



EXECUTIVE SUMMARY

BERTIN'S SLAUGHTERHOUSE IN MARABÁ AND ITS CATTLE SUPPLY CHAIN

November 24, 2006

Executive Summary - ESIA of Bertin's Slaughterhouse in Marabá

The “Environmental and Social Impact Assessment of the Slaughterhouse of Marabá – PA and its supply chain”, summarized here in its main aspects and conclusions, has passed through three maturation phases as it progressed: acknowledging the comprehensive bibliography available from several competent organizations both national and international; understanding the local reality, by means of interviews with institutions that are participating of the cattle production chain densification in Southeast part of Paraná; and the assessments of production organizations of the Bertin Group, diversified with multi-plants throughout the different regions of the country.

Generally, there were followed the investigation lines of the Reference Term, prepared by IFC specialists, who suggested an emphasis on assessment of environmental and social impacts caused by the Slaughterhouse expansion, considering, however, its relationships with suppliers, whose properties are localized in Marabá and neighborhood counties.

With this enchaining, the report was organized in 9 Chapters and 42 Attachments, valuating the analysis oriented “from general toward particular”, in an attempt to understand the macro-processes occurring in regions of Amazon and Pará, and the role of cattle production as a structuring productive segment.

With this reference, there followed coadjutant analyses, so as to show the applicable legal apparatus, followed by evaluations of governance framework available in the state of Pará. Next, there has been imposed the knowledge of the object of evaluation, that is, the Slaughterhouse and its Suppliers, in both physical terms, with its facilities and extensions, and operational terms, with its cattle flows.

This knowledge accumulation allowed focusing the results necessary for providing the “baseline” of economic, social and biophysical means, with its specificities, more or less vulnerable in terms of main characteristics and evolution pace.

A special attention has been paid to primary and secondary data collection with the objective of qualifying the pressure on the cattle production basin for commercial operations of the Bertin Group. The analyses resulting from this information were transmitted to local and regional stakeholder groups that, with their demands, most of which legitimate, have enriched the conclusions for acting in due time and to take advantage from the opportunity of adding to the region an element of transformation that, if well conducted, may reach new patterns for cattle production activity. Simultaneously, it became necessary to forecast the future up to 2009 and 2014 (adopted temporal marks) that is, on when and how the present picture of cattle production would grow counting for that with the assumptions – composing a reinforced command and control panel – and quantitative hypotheses on the rhythm that is expected for the livestock growth.

This double-type results, present and future, provided a good basis for identifying and evaluating the impacts on the environment of the areas of influence, between the transition and operation phases.

Already in this phase, there could be determined the measures of control necessary for minimizing the adverse effects or, on the contrary, for proposing those for development.

These elements allowed us to set up a Plan for Environmental and Social Action, including the Environmental and Social Programs that may, if well monitored, gradually contribute to a Sustainable Cattle Production Model.

The balance between positive and negative potentials, so as the difference between the cattle production activity dynamics as a whole, and the marginal effect of the Slaughterhouse Bertin expansion, was present in the reasoning of the multi-discipline team that has performed the works, sometimes on field, sometimes in office, but always in a co-operative and synergic manner.

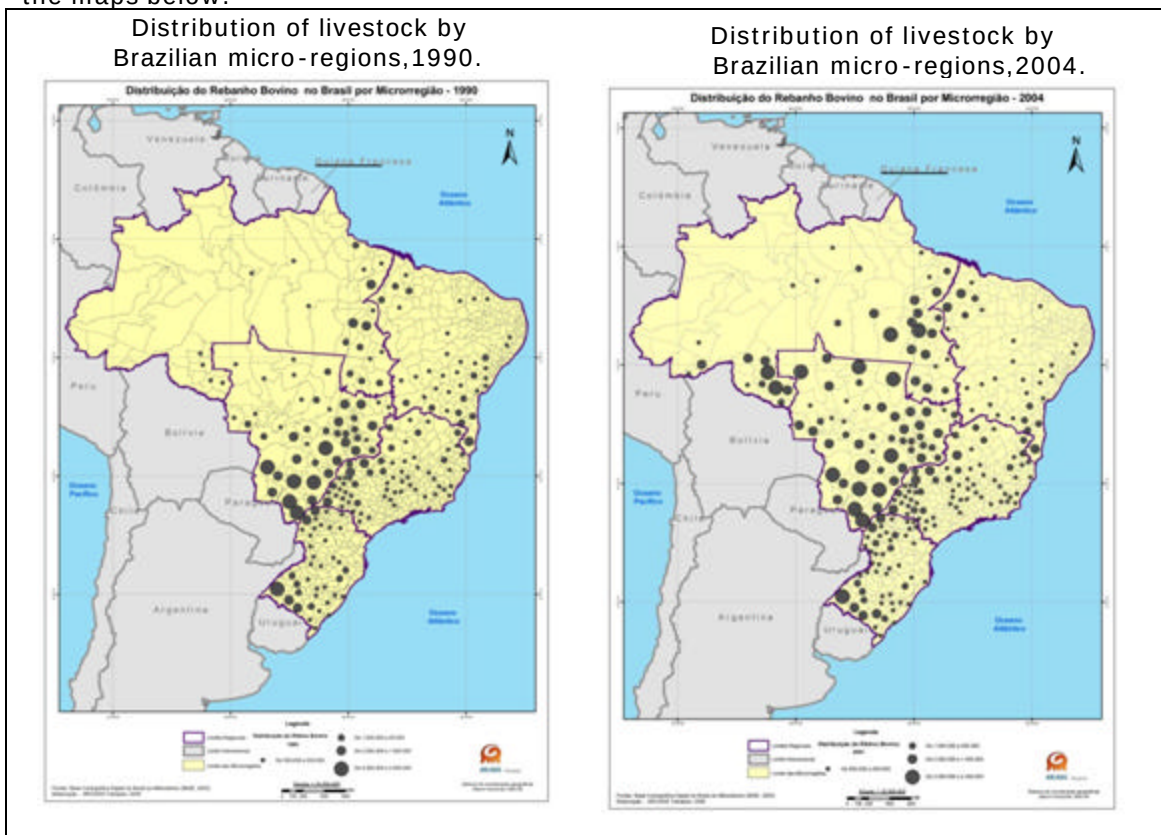
Within this same arrangement of ideas and results a concatenated analysis of said chapters is presented in an attempt to provide an executive summary right from the beginning of the report.

Deforestation and Cattle Production Consolidation in Amazon Region

Up to the middle 60's, the Amazon region presented low rates of human occupation and a reduced capacity of economic sustainability for farming activities, occasion when it started being perceived by the federal government as a solution for the country's social issues. Under State-guided policies, the Amazon region witnessed the construction of several huge infrastructures in addition to the introduction of several migration encouragement measures aiming its demographic occupation.

In the following decades, up to end of the 90's, occupation was intensified, resulting in conversion into farming activities of circa 600 thousand km² of forests, whose integration by means of land-appropriation in favor of private individuals was sometimes executed disregarding legal procedures, a problem still presently occurring in a significant way. Although the reasons accountable for deforestation of the Amazon region are many, among them predatory wood exploitation, agrarian reform settlements, mining activities, agriculture pressures and infrastructure improvements, during the 90's circa 80% of deforested areas were occupied with pasture (Piketty et. al., 2005).

Between 1990 and 2004, the livestock experienced expansion within the Legal Amazon region at a 7.4%-yearly rate, an expansion rate three times bigger than the observed for the Country as a whole, which was of about 2.4% (IBGE). The figures observed in the study indicate the direction of cattle production activities in the Country, clearly indicating a movement towards some States of the Legal Amazon region, as illustrated in the maps below.



Fonte: IBGE, PPM 1990 e 2004. Elaboração: ARCADIS Tetraplan

There is a number of reasons that explain introduction and expansion of cattle production activities in the Amazon region in general, and particularly in Pará's Southeastern region. Among such reasons we mention safe market operations and well-organized production chains, land low prices, efficient handling of pastures of *capim-braquiário* and high productivity of pastures as a result of mineralization of the forest's nutrients, availability of favorable credit-lines via "Fundo Constitucional do Norte – FNO" and low application rates of the forest code (Piketti et. al., 2005 e Arima et. al., 2005).

In addition to the strength of the cattle production activity, local advantages of structural nature are aggregated in a chain with slaughterhouses and other production activities, strong production relations being densified and thus forming production-chains.

The Current Debate

The Brazilian Amazon region, at the entrance of the 21st Century, is the object of a deepened debate regarding its future and development-model to be adopted, considering its potentialities and natural riches, as well as its local requirements and global functions.

In this debate, cattle production activity appears as one of its protagonists, once it is very intensified in regard to utilization of the territory. Considering that 80% of the Amazon region's deforested areas were occupied by pastures, whether the main reason for deforestation, whether taking advantage of areas deforested for other purposes, the cattle production activity assumes, directly or indirectly, significant responsibility for the degradation observed in the Amazon region.

If, on one side, the cattle production activity brings along a series of negative impacts, on the other side, it contributes for the generation of job positions and revenues for the territory's structuring. Such duality represents what is behind the current debate, where comprehension of all elements and variables involved is attempted in order to reach a solution which contemplates commitment for economic growth with maintenance of the environment, what is in a last analysis what is understood by sustained development. This solution is based in understanding what is at "stake" and what is gained and what is lost in any of the solutions adopted, that is, in understanding *trade-offs*.

The concept behind this study is that cattle production in the Amazon region and in referred Pará's specific region is an ongoing process presenting a dynamics of difficult reversion. It is therefore assumed that the solution for current conflicts and debates as well as for the future of cattle production activity in the Amazon regions consists in comprehending the existing values possible *trade-offs* that may occur.

Environmental and Social Legislation

Expansion of the cattle production activity on permanent basis, within the present context of the Amazon region, in which debate on its future performance has an increasing importance, depends a lot on observance and enforcement of the existing legislation. Thus, one of the core aspects of the study's discussion is the way, term and level of requirements for enforcement of the environmental legislation.

In the specific case of expansion of the Bertin Slaughterhouse in the City of Marabá and its related cattle production chain, legal aspects of major relevance are related to intervention and use of the territorial space and of its natural resources, under special protection given the nature of the enterprise and its location in the Amazon region, which in function of the biodiversity it shelters is qualified by the Federal Constitution as a national patrimony and thus, subject to specific regulation.

In this sense, specific legislation on Areas of Permanent Preservation (APP), Conservation Units (UC) and their absorbing zones (UCs surroundings) and ecologic corridors (which connect the Ucs), public forests, legal reserve areas – which in the Legal Amazon region correspond to 80% of the property or rural possession in forest areas and to 35% in scrubland areas – and regulations on hydric resources are applicable. The whole environment legislation for the region was analyzed in details in the study's final report.

From referred analysis, it can be assumed that the legislation aims to assure maintenance of relevant spaces and natural resources, in a way that interventions in specially protected areas dependent on effective local institutional actuation shall strengthen preservation of the environment, rendering as forecast able a scenario of economic development restricted to the consolidation zone defined in the Ecologic and Economic Macrozonning.

Therefore, applicability of the legislation in regard is extensive, enforceable in federal, State and local levels, and in differentiated restriction levels as foreseen in principles of environmental law. However, efficacy of legal instruments depends on effectivity of regulation and inspection actions by the Public Power and on articulation capacity of the civil society by means of non-governmental organizations actuating in the region.

The Foot-and-Mouth Disease Issue

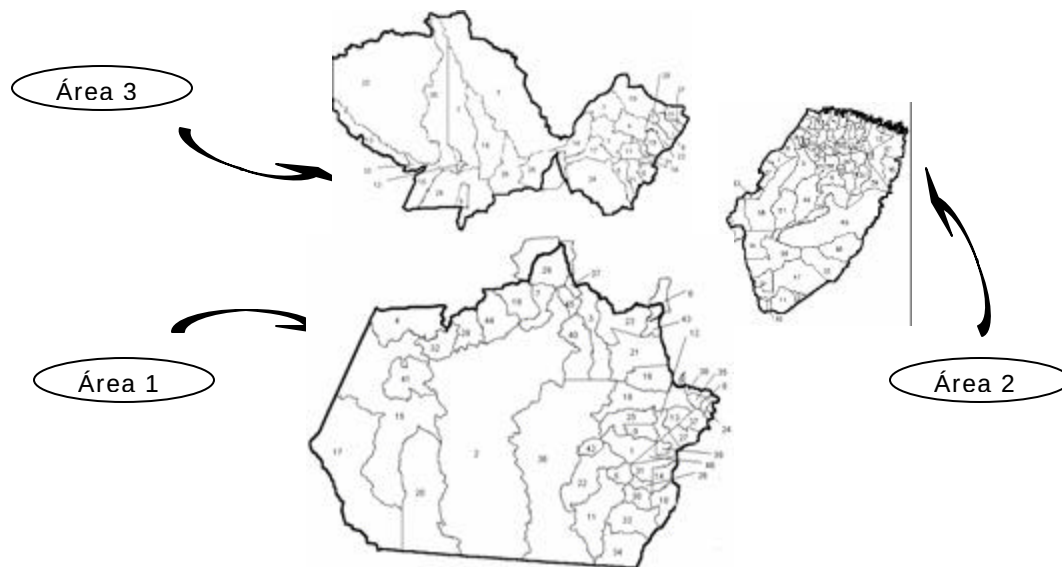
For compliance with national and international regulations, considering the trade flow of bovines and bubalines and the organization practices for bovine herds prevailing in the region, the State of Pará was divided in three geographic areas for the purpose of executing the National Plan for Eradication of the Foot-and-Mouth Disease – PNEFA, according to the map below.

