enough to meet the demand in the following 20 years, besides allowing the recuperation of forests. This project is receiving the financial support of the International Organization of Tropical Wood – ITTO, though some environmentalist sectors are against it.

7.2.5 Programs of Control to Burning for Agricultural Purposes and Forest Fires

Large-scale forest fires and burning that take place from June/July to October, specially in the so called Deforestation Arc (“Arco do Desflorestamento”), in the Amazon Basin, cause major environmental damages, such as patrimonial losses, health problems and environmental impacts due to the reduction of soil fertility, air pollution, destruction of vegetal coverage, increase of temperature, induction of natural calamities, death of animals, and car accidents.

The fight against forest fires and burning and illegal deforestation which can cause forest fires is carried out through three large programs of the Federal Government:

- a) National System of Prevention and Fight against Forest Fires – PREVFOGO;
- b) Program of Prevention and Control of Burning for Agricultural Purposes and Fight against Forest Fires in the Deforestation Arc – PROARCO; and

c) “Amazônia Fique Legal” Program.

7.2.6 Regional Development Plans

(1) Pará State Development Plan

The Pluriannual Plan 2000/2003 (PPA) of the State Government has the following guidelines:

- a. Develop without destroying;
- b. Construct the social peace;
- c. Reduce the regional inequalities.

The strategic macro objectives proposed by the State Government for four year are as follows:

- a. Reform and modernize the State;
- b. Improve the life quality; and
- c. Expand and diversify the productive basis.

The concept of this strategic objective encompasses actions in the economic ambit aiming at:

- a. Impeding the progress of the productive frontier in order to raise the soil utilization rate;
- b. Stimulating the formation of productive chains through the production verticalization; and
- c. Developing and diffusing alternative technologies for the rational exploitation of natural resources, promoting the modernization of productive technologies.

7.3 Programs/Projects for Recuperation of Degraded Areas

The Ministry of Environment strategy for the recuperation of areas in the Amazon region is oriented towards the support to projects and initiatives presented by governmental organizations or by representative organizations of the region civil society. This strategy is a way to oppose to the expansion of the agricultural frontier, developing a process of recuperation of areas which allows their re-incorporation to the regional economy.

The instrument which is being used is the Project of Recuperation of Altered Areas in the Amazon that integrates the Program Sustainable Amazon of the Secretariat of Amazon Coordination of the Ministry of Environment. This project has a total amount of R\$ 4.5 millions for the period 2000 to 2003, out of which R\$ 550 thousand are for the current fiscal year.

This Project actuation area is, preferably, the Deforestation Arc; the forest areas adjacent to the Arc; and the areas under the influence of the National Axes of Development defined by the Ministry of Planning. The Project also takes into consideration: 1) areas where the expansion of the Arc is a hazard; 2) areas under the hazard of grains intensive production expansion, mainly soybean; 3) areas with tendencies of economic expansion, caused by the migration of lumber-mills poles; 4) permanent preservation areas; and 5) legal reservation areas.

Besides this, the National Fund of Environment – FNMA – and the Demonstration Project Type A – PD/A, of the Ministry of Environment, finance projects oriented towards the

recuperation of degraded areas. Most of the demand of these two instruments is composed of agroforestry projects.

7.4 Environmental Legislation

7.4.1 General Aspects

According to the Brazilian Constitution, the Union, States, Federal District and Municipalities are obliged to protect the environment and to combat the pollution in any of its forms, to preserve forests, the fauna and the flora.

The main environmental laws and their objectives are described as follows.

- a. State Law no. 5887 – Has the objective of establishing measures, principles and instruments of action to preserve, conserve, protect and defend the natural environment, aiming at the social and economic development in harmony with the local and regional peculiarities. The law also promotes the development and diffusion of regional technologies oriented to the rational use of natural resources.
- b. Law 8974 – Defines that any construction or other activities that can cause environmental degradation can only be approved and executed after the analysis of their environmental impact. Controls the production, commercialization and employment of techniques, methods and substances that can jeopardize the life and environment quality. Also promotes the environmental education integrated to the education at the schools.

When exploiting the natural resources, the degraded environment shall be recuperated according to the technical solutions required by the concerning public organizations. Any person or institution responsible for deeds or activities that are considered harmful to the environment is subject to penalties and shall repair the damages.

7.4.2 Legislation

The Law 9393, of December 19 of 1996, concerning the Rural Territorial Property Tax – ITR, also deserves to be mentioned since contains some items that destroys the notion that the land with forests are unproductive and that deforestation itself is a melioration. Particularly, this law establishes for all the rural properties that the following areas are exempt from the tax: (1) areas of permanent preservation, i.e., areas protected in terms of the Law 4771/65, covered or not by native vegetation, with the environmental function of preserving the water resources, the landscape, the geological stability, the biodiversity, the genic flow of flora and fauna, to protect the soil, and to assure the welfare of human populations; (2) legal reservation areas, i.e., areas located inside a rural property or occupation, except the permanent preservation areas, necessary to the sustainable use of natural resources, to the conservation and recuperation of ecological processes, to the conservation of biodiversity, and to the shelter and protection of native fauna and flora; and (3) areas of ecological interest for the protection of ecosystems, so declared by a statement of a competent organization. Besides these, (4) only the areas considered useless for any type of agricultural, animal husbandry, fish farming, forestry or poultry exploitation are also exempt from this tax.

7.4.3 Forestry Code

The protection and use of forestry resources in Brazil are regulated by the Law 4.771 of September 15 of 1965 – The Brazilian Forestry Code. Despite been written long time ago, at that time it already contained advanced concepts such as the contents of its article 1st: “the existing forests in the national territory and the other forms of vegetation acknowledge as useful for the land that they covered are common interest goods for all the Country’s citizens...”.

Besides defining different typologies for the several areas categories, such as the permanent and legal reservation areas, and obliging the maintenance of 50% of Amazon properties as legal reservation, the Code forbids the empiric exploitation of Amazon basin primitive forests, allowing their utilization only upon technical plans of management established by a public power Act (Article 15).

The Forestry Code is also the basis for several regulation instruments such as Decrees, Acts, and Normative Instructions that discipline the exploitation, transport, management and commercialization of forest products and byproducts.

Due to the great progress of deforestation in the Amazon region, the Federal Government issued the Provisional Measure – MP 1.511, in September of 1996, restraining still more the utilization of the Brazilian tropical forests. Particularly, in regard to the item concerning to the minimum limit of the legal reservation areas of rural properties.

According the MP 1.511, the properties in Amazon in which the vegetal coverage is constituted of forests, the logging will only be allowed in up to 20% of the area. That is, the legal reservation area changed from 50% to 80% of the property. This measure aimed at not only reducing the forest areas with legal authorization for logging, but mainly not allowing that in the properties where the deforestation had already took place and in those where the deforested areas were under utilized or degraded, the deforestation expansion could continue. Through this measure, the intention is to legally stop the continuation of the vicious cycle of opening and abandonment of areas that is being part of the expansion process of the Amazon agricultural frontier.

Recently, this MP was analyzed by the National Congress, an as the result a substitutive was presented including, among other issues, the extinction of the established percentages of legal reservation areas. The reaction of the Brazilian society was very strong and negative, what obliged the National Council of Environment – CONAMA – to create an specific Technical Chamber to discuss the issue.

7.5 Related Organizations

7.5.1 Federal Organizations

In Brazil, the environment sector is ruled by the National System of Environment – SISNAMA, constituted by organizations and institutions of the Federal Government, States, Federal District and Municipalities, formed by the following structure:

(1) Ministry of Environment

The Ministry of Environment has the target of planning, coordinating, supervising and controlling the activities related to the environment national policy, including: 1) policy of preservation, conservation and sustainable utilization of ecosystems, biodiversity and forests; 2) economic and social strategies, mechanisms and instruments for the improvement of the environmental quality and of the sustainable use of natural resources; 3) policies for the integration of environment and production; and 4) environmental policies and programs for the Amazon and ecological-economic zoning.

(2) Brazilian Institute of Environment and Renewable Natural Resources – IBAMA

IBAMA is today an independent organization but connected to the Ministry of Environment, and has the objective of: 1) promotion of environmental policies of the federal government concerning to the protection, preservation and sustainable utilization of environmental resources; 2) assistance to the Ministry of Environment in regard to the promotion of water resources national policies; and 3) promotion of cooperative actions in accordance with the activities and guidelines of the Ministry of Environment.