The Area 1 represents the south-center region of the State of Pará being already recognized by the MAPA¹ as an unrestricted area, with permission to commercialize meat to other Brazilian States. The Brazilian government is presently requesting acknowledgement of this area by the OIE² as being an unrestricted area, upon compulsory vaccination, what shall enable producers of the region to export to more demanding countries. The report was remitted to the OIE in May 2006 and the final result of its analysis is foreseen for September 2006.

The areas 2 and 3 are respectively classified as being of Medium and High Risk regarding the Foot-and-Mouth disease.

Anyway, it may be affirmed that control of the foot-and-mouth disease in the region has an impressive impact upon its exportations figures, mainly regarding the Pará's Southeastern region.

Illustrative Map of Zones of Control of the Foot-and-Mouth Disease in Pará.



Bertin Group and the Slaughterhouse of Marabá

Bertin Group is a 100% national-capital holding company, which operates in the agro-industry, and infrastructure segments, next to complete a 30-year experience in the market. With its headquarters in the State of São Paulo, it owns 28 production units distributed all over the Country, where are working 20 thousand direct employees. With strong brands, which provide the user with an advancement in products and services, the corporation supplies the internal market and over 80 countries over the five continents.

In the agro-industry, the Bertin Group made a bet on total utilization of the cattle chain. Adopting a verticalizing strategy, the company operates an industrial conglomerate focused on nine business divisions: Agriculture and stock breeding, Food, Bio-diesel, Cosmetics, Leather, Pet Toys, Personal Protection Equipment, Hygiene and Cleaning and Industrial Hygiene. Regarding the infrastructure segment, the company operates in the areas of Civil Construction, Basic Sanitation, Energy and Transportation.

The food sector, the most representative one, is responsible for more than 22% of Brazilian bovine meat exportation, what assures the sector its current condition in the balance of trade as *major exporter in Brazil*.

The food division has seven industrial units, located in the States of São Paulo (Lins and Votuporanga), Mato Grosso do Sul (Naviraí), Minas Gerais (Ituiutaba), Goiás (Mozarlândia), Bahia (Itapetinga) and Pará (Marabá), slaughtering, on daily basis, an average of 6,000 thousand animals.

The plant in Marabá was acquired by the Group in the beginning of 2005 and its current operation counts with an installed slaughter capacity of 800 animals/day, maintaining commercial relations with circa 1,000 supplying farms. The expansion project foresees an enlargement of the slaughtercapacity to 1,600 animals/day.

Although not of the property of the Bertin Group, the farms which supply animals for slaughter are integrated into the slaughterhouse expansion. The Group has no deliberative authority upon referred establishments regarding the use and occupation of their spaces or appropriation of natural resources, but they are considered as being an integral part of the chain as they maintain sale and purchase relations under a determined rate of importance.

In terms of overall facilities, in addition to manufacturing farms there are included effluents-treatment systems and supporting infrastructure for utilities such as energy, water, and deployed motorways/roads.

Considering its location in the Amazon region, although in a highly-densified territorial portion, Bertin recognizes the strategic importance of establishing production and socio-environmental systems which could minimize the negative social and environmental impacts of its own operations as well as those of its suppliers in the relevant chain upon their influence areas. This concern represents the main objective of this project.

ENVIRONMENTAL LICENSE

In view of these characteristics the Slaughterhouse is in compliance with the required environmental licenses. The Operation License (No. 1402/05) for livestock slaughter activity and the Installation License (No. 0069/06) for expansion of the slaughterhouse and re-dimensioning of the effluent treatment station were issued by the Executive Secretary of Science, Technology and Environment of the Government of the State of Pará, being within their validity term.

Characteristics of the Water Supply and Liquid Effluents Treatment Systems

Regarding the water supply and treatment systems, the Bertin Slaughterhouse in Marabá has a natural lake as its supply source. During the period from June to December (dry season), it is necessary to fill it using hydric resources from the Tocantins River, collected by means of a depression. There are also three artesian wells for human consumption, bathrooms and commons.

Today, approximately 2,000 liters of water are used per slaughtered animal. This calculation corresponds to the water used by industry, comprising activities of animal and carcasses washing, as well as hygienizing of equipment and employees. A daily consumption around 3,200 m³ of water is estimated for the future situation.

The treatment used in this process consists of a *Compact Station for Treatment of Metallic Water*, operating under pressure, accelerated decantation, suspended sludge, comprising the following phases:

- *Hydraulic Dispersor*: ment for providing quick combination of chemicals with the gross water to be treated;
- *Floculator, Tubular Decanter Under Pressure*: intended for coagulation and flocks removal through the suspended sludge process;
- *Double-Action Sand Filter*: for filtration of water coming from the decanter;
- *Dosing of Chemicals*: there is used aluminum sulphate, alkali, sodium hypochloride and poly-electrolytes to promote separation of sedimentable and suspended solids, besides of eliminating possible contamination by the presence of bacteria, viruses and other pathogenic agents.

The current liquid effluent treatment system includes the following phases:

- Reception Box (equalization/pumping tank)
- Static Riddle
- Anaerobic Lake (Lakes 1, 2 and 3)
- Facultative Lake (Lake 4)
- Polishing Lake (Lake 5)

The effluents are sent to the Treatmet System through canals and pipelines, reaching the reception box that receives the green line and the red line, where the effluents are pumped to the static riddle and afterwards to the five existing lakes: Anaerobic (3),

Facultative (1) and Polishing (1). After the lakes, the effluents are launched into the Limão waterbank, at the Itacaiúnas River.

The future system operation will require permanent monitoring of the effluents' characteristics, what will allow the performance of necessary measures in case of non-compliance with water release standards required by law.

Expansion of the Slaughterhouse Physical Structure and Adjusting of the Treatment System

The Expansion Plan of the Bertin Group for its plant in Marabá consists of an increase of the slaughtering capacity, evolving gradually from 800 to 1,600 animals/day.

In terms of formal jobs, 1,023 employees are presently being absorbed, being 920 active and 103 removed for several reasons. During the expansion, it is foreseen the employment of 1,200 direct jobs, implying in 177 new employments. Such future hiring shall absorb local labor, embedding benefic effects for the region.

Due to the expansion, the current liquid effluents treatment station shall be re-dimensioned, being composed of two distinct treatment lines: one for solid residues existing in gross effluent, where they will be removed and separated by physical stages and thus treated, and other for residual waters, with solid residues already removed.

For the treatment of residual waters are foreseen:

- *Expansion of the Reception Boxes for Residual Waters*: stable inflow of effluents to be treated, thus avoiding flow variations and organic load;
- *Replacement of existing Static Riddles*: removal of existing solids, facilitating stabilization of the organic matter through subsequent biological processes, as well as preventing blockage of existing pumps and pipelines;
- *Construction of four Coagulators*: removal of oil and grease and of thin particles that eventually passed through the static riddles.
- *Deactivation of three Anaerobic lakes*: replacement of two biodigestors;
- *Construction of two Anaerobic Biodigestors*: the efficiency of organic matter removal will be above 75%; reduction of flies, because the generation of odors is diminished in a closed system; reduction of methane emission to the atmosphere, since the generated biogas will be burned. The lakes emit, in addition to CO₂, the methane, which has a greater impact on global heating than that of CO₂, comparatively; possibility of biogas use with economic added value.
- *Reform and expansion of two of the existing lakes*: the existing lakes, numbers 1, 2 and 3 will be replaced by two anaerobic biodigestors with 7.000 m³ each. Lakes 4 and 5 will be reformed and enlarged to capacities of 12,500 m³ and 14,020 m³, respectively.

The design of the future system presents important innovations against the current one, highlighting replacement of anaerobic lakes by a biodigestor system. The biodigestors allow draining and burning of gases produced in anaerobic digestion, implying in reduction the emission of odors and methane gas, therefore, lower impact in connection with odors and lower emission of greenhouse-effect gases.

Under this circumstances, the slaughterhouse will go through expansions in the sense of complying with the legislation and, more than that, adapting itself towards permanent improvements, with the aim of becoming economically, socially and environmentally adequate according to the required standards.

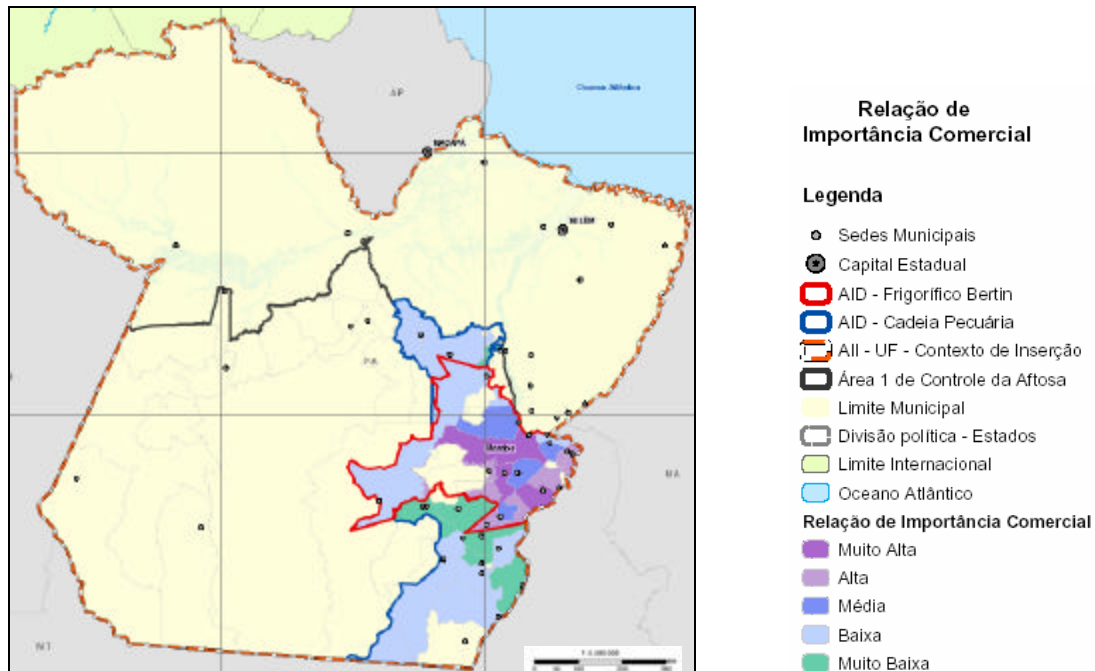
Slaughterhouse and the Associated Cattle Production Chain Influence Areas

Delimitation of the Enterprise Influence Areas

Usually, and as provided for in the legislation, areas of influence are delimited in three ambits – Indirect Influence Area (AII), Direct Influence Area (AID) and Directly Affected Area (ADA). Each one of these sub-spaces is subject to impacts during the enterprises's construction and operation phases, whether by direct or indirect causal relationships, and therefore its denomination, in addition to the ADA in which the very enterprise is located.

Delimitation of the influence areas of the study in question is quite peculiar, as it deals with expansion of a punctual enterprise, however, connected through relationships of direct dependence throughout a vast area in which are distributed the farms of suppliers of animals for slaughtering. Additionally, there are limitations of legal nature (such as the issues of areas that free from the foot-and-mouth disease) which end up interfering in their territory delimitation. Thus, the influence areas were delimited as follows:

Influence Área	Criteria
Directly Affected Area -ADA	The area in which the slaughterhouse and its extension area are located, in addition to its surroundings such as access means, neighborhood, use and occupation of the soil and waterway into which treated effluents are launched.
Direct Influence Area (AID) of the Slaughterhouse	- Maximum (economically feasible) distance of 250 km; - Optimized commercial relationship with the "Frigorífico Bertin", determined by the county's proportional participation in purchases of animals from the Frigorífico Bertin; - To be included in Area 1 of control of the foot-and-mouth disease and of the consolidation zone determined by the MZEE; - Location in the surroundings of Marabá, provided compliance with the previous criterion is observed; - Conservation Units and Indian Territory limits.
Direct Influence Area (AID) of the Cattle Production Chain	- Located within the consolidation zone of the MZEE and within the Area 1 for control of the foot-and-mouth disease; - Situated at the east side of the Indian Reserve called "Parque Indígena do Xingu"; - Situated outside the surroundings of Marabá; - Médium or low commercial relationship with Frigorífico Bertin.
Indirect Influence Area (AII)	The State of Pará as a whole, as it is indirectly affected by expansion of slaughterhouses in particular and by cattle production activities in general.



Those counties comprised in the AID area of the Cattle production Chain and the AID area of the “Frigorífico Bertin” present quite similar characteristics, where the cattle production chain appears as the main factor for structuring of the territory and contributing for the local economy. For the purposes of this study, the main difference they present is their participation in purchases from the Frigorífico Bertin. The 16 counties which compose the AID area of the Slaughterhouse supplied 86.8% of all cattle acquired by Bertin in 2005, whereas the 14 counties comprised in the AID area of the Cattle production Chain were accountable for only 13.2%. However, Bertin acquired only 2.9% of the herd existing in the counties of the AID area of the Slaughterhouse and only 0.6% of the herd existing in the counties of the AID area of the Cattle production Chain.

The main reason determining the slaughterhouse's purchase volumes in a certain county is its factual distance. From determined distance on, circa 250 km, purchase of cattle becomes little advantageous in function of transportation costs.

The enterprise's Direct Influence Area – considering both AID areas, that of the Slaughterhouse and the AID area of the Cattle production Chain – is a region with a high level of specialization in bovine husbandry activities, counting with one of the country's major herds and a well-implemented structure of freezing-chambers and slaughterhouses, what contributes for consolidation of the activity, responding for almost three-fourths of the State's total slaughter capacity.

As expectable, location logic of slaughterhouses in Pará follows the territorial distribution of the bovine herd. In addition to their strategic location in connection with costs for cattle transportation between the farms and the slaughterhouses, there is another comparative advantage against those freight-costs paid for shipment of freights abroad. In comparison with slaughterhouses located in the State of Rio Grande do Sul, for instance, exportations from Pará take 14 days less in their shipment term, implying in significant reduction of costs.

Thus, a physical capital is installed within the limits of the Oriental Amazon region, where location advantages are combined with several factors of economic nature, validated by the MZEE in Pará.

Present Scenario - Society, Environment and Economics

Understanding the region's present situation from the social, environmental and economic points of view, allows us to comprehend the manner by which expansion of the slaughtering capacity of the Frigorífico Bertin shall impact the economy, the population and the natural resources, among other aspects, providing subsidies for qualifying said impacts and proposing adequate control measures

Biophysical Environment

The southeastern region of the State of Pará, in general, and the AID area of the Cattle production Chain in particular, present favorable physical conditions for bovine husbandry. Although most terrains present hills and slopes usually of low declivity and the prevailing soils present problems in connection with availability of nutrients and susceptibility to erosions, implantation of pastures, and therefore cattle breeding, is feasible.

The rainy tropical weather favors cattle production, being characterized by average monthly temperatures above 18°C and by high pluviometer figures (circa 2,090 mm/year), prevailing precipitations of the convective type, that is, in the form of short-duration downpours. The rainy period extends from November to May and the dry season from June to October, maximum and minimum yearly average temperatures being of 31.7°C and 23.1°C respectively.

The AID area is formed by dense streambeds and is inserted in the Amazon and Tocantins-Araguaia hydrographic regions, at the confluence of 4 hydrographic basins. On its east side is inserted the hydrographic basin of the Xingu River, on its center-west portion is inserted the Tocantins River basin, a small portion of the AID's southwestern area is inserted in the Araguaia River basin and finally, at its northern portion, the AID area is part of the Pacajá River basin.

The region under study witnesses human population densification and therefore vegetal remains and relevant fauna species are generally restricted to legally protected areas. Regarding vegetation, the Amazon Biome prevails in the region, with the Scrublands – Amazon ecotones and the zoogeographical zone of the Amazon basin called Pará 2.

Among the criteria adopted for delimitation of the AID area, a natural/institutional barrier at its west portion can be observed, that is, areas under legal restrictions regarding use of the soil prevent their free occupation. Such legally protected areas, called Conservation Units (UCs) and Indian Lands (TIs), restrict, or at least difficult eventual expansion of pastures over said territories.

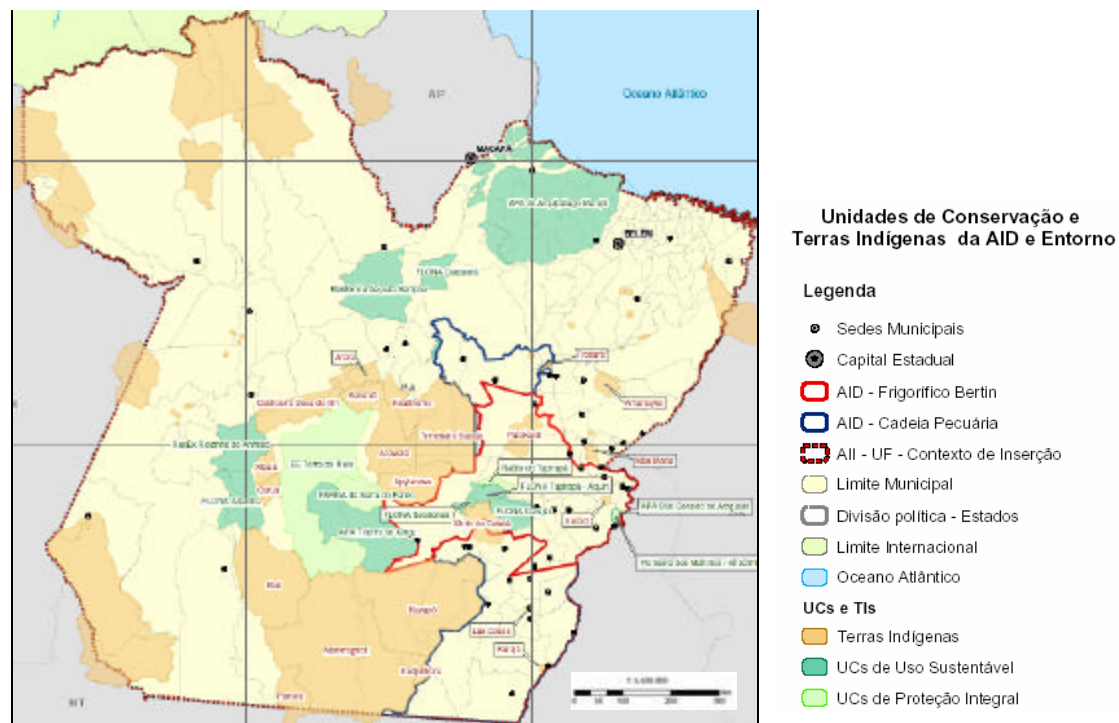
Within the considered AID area and its surroundings are located 7 Ucs, 4 being of Integral Protection and 3 of Sustainable Use, besides 7 TIs (see map below). It can be observed that despite the fragility of the region's institutional system, such areas present high levels of conservation, what in part evidences the effectiveness of the creation of said units for control of deforestation activities.

At the same time when the UCs and TIs are presently preserved, it can be noted that the Forest Code is not being observed in production areas of the study region's. Deforestation percentages, excluding legally protected areas in which no deforestation is taken for granted, reaches more than 80% of the territory in 10 out of the 16 counties under influence of the AID area of the Slaughterhouse. In some of them, such as in the counties of São Domingos do Araguaia and São Geraldo do Araguaia, such percentage exceeds 95% of the total territory. This means that in these counties average size of Legal Reserves corresponds to less than 20% of their area.

In this analysis, emphasis is made on two counties, namely São Félix do Xingu and Novo Repartimento (respectively, 35.0% and 37.3% of total deforested areas, excluding legally protected areas), being more susceptible to deforestation as they are part of the State's new frontiers and have great part of their territories covered by forests out of legal protection.

Thus, increase in the demand for animals for slaughter, mainly upon opening for external markets, shall press for increase of pasture areas in said counties. Therefore, eventual extension of deforestations in the north direction (Novo Repartimento) and west direction (São Félix do Xingu) are expected.

It is also expected that the MZEE in the State of Pará, under its current detailing phase, encompasses said specificities for a successful and well-ordered occupation of these territories, minimizing environmental losses resulting from the process.



Socioeconomic Environment

In a focused manner, an attempt was made in the sense of evaluating the relative economic importance of the counties comprised in the Direct Influence Area - AID and, in a linked manner, its impact upon demographic trends and condition of life of its inhabitants, based on secondary data and field surveys.

In general, in relative terms, comparing one county to the other, a small amount of dynamic centers prevails in the AID region, with a little bit more strengthened markets in the counties of Marabá and Parauapebas, in part due to mining activities, and a great number of counties with fragile and little articulated markets.

Little offer of job opportunities prevails in the region, resulting in its high level of informal activities and unequal income distribution. In this manner, eventual benefits from the

economic growth of another county, in occurring, are still absorbed in a slow and unequal manner among the population residing in the AID area counties.

In analyzing the living conditions of the relevant population, whether considering distribution of monetary revenues or supply of public services and assets, (non-monetary revenues), the conditions prevailing in the AID area are adverse. As a rule, they coincide with the area's demographic behavior, that is, the counties with a major growth are those with the best conditions of life in the range of the AID area.

The west-center portion of the AID area presents the best socioeconomic conditions, with a remarkable expansion of cattle production areas and reasonable socioeconomic standards, whereas the northern portion of the AID area also presents an average economic performance, concentrated in the cattle production chain, although presenting clear social needs as well. Referred needs are also encountered in the east portion of the AID area, in which the counties present quite fragile local markets, or subsistence markets, generally based on farming activities, reflecting more deficient social conditions.

In general terms, the social scenario is an intermediary situation, although characterized by the social exclusion prevailing in the whole State of Pará, what results in grave social problems related to disregard to human rights, notably rural violence, fraudulent landholding (grilagem) and practice of slave-labor in counties of this study, as follows.

Severest social issues: disregard to human rights – agrarian conflict and violence in rural areas and slave labor

The issues in connection with agrarian conflicts and violence in the State of Pará are directly related to land concentration, mostly related with fraudulent landholding (Grilagem), in a State with more than 30 million hectares in an irregular and/or illegal situation, where criminal practices such as extraction of natural resources and the expulsion of traditional, extractive, riverside, and indian populations can be observed. This scenario is worsened by the occurrence of slave-labor in several productive segments of the market.

It shall be also emphasized that in more isolated areas and regions of difficult access presence of public power is timid. In such regions, fraudulent land title holders (grileiros) in association with loggers and farmers constitute important local players, in a scenario which favors impunity on behalf of maintaining power and economic accumulations, directly related to the violence issue.

In the last decades, Brazilian and international labor Unions, the International Labor Organization – OIT and also the Brazilian Government have denounced the existence of workers submitted to forced work in several sectors of the economy, in several regions of Brazil.

In order to face the situation, The Ministry of Labor and Employment – MTE has created, in December 2004 the Employers Cadastre, which is indeed a roll of transgressors, known as the “Dirty List”³. The purpose of the Dirty List is to inform the society on the names of employers who maintained workers under conditions analogous to slavery, so public institutions and society can pursue the applicable measures in their respective scope of competence.

In the last survey conducted by the MTE on 05/18/2006, the “Dirty List” amounted to 133 rural employers, with highlight to the State of Pará with 40% of these occurrences.

³Published periodically at: <http://www.mte.gov.br.lista>

An analysis of the “Dirty List” shows that the cattle production activity is related to 50% of the slave-labor cases in Brazil and to 52% of the cases in the State of Pará, occurring in all counties of the AID area under study.

For such reason, Pará is one of the main targets of the National Plan for Eradication of Slave Labor, which foresees specific actions on behalf of the State, such as creation of General-Attorney offices in the counties of São Félix do Xingu, Xinguara, Conceição do Araguaia and Redenção, and installation of Federal and State Public Defenderships in counties of the State of Pará, among others.