(3) EMBRAPA – Brazilian Company of Agricultural Research

EMBRAPA is a federal public institution (State company), created in 1973, and under the jurisdiction of the Ministry of Agriculture and Supply. The research carried out by EMBRAPA target all the agricultural products produced in Brazil from bread and meat to milk and feijão beans. The institution performs the important role of providing appropriate solutions for the sustainable agricultural activity, through the creation, application and transference of knowledge and technology that can benefit the Brazilian society. Its activities include reforestation in degraded areas and improvement of degraded pastures, with due concern about natural resources and environment. Since its foundation in 1973, EMBRAPA has already developed more than 9,000 technologies recommended to the Brazilian agriculture and animal husbandry.

(4) National Institute of Colonization and Agrarian Reform (INCRA) – Ministry of Agrarian Development

INCRA was created in 1970, through the integration of IBRA – Brazilian Institute of Agrarian Reform – and the INDA – National Institute of Agricultural Development. The INCRA objective is to promote the agrarian reform, to develop settlement projects, to administrate the implemented settlements, to promote the organization of rural producers, and to implement the rural electrification, aiming at the economic and social development. The institute has 29 local offices installed in the whole Brazil, 2 in Pará – Belém and Marabá. The INCRA in Marabá is

responsible for the Pará State southeast region, including the Study Area. In 1998, INCRA was upgraded to the ministerial level.

7.5.2 State Organizations

(1) SECTAM – Executive Secretariat of Science, Technology and Environment

SECTAM is the State organization responsible for the coordination, execution and control of activities related to the scientific and technologic development and to the protection and conservation of the environment in Pará. It was created in May of 1988 by the Law no. 5457. However, SECTAM started to have a defined organization chart and to actually operate only in July of 1993. The upper management of SECTAM is carried out by two directorships: the Directorship of Science and Technology, and the Directorship of Environment. Several Coordination offices performing activities in the fields of Technical-Scientific Studies, Diffusion of Technologies, Support and Fostering of Productive Sectors, Licensing and Inspection, Environmental Protection and Projects Evaluation are subjected to these two Directorships. Among the SECTAM attributions, there is an incentive to the use of appropriate technologies for the sustainable development, associating the preservation of natural resources to the improvement of quality of life of the people.

(2) SAGRI – State Secretariat of Agriculture

SAGRI, as a State organization, coordinates the Pará State agricultural sector, with the objective of promoting the effective development of political leadership, of the socioeconomic aspect, and of the regional productivity, according to the federal and State policies. The main activities of this Secretariat are as follows: solution of the agricultural sector problems; improvement of the State methodology utilized in the agricultural development; the fostering of production, commercialization and supply of agricultural products, taking into consideration the problem of natural resources reduction; and the implementation of the administration system of agricultural activities in the State. Therefore, SAGRI is not the competent organization for the recuperation of degraded areas, although has the function of controlling the appearance of degraded areas from the view point of the agricultural activities.

(3) EMATER - Pará – Technical Assistance and Rural Extension Company

EMATER is the official organization of Technical Assistance and Rural Extension, rendering specialized services in the fields of agrarian and human sciences, spreading technological knowledge and information in the rural area of Pará State. Founded with the name of ACAR – Pará, in December 3, 1965, by determination of the State Government and through the joint efforts of the Secretariat of Production, the Brazilian Association of Credit and Rural Assistance, Bank of Amazon – BASA, Superintendency of the Amazon Economic Valorization Plan – SPVEA, Bank of Pará, Agronomy School of Amazon and Federal Authority of Agriculture, became through the Decree no. 9.958, of December 29 of 1976, the Pará State Technical Assistance and Rural Extension Company – EMATER-PARÁ, public company of private rights, connected to the State Secretariat of Agriculture.

EMATER has approximately 400 professionals (Agronomic Eng., Forestry Eng., Veterinarian Doctors, Agricultural Technicians, Social Workers, Pedagogy Professionals, Teachers, Economist Administrators, among others). Out of them, 68% have a post-graduation degree,

mainly in the fields of Rural Extension, Agricultural Engineer, Communal Organization, Political Economy, Communal Education, Environmental Education, Agricultural Economy, Development Planning, among others. The company has 110 municipal offices, 220 vehicles, 67 motorbikes and 8 ships, rendering services to approximately 100,000 rural families in the whole State.

(4) ITERPA – Land Institute of Pará

ITERPA was created in 1975 with the goal of coordinating the issues related to the land in the implementation of the Pará State agricultural policy. Its main activities are as follows: the definition of municipal boundaries, the demarkation of limits between the private properties and public areas, the solution of disputes for land caused by the illegal occupation, and the promotion of re-utilization of abandoned areas. ITERPA annual budget in 1999 was of R\$ 3.5 millions.