Approval of the Constitutional Amendment Proposal (PEC) No. 438/2001 is foreseen for a short-term, providing for expropriation of lands in which workers are submitted to working conditions analogous to that of slavery, and the Law Project No. 2022/1996 which prevents formalization of contracts with organs and entities of the public administration and participation in biddings promoted by referred entities for those companies which, directly or indirectly, promote slave-labor for production of their goods and services.

On the other side, it shall be emphasized that on 07/21/2006 the Union’s Official Diary published the decree which instituted the Interministerial Commission for Combating the Rural Violence – CNVC. The target-public of its actions shall be rural owners and workers, riverside populations, remainder *quilombo* settlers, and populations affected by dams.

The CNVC was created by the Ministries of Agrarian Development, of Justice and Environment, and by the Special Secretariat for Human Rights with the purpose of preventing, fighting and reducing rural violence, executing the “National Plan for Combat to Rural Violence”.

The land issue

Concerning the reality in the State of Pará, a great number of data inconsistencies among the relevant organs, associated to lack of control and inspection in land demarcations favor lack of transparency and corruption in processes of estate regularization. In practical terms, the single system for land registration or even data exchange among organs (INCRA and Federal Revenue, for instance) does not exist or is quite precarious, giving chance to corruption, mainly at real-estate register offices.

In this context, *grilagem* is the acquisition of property possession or ownership through illicit means, with adulteration of documents and employment of violence. This process involves, in great majority of cases, the action and consent of landowners, loggers, cattle breeders, real-estate speculators, politicians, corporations and public organs.

Despite the initiatives of the Public Power for investigating and trying to discover irregularities, studies and statistical data show that the North region is responsible for more than half of fraudulent landholding in the Country.

The Interministerial Parliamentary Commission (CPI) of the Chamber of Deputies, of 2002, shows that from the more than 124 million hectares of the State of Pará, only 40 million hectares, circa 32.0% of the total area, are officially registered in the National System of Rural Enrollment (SNCR), against almost 68.0% in irregular condition. From the registered areas, some 24 million hectares are located in 26 thousand properties and the remaining (16 million ha.) are located in 84,124 possessions. This totals 111 thousand registered realties, whereas approximately 100 thousand (90% of total registrations) have areas up to 500 hectares and hold 7.3 million hectares, corresponding to 18% of the registered area. Concomitantly, 5,414 possessions (6% of the total) with areas above 500 hectares, hold more than 10 million hectares, that is, circa 25% of the total of registered areas, with concentration on properties between 2 and 5 hectares. INCRA has cancelled the register of at least 20.8 million hectares divided among 422 farms in Pará.

Most relevant aspects related to *grilagem* of land identified in studies and also based on data from the Ministry of the Agrarian Development refer to:

(i) superposition of fraudulently owned lands (*terras griladas*) one over the other; (ii) superposition of fraudulently owned areas over public lands, forest and Indian reserves; (iii) "fictitious" *grilagens*, consisting in the use of false documentation on fictitious lands in financial transactions; (iv) fraudulently owned land in areas that are inadequate for agrarian reform settlements and (v) inconsistencies in the INCRA's Rural Real-Estate Cadastre.

From the socioeconomic point of view, the denunciation of land conflicts and *grilagem* involves slave-labor, expulsion of Indian communities and settlers from their legally granted land and murders. Statistical data show that Pará has the highest rate of murders related to agrarian conflicts, which are not investigated.

The irregular process of land occupation is generally initiated by forest exploitation for illegal timber extraction, a practice that occurs in the region for more than 40 years. Removal of the vegetal cover gives place to pastures for cattle breeding. Increase in cattle production activities, on its turn, causes devastation of the forest and illegal sale of wood, completing the cycle.

Some actions of the State on the land issue imply in: (i) ecological-economic zoning as a tool for supporting the formulation of public policies and decreasing the rural conflicts; (ii) Federal law for Control of Public Forests, of 2006, which aims to protect traditional communities and protected areas; (iii) the "Pará - Plan", which articulates State policies on land regularization while executing geo-referencing, by means of which INCRA intends to identify and delimitate, on a definitive basis, lands of the Union in Pará, mapping irregularities and regulating occupations of public areas.

As to the attempts of INCRA in updating and regularizing its Cadastre, the filings relate that conflicts of interests between land-control organs, real-estate registry offices and landowners, in addition to inefficiency of the administrative machine, prevent any initiative intended to enforce the pertinent legislation and efficacy of control and inspection mechanisms.

Characteristics of the AID Area as a Result of the Field Survey

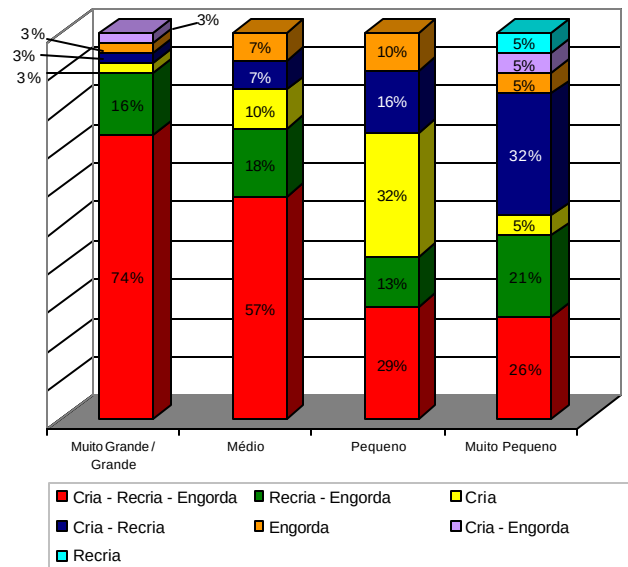
The field survey was conducted with application of 144 questionnaires to owners, administrators or land-lessees, with the purpose of determining the area's main characteristics and indicators of the region's cattle production system.

By means of said questionnaires, migration in the region was identified as being quite notable. From the total interviewed, 29.5% are natural from the State of Minas Gerais, 18.1% from Goiás, 12.5% from do Maranhão, 7.6% from Tocantins and the remaining 33.3% are from several other States, prevailing their northeastern origin. On the other side, only 4.2% of the interviewed are from the State of Pará.

According to the survey's results, there is a prevailing of registered workers (32%),

followed by croppers, daily workers or job workers (together, totaling 24.6%). The answers indicate possible commitment of some basic rights, such as social welfare and severance pay. Considering the production activity performed, 76% of the interviewed dedicate to cattle production activities, evidencing consolidation and importance of cattle production as an important economic activity in the region. There is still a prevalence of beef industry breeding against dairy farming, representing 53% and 23% of the total, respectively.

Dairy farming is concentrated among small and very small producers, which usually join together in milk cooperatives or produce for subsistence purposes, where 40% of small producers and 26% of very small producers affirmed to dedicate to dairy farming. The large and very large producers, on the other hand, have practically no dairy activities (10%) in their properties, although this figure increases among average producers (23%).



Slaughter Cattle Breeding Activity

According to the field survey, most producers (51%) perform the complete production cycle, that is, they dedicate to breeding, re-breeding and fattening of their animals. This means they rarely acquire calves from other producers, producing in their own property the cattle for slaughtering. Thus, the higher the percentage of complete-cycle production, the lower the chance of occurring trade of animals between farms and between municipalities.

Producers who perform only the breeding and/or re-breeding constitute 23% of the total of interviewed, who sell their calves to third parties for fattening and selling for slaughter, that is, between these producers there must be a trade beyond the limits of their properties. For comparison purposes, producers who stated that they exclusively re-breed and/or fatten animals amount to 23% of the interviewed.

Percent participation of the breeding and re-breeding system increases with the decreasing of property size, that is, calves produced at small and very small properties are usually sold to medium-size and large producers for re-breeding and fattening, what is strictly related with low number of small producers among the suppliers of the Frigorífico Bertin.

There is a prevalence of animals of the nelore breed (50%) among producers of all sizes. Hybrid animals correspond to 35% of the local livestock and, although also utilized for the beef industry, these breeds are not specialized for slaughter cattle breeding. Usually, hybrid cattle for slaughtering constitutes a sub-product of dairy farming, that is, are animals discharged from dairy farming or Male animals acquired for re-breeding or fattening by medium-size/large and very large producers, due to their lower cost when compared with cattle of nelore breed.



In general, it can be observed that the cattle production in the region does not employ high technologies and the technology degree increases with increase of the producer's size. Therefore, mainly among medium-size, large and very large producers, there is a possibility for implementing handling techniques which increase cattle production as a result of zootechnical indexes improvement.

Also as a result of the survey, it was observed that some 90% of the grass types mentioned are improved species, characteristic of pastures with potential for intensification. Among them, highlight is made to *Braquiária brizantha* (35%) and the Mombaça Grass (26%), species with high potential of productivity.

Additionally, there is a predominance of large pickets, varying in the average between 20 and 60 ha, regardless the size of the producer, what indicates extensive handling of pastures, and therefore, may infer that there is sufficient space in the region for increasing the herd by improving the pastures handling, with no need for occurring new deforestations.

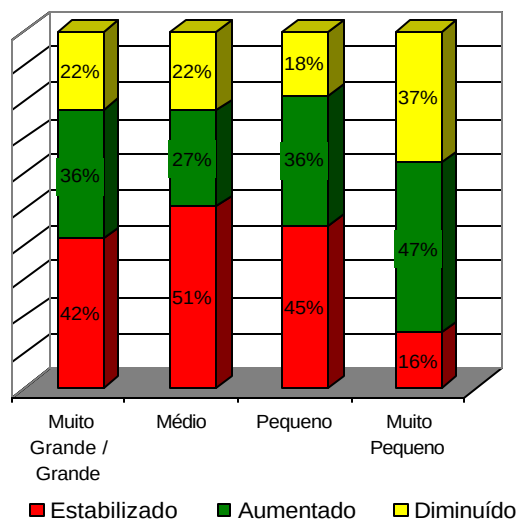
Despite the apparent prevalence of extensive systems for pasture handling, 79% of the interviewed stated that they reform their pastures, although still with low technology levels. The application of calcareous rocks, phosphate or manuring is more frequent among very large and large producers, even though with a very reduced utilization rate.

As to burnings, it is worth mentioning that its usage as a means of pasture maintenance does not reach 10% of the properties, exception made to small producers, which in 20% of the cases utilize this system.

In regard to evolution of livestock, the majority of interviewed, except the very small producers, state they have stabilized their livestock, reflecting that these producers have reached the capacity of supporting their properties and are no longer conducting deforestations, or because there are no forest areas left or because they intend to reserve their areas of legal reserve and/or APPs, or, yet, because of fear of Public Agencies inspections with environmental attributions.

The percentage of producers who have stated having increased their livestock is still high, of 47% order for very small producers, 36% for large/very large producers and small producers, and 27% for medium-size producers, what explains the high rates of livestock growth observed in the region during the last years.

Among the interviewed producers, 85% answered that a rise in the price of the *arroba* (15 kg) or an increase in sales volumes would lead them to increase the size of their livestock, whereas 55% would increase the size of their livestock within their own properties, predominantly by means of recovery of pastures, while 39% said they would purchase new areas, giving preference to already deforested areas, and only 6% of the producers stated they would acquire forest areas.



Animal Purchase and Sale Relationships

In general, trade relations occur within the very county, what may reflect high transportation costs, precarious road conditions and excessive supply of animals in the region, among other reasons.

As for purchase of animals, it is worth mentioning that such transactions rarely occur outside the surveyed counties and when they occur, are normally established between neighboring counties. Sales, on the contrary, occur more frequently in other counties, and further, in other States of Brazil. This occurs due to the fact that in said sales of animals are also included sales of animals for slaughter, the region being the State's major production center, although not a huge consumption center.

In addition, the region is characterized as a supply market of animals for slaughter, as the nominal installed slaughter capacity is insufficient for absorbing the offer. Thus, it becomes necessary to sell animals for slaughtering in other locations, such as States of northeastern region of Brazilian and other counties in Pará.

This analysis corroborates average and maximum distances determined for displacements of purchase and sale of animals. Purchases, usually related to acquisition of animals for re-breeding and fattening, are transacted within an average range of 86-km and within a maximum range of 400-km. As for sales distances, as they include sales of animals for slaughter in other counties and States, the distances reach a 3.000-km range, the average distance being of 530 km.

The Slaughterhouse and its Surroundings – Directly Affected Area

Analysis of the directly affected area by operations of the “Frigorífico Bertin” – at its Marabá plant – considers two main fronts, namely:

- i) Analysis of use and occupation of the soil, restricted to an approximate 4 km range from the enterprise's center, what embodies any eventual direct impact operation or expansion of the enterprise may cause.
- ii) Analysis of the Tocantins/Araguaia Hydrographic Region, more specifically, Hydrographic Sub-Basin of the Tocantins River, which may be eventually affected by release of effluents by the Frigorífico Bertin.

Use and Occupation of the Soil

The Frigorífico Bertin is located on the PA-150 Highway, at a distance of 2.09 km from the urban zone and at 1.8 km from the Itacaiunas River. Regarding its main access means, the region is served by the PA-150 Highway and the “Rodovia Transamazônica” motorway, located 2.38 km far, besides unpaved roads..

The surrounding area under study presents quite diversified landscape situations, resulting from different human activities and vegetal formations. There exist pasture areas, vegetation recovery areas, rain forests, besides of industrial (cast iron) and urban nuclei, and mainly commercial areas.

Natural remainders are located along fluvial lowlands, that is, rain -forests along the lakes bordering the Itacaiunas River and also in a primary forest area along the PA-150 Highway.

In general, there is a predominance of rural areas (pastures) in addition to vegetation basically constituted by *capoeiras*, river-side forrest and typical vegetation of frequently

flooded areas. The rural area is characterized by presence of medium and small size properties, basically oriented to cattle production activities (milk or meat).

It is important to mention the presence of the local sanitary landfill in the surroundings of the Slaughterhouse (not under due environmental control) and of a clandestine slaughterhouse on the Rodovia Transamazônica highway, respectively located at 3.23 and 2.29 km far from the Slaughterhouse and at 2.45 and 0.48 km from the urban zone, which may be affecting the environmental conditions as to air pollution, water pollution among others.

Effluents recipient sub-basin

According to the Brazilian Institute of Geography and Statistics – IBGE, the region under study integrates the Tocantins/Araguaia Hydrographic Region, more specifically, it pertains to the Tocantins River Hydrographic Sub-Basin, with a total draining area of 967,059 km², representing 11% of the national territory and 20.8% of the State of Pará.

The county of Marabá, specifically the Frigorífico Bertin, has as its recipient body the Igarapé Limão Brook, tributary of the Itacaiúnas River, which flows into the Tocantins River after circa 7 km.

Social Participation Process

As previously stated, the social participation process was one of the structuring components of the study, aiming to catch the perceptions of the different stakeholders involved, in an attempt to assure democratic and legitimate mechanisms in decision-making processes and construction of alignments and agreements.

In this sense, presencial participation activities were developed during the project's main stages, understood and configuring the “Series of Public Consultations” – decentralized meetings and seminars held in Marabá and in selected counties of the surroundings.

The specific objective was to inform and hear from the different audiences related to the Slaughterhouse and its associated cattle production chain, under the following directions:

- Listening – obtaining information and recommendations;
- Constructing agreements and/or alignments, and still,
- Sharing the results with groups of interest directly related to the Project.

It will be emphasized that a consensus of opinions was not necessarily intended, but rather the search for elements on perspectives and challenges for implementing in the southeast region of the State of Pará a sustainable cattle production model and, mainly, identifying among the positioning subsidies for inter-institutional articulations.

Among the many existing participative planning methodologies, option was made for the participative action-survey. Action-surveys, according to Thiollent (1985), “are a type of social surveys with an empiric base which conceived is conceived and conducted in straight relation with an action or a collective problem-solving and in which researchers and participants who are the situation's or problem's representatives are involved in a collaborative or participative manner”.

In this sense, ARCADIS Tetraplan, with agreement of the Grupo Bertin and of the IFC, conceived the accomplishment of the “Series of Public Consultations” in 3 (three) successive phases, as presented below:

Phase1: Opening Seminar

The first phase occurred on 04/11/2006 with the Opening Seminar “Model of Sustainable Cattle Production – Perspectives and Challenges for implementing a Sustainable Model of Cattle production in the Southeastern Region of Pará”, at the auditorium of the UFPA – Universidade Federal do Pará, and which counted with the participation of 51 persons, representatives of several governmental entities, such as the Secretary of Production – SEPROD, SEAGRI, EMBRAPA, Banco da Amazônia, ADEPARA, IBAMA - Marabá, Municipal Secretary of Health, among others. And additionally, of non-governmental entities such as the IMAZON, Municipal Council for the Environment, Labor Union of Rural Producers, FUNDEPEC, FAEPA, among others. Effective participation of the participants took place in the Seminar’s discussions with an impressive demonstration of interest in collaborating with the works development.

Phase 2: Decentralized Focus group Meetings

Considering the regions’ specific characteristics and the need of spreading discussions on the project to other counties besides that where the enterprise has its headquarters, and further, due to the survey-participative action methodology, the technique of focal groups was adopted for conducting this second phase.

The focal-groups technique presupposes formation of directioned discussion groups, which aim to produce information on specific themes from composition of a set of selected entities. The criterion for selection of group participants is determined by the study’s objectives (WARD et. al., 1991).

Focal groups were selected according to suggestions of local organizations, specifically, FETAGRI – Federation of Workers in Agriculture of Southeast of Pará – and COPSERVIÇOS – Cooperative of Execution of Services – and also of the very Grupo Bertin.

The focal meetings occurred during the month of May, in the following counties: Eldorado dos Carajás, Parauapebas, São Domingos do Araguaia, Itupiranga, Marabá and Belém.

It shall be mentioned that the meetings were of extreme importance for the establishment of initial parameters for relationships of the Grupo Bertin with social organizations, local leaderships, players of the cattle production chain, families, rural workers and local community, being possible to apprehend expectancies, difficulties and suggestions from these agents in connection with the project proposed by the Group.

PHASE 3: CONCLUSION SEMINAR ON THE SERIES OF PUBLIC CONSULTATIONS

The third phase occurred on 07/06/2006 with the “Seminar for Presentation of the Results on the Series of Public Consultations”, at the Hotel Vale do Tocantins in Marabá/PA and which counted with participation of 56 persons, representatives of several governmental entities, Brazilian Institute of Environment and Renewable Natural Resources – IBAMA; Universidade Federal do Pará – UFPA; Farming Defense Agency in the State of Pará – ADEPARÁ; Conselho Municipal Council for the Environment – Marabá; Municipal Secretary of Health – Marabá; Federation of the Agriculture of the State of Pará - FAEPA; CREA – PA; Municipal Committee for Animal Sanity – COMUSA; Labor Union of Rural Workers of Marabá; Rural producers of the region; COPSERVIÇOS – Cooperative for Execution of Services; TORTUGA, Trainner Human Resources; Labor Safety and Medicine – SESMT; TV Record and TV Bandeirantes, among others.

The Seminar was conducted with presentation of the results obtained during the phases I and II and subsequently with an oriented group-dynamics debate. Contributions and subsidies on part of the participants were systematized, some of them being incorporated to programs of the Socio-environmental Action Plan.

These results compose a current framework of the prevailing thoughts among the stakeholders, from which participative monitoring may continue in the sense of comprehending their evolution and new demands.

Additionally, in view of the complexity of institutional relations in the southeastern region of Pará, in addition to subsidies from the previously described phases, a series of field surveys were performed with the purpose of identifying which entities have direct and/or indirect responsibility, political, administrative, economic and social influence in the region. Posteriorly, an attempt was made for selecting those governmental and non-governmental institutions whose actuation is important in privileged issues of the present study, with special attention paid to deforestation and social issues such as forced labor, land regularization and the squatting issue. Sense of the analysis was searching a means of judging or appraising the “institutional strength” of these entities towards guidance on these issues.

Active Institutional Matrix

Institutional relations articulated in the State of Pará are of an enormous complexity, a territorial space where one of the most important environmental reserves of the planet is located, and regarding social aspects, marked by conflicts for possession of land, practice of labor-work and illegal and predatory exploration of natural resources. In this context of serious problems related to environmental and land issues, agribusiness being identified as one of the intensifiers of such process, the Grupo Bertin shall establish distinct strategies for articulation with the State, including local Public Power, as well as with organizations of the civil society, always in the sense of optimizing its actions in favor of the local governance.

On its turn, ARCADIS Tetraplan considers that regarding institutional conditions for implementation of a sustainable cattle production, as determined in the Projeto Bertin, that:

- i) Fragility of institutions in Pará is still persistent, whether for the institutional capacity aspect as for their structural condition; the State is demonstrating an attempt to assume responsibility for the territorial ordering and control on the State's natural resources, while effectively fighting violation of human rights on its several aspects;
- ii) The existence of a significant number of non-governmental organizations and social movements with impressive local actuation, and in great part, with national and international articulation, what shall be understood as potentiating elements for a better governance towards sustainability.

This occurs due to the fact that a significant subgroup of such entities has a propositional character, and from their criticism, denounces and propositions the State is driven towards more effective actions, in some cases with partnerships established with the Public Power. At the same time, partnerships with private entities are made available for implementation of sustainability projects with minimization of socio-environmental impacts, adoption of new technical-scientific production parameters, or yet, more specifically, actions for inclusion of more fragile segments of the cattle production chain, such as family rural workers.

The Impacts

The impacts resulting from the extension of Frigorífico Bertin were evaluated in the light of determined scenarios, and mainly bearing in mind the duality faced in the study, highlighted many times in the report due to its importance .

In considering the impacts, special attention was paid to detaching those impacts resulting from cattle production activity from those generated or potentialized by expansion of the Frigorífico Bertin. There are impacts that are clearly generated by expansion of the slaughterhouse.

Others, however, are the result of the cattle production chain functioning. That is, they are the result of the ensemble of slaughterhouses, producers, markets, and etc. In these, Frigorífico Bertin in isolation represents very little or almost nothing, but in combination with the other agents its participation shall be noted. Therefore, for these impacts, marginal contribution of extension of Frigorífico Bertin to the current processes shall be evaluated.

Although mitigation or enhancement measures have been suggested for all foreseen impacts, it is quite important paying attention to measures regarding impacts of the cattle production chain to which the Frigorífico Bertin contributes exclusively on marginal basis. These measures are considered as being of great importance as they affect not only those impacts restricted to the activities of the Frigorífico Bertin, but also for acting upon undesirable impacts of the cattle production activity in the region. Such measures may have a demonstrative effect on behavioral change of vital importance for the region.

Impacts were evaluated according to their attributes, magnitude and solving-rates of proposed measures, as synthesized in the table below. Combination of these three variables provides the impact's relevance-rate.

Atributos	
• Nature	 POSITIVE  NEGATIVE
• Probability	P - PROBABLE C - CERTAIN
• Spatiality	L – LOCALIZED D - DISPERSE
• Term	➔ SHORT ➔ AVERAGE ➔ LONG
• Form of interference	FN – NEW FACT I – INTENSIFIER
• Duration	P – PERMANENT T – TEMPORARY
Magnitude	
• Qualitative measurement	 POOR  MÉAVERAG  HIGH
Measur Resolution	
• High resolution	 POSITIVE IMPACTS  NEGATIVE IMPACTS
• Average resolution	 POSITIVE IMPACTS  NEGATIVE IMPACTS
• Low resolution IMPACTS	 POSITIVE IMPACTS  NEGATIVE IMPACTS

The table below presents the final balance of all positive and negative impacts, whereas the following tables illustrate all impacts foreseen with expansion of the capacity of slaughter of Frigorífico Bertin and their respective attributes.



Balanço dos Impactos Ambientais

PHASE	NATURE		RELEVANCE DEGREE		
			HIGH	AVERAGE	LOW
OPERATIONS ON TRANSITION PHASES AND AFTER EXTENSION	POSITIVE	SOCIOECONOMIC	●	●●●●●●●●	●●
		BIOPHYSICAL	-	-	●
	NEGATIVE	SOCIOECONOMIC	-	●●	●●
		BIOPHYSICAL	-	●●●	●●●●●●●●



AVALIAÇÃO DE IMPACTOS SOCIOAMBIENTAIS NA ADA

IMPACTOS PREVISTOS	ATRIBUTOS						MAGNITUDE			MEDIDAS DE CONTROLE			GRAU DE RESOLUÇÃO	
	NATUREZA	OCORRÊNCIA		ESPAÇIALIDADE	FORMA INTERFERÊNCIA	DURAÇÃO	INDICADOR	QUANTITATIVO	QUALITATIVO	DESCRIÇÃO	GRAU DE RESOLUÇÃO			
		PROBABILIDADE	PRAZO											
1. Meio Físico e Biótico														
A) Ar														
Odor (operação do sistema de tratamento de efluentes)		C	→	L	I	p				M	Elaboração de plano de obras que priorize redução dos tempos de intervenção	A	----->	B
Poliuição do ar, poeira (material particulado) no transporte do material removido das lagoas antigas para compostagem		C	→	L	I	t				M		M		M
Poliuição do ar (Poeira, NOx, HC), no transporte para compostagem		C	→	L	I	t	indicadores de padrão de qualidade do ar			M	Umectação de vias de tráfego Manutenção veicular Planejamento das rotas Redução dos tempos de intervenção	M	----->	M
B) Solo														
Reciclagem de nutrientes e melhoria da estrutura do solo pela aplicação do composto		C	→	L	I	p	qualidade do solo			P	Identificação de áreas prioritárias para aplicação do composto Aplicar critérios ambientais evitando contaminação de recursos hídricos Promover programa de capacitação para proprietários rurais que eventualmente receberão este composto	M	----->	B
Poliuição do solo na área de compostagem pelo vazamento de líquidos percolados		P	→	L	I	t	qualidade do solo			M	Elaboração de projeto da área de compostagem	A	----->	B
Poliuição do solo por aplicação do composto		P	→	L	I	t	produtividade			M	Identificação de áreas prioritárias para aplicação do composto Aplicar critérios ambientais evitando contaminação de recursos hídricos Promover programa de capacitação para proprietários rurais que eventualmente receberão este composto	M	----->	M
C) Recursos Hídricos														
Poliuição de águas superficiais (Rio Itacaíunas) por lançamento de poluentes		P	→	L	I	p	qualidade das águas do Rio Itacaíunas			M	Elaboração de plano de intervenção que reduza interferência no sistema de tratamento Elaboração de plano de monitoramento do sistema de tratamento durante as obras	A	----->	B
Poliuição do lençol freático por infiltração de poluentes no solo		P	→	L	I	p	qualidade do lençol freático			M	Elaboração de monitoramento do lençol freático	A	----->	B
Contaminação de águas superficiais do igarapé Limão pelo lançamento de poluentes		C	→	L	I	p	qualidade das águas do igarapé Limão			M	Elaboração de estudo de autodepuração do igarapé do Limão Monitoramento do sistema do igarapé e efluentes tratados	A	----->	B

ATRIBUTOS			
NATUREZA		ESPACIALIDADE	
N	NEGATIVO	L	LOCALIZADO
P	POSITIVO	D	DISPERSO
PROBABILIDADE		FORMA DE INTERFER.	
C	CERTO	FN	FATO NOVO
P	PROVÁVEL	I	INTENSIFICADOR
PRAZO		DURAÇÃO	
→	CURTO	t	TEMPORÁRIO
→→	MÉDIO	p	PERMANENTE
→→→	LONGO		

MAGNITUDE	
PEQUENA	
MÉDIA	
GRANDE	

GRAU DE RESOLUÇÃO	
BAIXO	
MÉDIO	
ALTO	

GRAU DE RELEVÂNCIA	
BAIXA	
MÉDIA	
ALTA	

Guidelines for Sound Agricultural Practices

As a means for minimizing pressures of the cattle production activity upon the Amazon ecosystem, guidelines on sound agricultural practices were established in order to assure Frigorífico Bertin that its suppliers adopt practices that are socially and environmentally sound.

The Sound Agricultural Practices Program – GAP constitutes a quality management system intended to improve the standard of products of the food industry.

This Protocol must be observed by producers who in meeting the foreseen requirements may request certification of their production process. There are currently some Protocols of Sound Agricultural Practices, such as the EUREPGAP – IFA and ABM, considered as behavior codes and already adopted for certification processes.

With the aim of meeting particularities of Pará's south and southeastern regions, having in mind cattle production activities and the international agreement regarding the GAP Protocols mentioned above, they were adapted considering the region's most vulnerable aspects and the need of complying with Environmental and Labor legislations in force in the Country.

From the GAP-PA Program, a Certification Process may be implemented in which the properties go through a yearly conformity inspection/audit regarding compliance with the Protocol, and then receiving the *status* of "Certified Property" or "Approved Property" for supplying animals for abate at the Frigorífico Bertin in Marabá.

The certification process is voluntary, whereas producers interested in having their property certified shall request such certification with entities duly authorized by the MAPA.

A three-level Certification System is foreseen, varying in accordance to the rate of fulfillment of the GAP-PA Protocol requirements.

The certificate shall be issued and approved by the certification body with a 1-year validity. Yearly audit for certification renewal includes checking fulfillment of all GAP requirements and constitutes an important monitoring instrument. Referred audit must always result in a Certification Report containing evaluation on the property in regard to compliance with good production practices, as well as recommendations on future compliance with pending requirements.

PROPOSAL FOR ANIMAL ORIGIN IDENTIFICATION

Rural producers who compose the chain associated with the Frigorífico Bertin may breed their own animals (complete cycle) or purchase them for re-breeding and fattening from other properties, thus creating an indirect supply-chain of animals for the Bertin.

From the assumption that this indirect chain may cause negative social and environmental impacts, simple ways of assuring that the animals slaughtered by the Frigorífico Bertin in Marabá have their origin known from birth on, assuring that in all of their production phases, they have been in properties that comply with the Environmental and Labor Legislation in force in the Country.

One of the feasible manners of assuring the origin of the animals is the use of Bovine and Bubaline Production Chain Trackability Service – SISBOV, accepted and recognized internationally. In this sense, the new rule included in Normative Instruction IN No. 17, which foresees traceability of properties and not only of animals, restricting the trade between properties approved by the SISBOV, is the instrument that assures follow-up of the animal origin by tracking the production cycle.

For this reason traceability is one of the main aspects in the GAP Certification process.

Pilot Experiment

With the aim of evaluating the degree of difficulty for compliance with the GAP-PA Program and the new requirements from SISBOV, so as their weak points, a Pilot Experiment is being conducted in properties of the region

All participant properties have their land situation regularized (definitive title to the land), and are not included in the “Dirty List”, that is, have no relationship with any labor issues regarding forced , degrading and unhealthy labor.

Properties do not necessarily have environmental regularity. In this sense, a Term of Conduct Adjustment (TAC) will be requested, subscribed with Public Organs with environmental attributions, for recovery of the APPs and Legal Reserve within a pre-determined term.

The Pilot Experiment comprehends several phases, going from (i) selection of participant properties, (ii) phases corresponding to implementation/preparation of the property for the GAP-PA Program, which includes technical manpower specialization training and new standards from SISBOV, up to (iii) certification of the property that meets the Protocol requirements.

Certification comprehends an audit for evaluating the grade of fulfillment of the GAP standards in the property, whether it is qualified or not for certification granting. The Program’s maintenance will occur by means of yearly inspection/audits conducted by authorized auditors, and training/recycling courses for producers and rural workers with the purpose of their compliance with the Protocol’s and the SISBOV patterns, besides a greater reliability on information supplied by rural producers.

The purpose is that during a determined period of time, the GAP-PA Program assures that that every animal slaughtered in Marabá plant can have its origin known since its birth, in addition to other information such as alimentary handling received.

Scenarios and Projections

With the purpose of evaluating impacts caused by expansion of the Grupo Bertin, focus was made in analyzing the factors that influenced recent evolution of the cattle production activity in the region, as well as main determinants of the activity that may be projected for a close future. Thus, scenarios were created for average term – 2009 –, occasion on which the Frigorífico Bertin will be operating with its enlarged capacity, and for long-term – 2014 – when improvement of techniques of pasture and livestock handling are expected to be implemented, in a way that growth of livestock occurs due to improvements of average occupation rates and of general zootechnic indexes are stabilized in vegetative figures

Main factors considered in the scope of this work, which may be determinant for future evolution of the cattle production activity in Pará and, specially, at its southeastern portion, are:

- I. Release for exportation of meat produced in the southeast region of Pará - Foot-and-Mouth Disease Free Zone.
- II. Gradual improvement of transport infrastructure.

III. Increase of world demand for meat – expansion of markets in China and India, and outbreaks of the “mad-cow disease” in Europe and North America.

I. Maintenance of the livestock growth in Pará, in a way that Pará shall become the major producer of bovine cattle in Brazil.

II. Pressure of the agriculture upon Brazil's Center-West region

III. Entering into effect of Kyoto Protocol, what may stimulate sugarcane plantation increase and to convert pasture areas into sugarcane plantations.

IV. The meeting of environmental regulations will be partial, although more rigorous than in current situation.

V. Gradual strengthening of regulatory instruments – expansion of protected areas network and implementation of environmental legislation.

VI. Increasing public and political will at National and State levels, in order to diminish the negative effects of uncontrolled deforestation in the State.

VII. Improvement of the land situation and establishment of a real-estate market in lands with embedded infrastructure.

VIII. Decrease in deforestation by means of creation and control of protected areas by the Federal Government.

IX. “Sound Agrarian Practices” Certifications of properties, including traceability of animals.

X. External pressures for preventing deforestation in the Amazon region.

XI. Increasing role of international financial institutions when considering social and environmental criteria for loan granting.

XII. Market structuring, including service and industry improvements, contributing to break typical behaviors of frontier regions.

It is considered that all these presuppositions, with lesser or greater intensity and in a combined manner, outline the future picture of the region under concern, and provide a base for some quantitative-nature conjectures.

Construction of the Scenarios

Two scenarios were traced for growth of cattle production activities with the purpose of forecasting eventual impacts that expansion of the Frigorífico Bertin may cause in the region. In that sense, several concepts, quantitative measurements and projections were adopted.

The first concept analyzed was the supportive capacity, understood as the maximum limit of cattle that the territory can hold in view of the livestock handling techniques employed and pastures, that is, in view of maximum physical capacity rates. According to all suppositions made along this chapter, two supportive capacity values were adopted, one considering the area already deforested and another considering the total AID area, excluding the UCs and TIs areas, whose values were of 13.15 million animals and 19.56 million animals, respectively.

Growth of the livestock was projected considering that in terms of processes, figures are currently on an ascendant pace of the evolution curve, practically at its maximum limit. It is believed that even with the release for exportation, growth dynamics tend to decrease, that is, the livestock will keep on growing, however, with decreasing rates.

In this way, two possible growth scenarios were outlined:

⁴ Source: Margulis, S. 2004. *Causes of deforestation in the Brazilian Amazon*. Banco Mundial. Washington, D.C.

1. Continuous linear growth, at decreasing rates, according to the historic evolution between 1990 and 2003,

2. Continuous linear growth at rates below the aforesaid rates, determined by the current size of the livestock and supportive capacity of the AID area, without further deforestation, considering it shall be reached in the year 2014.

Given these projections, current and future (projected) offer of animals for slaughtering with the installed capacity of slaughter were compared, as well as current and future capacities after the expansion of Frigorífico Bertin. The main results obtained with the quantitative exercise are presented in the table below.

	2005 – Present situation	Begin of 2009	
	Scenario 2	Scenario 1	Scenario 2
Livestock	9.972.219	12.076.823	11.032.805
Offer of animals for slaughtering(one-year period)	2.493.055	3.019.206	2.758.201
Offer of animals for slaughtering (per day)	7.991	9.677	8.840
Capacity of slaughter of Bertin (one-year period)	249.600	499.200	499.200
Capacity of absorption of Bertin	10,0%	15,6%	18,1%
Total capacity of slaughter (one-year period)	1.716.000	1.965.600	1.965.600
Offer surplus (one-year period)	777.055	1.053.606	792.601
Offer surplus (per day)	2.491	3.377	2.540
% surplus (surplus/total offer)	31,2%	34,9%	28,7%

Considering there is an offer surplus for the demand of the 9 slaughterhouses installed in the region, attempt has been made for qualifying this surplus. It is worth mentioning that the said surplus is related exclusively to the 9 slaughterhouses installed in the region and that the animals not acquired by the same are commercialized by other means, most part of them being exported live or, slaughtered in clandestine slaughterhouses.

In general, major slaughterhouses acquire better quality cattle, the lower quality cattle being commercialized through these alternative means.

Despite limitations resulting from lack of data, an exercise was conducted for estimating the quality of the offer for 2009 in two distinct situations, for each one of the sketched scenarios: the first, considering medium-size, large and very large producers holding 70% of the livestock, and the second, considering them holding 80% of the livestock. Results are shown in the table below.

Qualification of the offer of animals in scenarios 1 and 2, beginning of 2009.

	Scenario 1		Scenario 2	
	Medium-size, big and very big producers with 70 % of livestock	Medium-size, big and very big producers with 80 % of livestock	Medium-size, big and very big producers with 70 % of livestock	Medium-size, big and very big producers with 80 % of livestock
Total livestock	12.076.823	12.076.823	11.032.805	11.032.805
Higher quality livestock	8.979.722	9.410.260	8.203.442	8.596.762
Lower quality livestock	3.097.101	2.666.563	2.829.363	2.436.043
Availability for slaughter of higher quality livestock (day)	7.195	7.540	6.573	6.888
Availability for slaughter of lower quality cattle (day)	2.482	2.137	2.268	1.952
Total availability of cattle for slaughter (day)	9.677	9.677	8.840	8.840

Preparing: ARCADIS Tetraplan

In this exercise, it can be assumed that in 2009, when Frigorífico Bertin should be operating under its extended capacity, there will a surplus in the offer of higher quality animals, since the other slaughterhouses do not increase their capacities and there will be no more slaughterhouses to be installed in the region.

In these scenarios, it is believed that Frigorífico Bertin in Marabá expansion is feasible without bringing new deforestation sights, provided that the control measures proposed in this study are implemented

Main arguments in support to this supposition are the existence of a surplus in the offer of cattle in the region and the possibility of improvements of zootechnical indexes, mainly those related to pasture handling techniques, what allows an increase in productivity and, consequently, a larger livestock the same area. Further, it is believed that there is room for implementing of control measures without incurring in very high additional cost for the Slaughterhouse, as well as for producers.

In this scenario, control measures (mitigation, compensation and monitoring of adverse impacts and potentiation/development of foreseen benefits) proposed in this work possibly assume greater relevance for the region rather than for the slaughterhouse, strictly speaking.

Plan of Environmental and Social Action - ESASP

The mission of Grupo Bertin is to add value to, promote development and strengthen relationships with the diverse audiences – customers, suppliers, partners, investors, press, public agencies, collaborators and the community.

Considering that the operation in Marabá are quite recent, there is being prepared a proposal for inserting this unit in the Group's Global Environmental and Social Management System – SGAS, and at the same time strengthening it by intensifying the environmental and social focus. It is also assumed that results of the ESIA presented herein will subsidize its structuring, extending it to the Group as a whole.

Without exhausting all components of the SGAS in Marabá, some aspects may already be listed:

MISSION – HEALTH AND LABOR SAFETY (To assure Health maintenance and Physical Integrity of Collaborators of Empresas Bertin Ltda., as well as Prevention of Accidents and Environmental Preservation)	LTCAT – Technical Report on Work Place Conditions	
	PPRA – Program for Prevention of Environmental Risks	
	PCMSO – Occupational Health Medic Control Program	
	PGR – Program for Risks Control	
Control Instructions And Environmental and Social Management of Normative Nature, which define Internal Procedures of the Company	A) Environmental Management:	• PGR – Plan of Risks Management • PAE – Plan of Emergency Actions • PCA – Plan of Environmental Control
	B) Social Management:	• Social Responsibility Policy • ((Conduct Code – Bertin Ltda)
Instructions for Operational Management	• BPF – Boas Práticas de Fabricação	
	• PPHO – Procedimentos Padrões de Higiene Operacional	
	• APCC – Analise de Perigos e Pontos Críticos de Controle	

SOCIAL-ENVIRONMENTAL PROGRAMS – ESAP

Identification of the impacts caused by extension of the Slaughterhouse and their ranking according to their relevance rate, allow checking the main social-environmental issues that expansion of the Slaughterhouse may cause, some of them acting upon processes already inexorable in the region. In this sense, the dual of these more relevant impacts are transformed in goals to be achieved by an ensemble of social and environmental programs.

As it can be observed, all impacts of a direct or indirect nature were addressed with some type of treatment, whether in the sense of reducing, neutralizing or monitoring them, whether in that sense of potentializing beneficial situations that the enterprise may bring along.

The Objectives and Means Graphic shows the inter-relation between impacts and actions (subprograms) integrants of the 6 Social-environmental Programs. Subsequently, application of this instrument is presented, showing the cause-effect relationship between the programs and their measures.

This structure of objectives and sub-objectives is the unfolding of a Strategic Vision oriented to three main slopes:

Adequate Social-environmental Production System, that is, considering the chain as a whole, with its issues regarding the area of influence of the Slaughterhouse, therefore including differentiated treatment to suppliers;

- *Educational*, towards new attitude of suppliers, employees and the society in general, in the relation with the environment; and,
- *Institutional*, in an attempt to improve governance, considering the strengthening of a body for command and control of appropriation of natural resources, with emphasis on deforestation, sound work conditions and land regularization.

Against the diverse environmental impacts, whether as positive or negative manifestations, mitigation, compensation and monitoring measures were proposed (denominated control measures), as well as potentializing measures, providing ground for formatting the Social and Environmental Programs which will structure the Social-Environmental Action Plan (ESAP).

REFORMULATION OF CATTLE PURCHASE PROCEDURE PROGRAM	
OBJECTIVE	
- Assuring a Commercial Roll for the Slaughterhouse in a way to provide a Roll of Suppliers duly regularized; - Acquiring animals for abate based on criteria of suppliers licensing and purchase contracts, thus promoting legality of such commercial relations; and Assuring adequate use of the environmental resources in the supplying properties, as well as their evolution in terms of recovery of degraded areas.	
TARGET-PUBLIC	Directed to rural producers suppliers of animals to the Frigorífico Bertin in Marabá, circa 615 at the current situation.
Sub-programs	
SUB-PROGRAM 1 – INITIAL REGISTRATION OF FARMS Preparing of the Environmental and Commercial Registration Form (FCAC); Register of the Farms by their Priority Order.	
SUB-PROGRAM 2 – Cattle Purchase Procedure Establishing of criteria which could allow or prevent licensing, even if temporarily; Analysis of the Roll according to established criteria; Orientation to producers; Licensing of Farms; Development of a Registration Information System; Purchase of cattle according to licensing criteria; Monitoring of fulfillment of licensing criteria.	
SUB-PROGRAM 3 – EVALUATION AND MONITORING OF ENVIRONMENTAL PERFORMANCE Formulating of an Environmental Performance Monitoring System for Registered Properties; Monitoring of Registered Properties by means of Satellite Images.	

ENTREPRENEURIAL SOCIAL RESPONSIBILITY PROGRAM	
OBJECTIVE	
Development of practices that insert the business in a wider context of social commitments, either at local or regional levels, promoting interaction of Grupo Bertin with the context in which it is inserted and the strengthening of processes and public and private actions intended to promote a better condition of life and progress of the society.	
TARGET PUBLIC	Local and regional communities, with special attention paid to family farmers, employees, customers and suppliers, community leaderships and organization of the civil society, active Institutions in formation of the public opinion (Churches, Labor Unions, Associations, Press; Rádio, TV).
SUB-PROGRAMS	
SUB-PROGRAM 1 – CONTRIBUTION FOR TECHNICAL ENABLING OF FAMILY FARMERS Contribution for strengthening and promoting diversification of the local economy within the parameters presented by the local partners, given comprehension of the importance of such diversification for the enterprise as well.	
SUB-PROGRAM 2 – CONTRIBUTION FOR MARKET-ACCESS TO SMALL PRODUCERS Contribution for strengthening family farming with actions for increasing commercialization of products with their origin in rural settlement projects.	



SUB-PROGRAM 3 – SUPPORT TO ERADICATION OF SLAVE-WORK

Adoption of practices in support to national campaigns and local combat to slave-labor.

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SUB-PROGRAM 4 – PREPARING OF SOCIAL BALANCE OF THE GRUPO BERTIN

Elaboration and divulgation of the Social Balance as a management tool for consolidation of a entrepreneurial culture which privileges transparency and allows the society knowing and valorizing the efforts of the Grupo Bertin, in the sense of conciliating economic success with positive results from the social and environmental points of view.

SOCIAL AND ENVIRONMENTAL COMMUNICATION PROGRAM

OBJECTIVE

To provide development of knowledge on the enterprise, its social-economic and environmental interferences and their respective treatment, in a way to inform the groups of interest on actions of the Grupo Bertin, in the scope of its responsibilities. At the same time, by means of mechanisms of social participation, - present field approach -, encourage a participative process comprising several sectors of the society, in the sense of hearing the contributions and subsidies from the local community.

TARGET-PUBLIC

Employees of the company; Players of the cattle production chain:
Small, average and large rural producers; Family Farmers;
Governmental Sector; Community leaderships and organizations of the civil society, such as associations and NGOs which manifest interest in similar subjects; Active Institutions in formation of the public-opinion (Churches, Labor Unions, Associations, Press; Radio, TV); Local community directly affected by the enterprise.

SUB-PROGRAMS

SUB-PROGRAM1 – Social Participation in the Development of the Social-Environmental Communication Program

Creation and habilitation of the Program's Local Coordination Team; Determination of Schedules and Procedures for Conduction of Permanent Public Consultations.

SUB-PROGRAM 2 – Creation of the Social-Environmental Communication Center

Installation of a central spot (presencial, via phone and internet), where any citizen shall be able to obtain information on the company and the project, as well as providing suggestions and criticisms.

SUB-PROGRAM 3 – Periodic Articulation between BERTIN and the Local Press

Articulation and Structuring of Inserts of the Social-Environmental Program in the local and regional press.

ENVIRONMENTAL EDUCATION PROGRAM

OBJECTIVE

Contributing for awareness bearing in mind recovery and conservation of the region's natural resources, improvement of the environmental conditions and quality of life of the local population.



TARGET-PUBLIC	Regarding qualification courses, the target-public shall be understood as the employees and suppliers of the Frigorífico Bertin who shall participate in the environmental education foreseen activities. The program intends to encompass all professionals from the administrative and technical areas, including managers. Regarding the target-public of events open to the community, the purpose shall be gathering private and public companies, NGOs, settlers associations, Rural Labor Unions, farmers and breeders, religious and cultural entities, in addition to other public segments intervenient in the region, potentially representing leaderships and opinion-makers.
FORESEEN ACTIONS	
Structuring qualification courses for:	
employees of the Frigorífico Bertin in Marabá	
▪ suppliers of the Frigorífico Bertin in Marabá	
Promotion of events open to the local community	
Permanent evaluation of the environmental education activities	

LIMNOLOGY AND WATER QUALITY MONITORING PROGRAM	
OBJECTIVE	
To follow up the conditions of waterways in the area of influence of the Frigorífico Bertin, what shall allow for preventive and corrective strategic decision-making for preservation of the aquatic system under study.	
SUB-PROGRAMS	
SUB-PROGRAM 1 – Assembly of a Baseline for Water Quality Monitoring	
To consolidate, from an initial evaluation campaign, of the establishment of water-quality monitoring actions.	
SUB-PROGRAM 2 – Assembly of a Baseline for Limnologic Monitoring	
To consolidate, from an initial evaluation campaign, of the establishment of limnologic monitoring actions.	
SUB-PROGRAM 3 – Limnologic and Water-Quality Monitoring	
Strategy definition, including sampling chain, for the set of parameters to be analyzed and collection frequency.	
Partnership with the Prefecture Municipal de Marabá – “Projeto Reviver” of the Itacaiúnas river.	

ENVIRONMENTAL AUDIT PROGRAM	
OBJECTIVE	
Environmental audits are a powerful control tool for evaluation of the environmental performance of a construction, an enterprise or a program, in a given moment, that is, it is the social-environmental picture of a project in a determined phase.	
The audit's objective is to contribute for permanent improvement of the social-environmental control at the Slaughterhouse in Marabá. Audits shall evaluate if the commitments assumed and defined beside the competent environmental organs are being observed, for eventual pursue of remedies.	
TARGET-PUBLIC	Employees of the company and Directors of the Slaughterhouse
FORESEEN ACTIONS	
Follow-up of the expansion of constructions at the Slaughterhouse.	
Follow-up of the licensing processes.	
Follow-up of implementation of the Social-Environmental Control System - ESMS, with emphasis on Social-Environmental Programs – ESAP.	



CORPORATE ACTION PLAN

FOR BERTIN'S INSTALLATIONS
THROUGHOUT BRAZIL

November 20, 2006

BERTIN: CORPORATE ACTION PLAN

November 20, 2006

[illegible]

BERTIN: CORPORATE ACTION PLAN
November 20, 2006

B.	Bertin's Pollution Prevention and Abatement Plan (PPAP) a) Bertin shall implement a PPAP in form and according to a schedule acceptable to IFC.	(a) Implementation according to schedule (see Annex A)
C.	Enhancement of Bertin's Corporate Social Responsibility (CSR) plans and actions - Setting up a Management Structure for CSR a) Hire or appoint a Social Development Specialist to coordinate the CSR area. b) Carry out a diagnostic and evaluation of Bertin's CSR actions, current and past; identify the best structure, including its legal status, to carry out Social Investment actions; elaborate a CSR/Social Investment Plan, including targets (short and long term) and projected administration and expenditures budget. c) Establish the structure outlined in the previous item - Carry out CSR/Social Investment Plan, monitor and report d) Implement CSR/Social Investment Plan e) Monitor and evaluate results of the CSR/Social Investment Plan including reporting results achieved. Use the "balanço social" standard developed by the Brazilian Institute of Social and Economic Analysis (IBASE) and the Global Reporting Initiative (GRI).	(a) Condition of First Disbursement: (b) Commitment plus 6 months (c) Commitment plus 8 months (d) Report through the AMR (e) Report through the AMR

BERTIN: CORPORATE ACTION PLAN
November 20, 2006

D.	Implementation of Bertin's Public Consultation and Disclosure Plan (PCDP) a) Implement the PCDP according to schedule agreed with IFC (Annex B)	(a) Reporting through the AMR (See Annex B)
E.	Implementation of Bertin's Indigenous Peoples' Development Plan (IPDP) for Sacre 2 Power Plant a) Complete implementation of the IPDP for Sacre 2 according to schedule b) Apply PS 7 IFC Guideline for interactions with Indigenous People that may arise from any activities carried out by Bertin.	a) Reporting through the AMR (See Annex C) b) Reporting through the AMR
F.	Enhancement of Bertin's Labor and Working Conditions Policy a) Full compliance with Brazilian National Law concerning disabled people (Law N° 7.853, of October 24, 1989) b) Review Bertin's Human Resources policies and staff profile in light of IFC's Guidance Note on Non-Discrimination Equal Opportunities and submit review report to include recommendations to ensure future compliance with the PS2.	a) By submission of first AMR b) By submission of first AMR
G.	Environmental and Social Action Plan (ESAP) for the Marabá Slaughterhouse Bertin agrees to implement the ESAP for the Marabá Slaughterhouse, according to Annex C timetable.	Implementation according to schedule (See Annex D)

- Annexes:
- A. Pollution Prevention and Abatement Plan
 - B. Public Consultation and Disclosure Plan
 - C. Indigenous Peoples' Development Plan
 - D. Environmental and Social Action Plan for Marabá



PPRP

POLLUTION PREVENTION OR REDUCTION PROGRAM

2006

BERTIN LTDA

THE COMPANY		
NAME	-	Bertin Ltda
ACTIVITY	-	Slaughterhouse / Tanning / Hygiene and Cleaning / EPI / Dog Toy
SITE	-	www.bertin.com.br

INTRODUCTION
The Pollution Prevention or Reduction Program – PPRP of Bertin Enterprises, aims the reduction or even elimination in volume, concentration and toxicity of the pollutants at the source of origin, through actions and a process of a steady improvement.
PROGRAM PLANNING

G O A L S	BASIC DOCUMENT Create an Environmental Policy for the Company, based on principles of: minimum impact on the environment, maintenance of natural resources, applying rationally the technological advances and correcting social and environmental problems. Investments foreseen for the units: Tanning Units Aguai – SP - To purchase aeration equipment for the Biological Lake. (Reserves) - To equip a lab with equipment for performing effluent monitoring. - To purchase a centrifuge or another equipment for pressing the sludge from effluent treatment system. Cacoal – RO - To purchase aeration equipment for the Biological Lake. (Reserves) - Pumps for dosing physical-chemicals. - To equip a lab with equipment for performing effluent monitoring. - To purchase a centrifuge or another equipment for pressing the sludge from effluent treatment system. Conceição do Araguaia - PA - Construction of a lake for industry water. - To purchase aeration equipment for the Biological Lake and Equalizer. - To purchase a centrifuge or another equipment for pressing the sludge from effluent treatment system. - To equip a lab with equipment for performing effluent monitoring. Naviraí - MS - To equip a lab with equipment for performing effluent monitoring. - To purchase a centrifuge or another equipment for pressing the sludge from effluent treatment system. Lins – SP - Construction of tanks for new Caleiro recycling. - Construction of tanks for Chromium baths recycling. - Construction of Grease Box. - Construction of new pipelines to ETE. - Purchase of a centrifuge or another equipment for pressing the sludge from effluent treatment system. - To equip a lab with equipment for performing effluent monitoring. São Luis dos Montes Belos - GO - Construction of Primary Decanter. - Construction of Physical-Chemical Process. - Construction of Secondary Decanter - To equip a lab with equipment for performing effluent monitoring. - To equip a lab with equipment for performing effluent monitoring.
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G O A L S	Marabá – PA - Construction of a new effluent treatment station, physical-chemical equalizer, primary decanter, aerated lakes, secondary decanter. - Purchase of aeration equipment. - To equip a lab with equipment for performing effluent monitoring. - Purchase of a centrifuge or another equipment for pressing the sludge from effluent treatment system - Pumps for dosing physical-chemicals. Estância Velha – RS - Construction of a new effluent treatment station, Physical-Chemical Equalizer, primary Decanter, aerated lake. - Purchase of aeration equipment. - To equip a lab with equipment for performing effluent monitoring. Rio Brilhante – MS - Construction of a new effluent treatment station, physical-chemical equalizer, primary decanter, aerated lakes, secondary decanter. - Purchase of aeration equipment. - To equip a lab with equipment for performing effluent monitoring. - Purchase of a centrifuge or another equipment for pressing the sludge from effluent treatment system - Pumps for dosing physical-chemicals. Redenção – PA - Construction of a new effluent treatment station, physical-chemical equalizer, primary decanter, aerated lakes, secondary decanter. - Purchase of aeration equipment. - To equip a lab with equipment for performing effluent monitoring. - Purchase of a centrifuge or another equipment for pressing the sludge from effluent treatment system - Pumps for dosing physical-chemicals. Investments foreseen for the units: Slaughterhouses Lins – SP - Construction of a PVC pipeline for transportation of methane to the tanning unit for utilization in boiler. - Purchase of gas burner for the boiler. - Physical-chemical process after bio-digesters. Ituiutaba - MG - Construction of anaerobic bio-digesters. - Purchase of gas burner for the boiler. - Physical-chemical process after bio-digesters. - Campo Grande - MS -Construction of complete liquid effluent treatment station, containing: static riddles, grease Box, equalization tank, pump house, pipeline network. - Construction of anaerobic bio-digesters. - Purchase of gas burner for the boiler. - Physical-chemical process after bio-digesters. Naviraí - MS - Construction of anaerobic bio-digesters. - Purchase of gas burner for the boiler. - Physical-chemical process after bio-digesters. Mozarlândia - GO - Construction of anaerobic bio-digesters. - Purchase of gas burner for the boiler. - Physical-chemical process after bio-digesters. Marabá – Pa - Construction of ETE – Effluent Treatment Station, complete, containing: static riddles, grease Box, equalization tank, pump house, pipeline network. - Construction of anaerobic bio-digesters. - Purchase of gas burner for the boiler. - Physical-chemical process after bio-digesters.
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PROGRAM PLANNING		
G O A L S		Studies on residue reduction and water and power consumption minimization ➤ Bran of Lowering and scraps with chromium - To convert these residues in tanning material to be used again in the process tanning. ➤ Compounding with Residues, from tanning unit and slaughterhouse. ➤ Decrease of water consumption per hide. ➤ Usage of soaking water in the process. ➤ Decrease of firewood consumption, using gas from bio-digester. ➤ Forest recovery in Group's property. Assuring reposition of Forest raw material consumed in firewood for boilers.

PROGRAM PLANNING		
P R I O R I T I E S	1 ^a -	To determine and evaluate the Effluent Monitoring of each Industrial unit, checking every Parameter, registering and updating the results in Attachment – Spreadsheet 1. And on the very spreadsheet the measures of control and reduction, putting them in condition to meet the Legislations in force.
	2 ^a -	To adopt measures for minimizing the volumes of effluents produced in the productive process. Analyzing the layout, performing a critical checking of alternative processes, which result in lower water consumption. Attachment - Spreadsheet 2.
	3 ^a -	To map and quantify the residues produced in industrial units on Attachment - Spreadsheets 3 and 4.
	4 th -	To establish the Monitoring Results and Corrective Actions Proposals;
	5 ^a -	To prepare Lectures and Presentations with themes turned to acquiring the knowledge of environment preservation and divulging company's actions for preventing and decreasing the pollution.

PPRP TEAM		
Team Members	Position in the Unit	PPRP' Responsibility
Name	- Unit General Manager/ or Administration Manager	- Program Supervision - Unit Representation - Final Decision
Other names	- Chemist - Laboratory Analyst - Industry Operational (minimum of three)	- Communication with other employees. - Collection of samples and analyses. - Collection of information and inclusion into the program. - Planning of Proposals for PPRP. - Performing of Documentation.

ON ACTION METHODOLOGY

Evaluation of Results has as objective to check the benefits and gains, from Environmental and Economic standpoint, produced by the PPRP implementing.

ON DATA RECORDING

The developed phases will be recorded in reports and, if necessary, illustrated, attached to this Basic Document and filed in chronological sequence.

ON EVALUATION

PERIODICITY: Annual

Comparative analysis of conditions found in the present period with those of past year, contemplating the same technical requirements.

In meeting the goals with success, the program will be restarted by establishing new goals.

AS TO THE RESPONSIBILITY OF THIS DOCUMENT
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In witness whereof, executes this document and presents himself herein, assuming the responsibility as to its content and proposals

Paulo Beltran
Chemist Technician
Register – N^o 04451987

Valentina M. Prado de Lorenzo
Civil and Work Security Engineer
C.R.E.A. 0600998626/SP

UNITS		PERIOD – MONTHS																							
		1	2	3	4	5	6	7	8	9	10	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°	21°	22°	23°	24°
1. TANNING																									
1Water																									
1.2 Cacaoal																									
1.3 Conceição do Araguaia																									
1.4 Naviraí																									
1.5 Lins																									
1.6 São Luis dos Montes Belos																									
1.7 Marabá																									
1.8 Estância Velha																									
1.9 Rio Brilhante																									
1.10 Redenção																									
2. Slaughterhouse																									
2.1 Lins																									
2.2 Itutuba																									
2.3 Campo Grande																									
2.4 Naviraí																									
2.5 Mozarlândia																									
2.6 Marabá																									
OBS.: PERÍODO AFTER RELEASE OF FINANCIAL RESOURCES																									

S C H E D U L E



Public Consultation and Disclosure Plan (PCDP)

November 2006

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1. The Bertin Group
2. Introduction
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 - 7.1 Creation of the Socioenvironmental communications unit
 - 7.2 Socioenvironmental communications unit – Marabá
8. Social Reaction as an attribute of Social Communication
9. Institutional representatives
10. Cronogram

1. Bertin Group

The Bertin Group is a holding company of 100% national capital that operates in the segment of agriculture, industry and infrastructure and is about to complete 30 years in the marketplace. With headquarters in the State of São Paulo, it possesses 28 production units throughout Brazil, where it operates with 22 thousand direct collaborators. With strong trademarks that propitiate to the consumer advances in products and services, the corporation attends the internal market of over 80 countries in the five continents.

In the agriculture and industry segments, the Bertin Group laid a bet in the total utilization of the bovine chain. Following the verticalization strategy, the company maintains an industrial conglomerate focused in nine business divisions: Agriculture and Cattle-Raising, Foodstuffs, Biodiesel, Cosmetics, Leathers, Dog Toy, Individual Protection Equipment, Hygiene and Cleaning and Industrial Hygenisation. In the Infrastructure segment, however, the company is established in the areas of Civil Construction, Basic Sanitation, Energy and Transport.

The foodstuffs sector, which is the most representative, is responsible for more than 22% of the Brazilian bovine meat exports, what confers to it the current position in the trade balance of biggest exporter of Brazil, having an important role in the cattle-raising segment development.

All the sectors of the Bertin Group share a common view of continuous investments in quality, technology, researches, capacitation of the teams of labor, logistics, management processes and marketing strategy.

The Bertin Group mission is to aggregate value, promote development and strengthen the relationship with the several publics – clients, suppliers, partners, investors, press, public organs, collaborators and community.

2. Introduction

The IFC Bertin Project consists in a program of investments to the 2006 – 2010 period that will allow the Bertin Group to expand its businesses referent to the enlargement and modernization of its plants, giving continuity to the development of its approaching of good environmental, social and occupational health practices through the development and continuous implementation of its Environmental and Social Management system.

3. Objective of this instrument

To make available, through official communication channels, the knowledge necessary about the Bertin group on its potential socio-economic impacts, as well as its decisions, aimed at informing stakeholders and, more than that, encourage them to monitor these actions, issue contributions to the implementation of improvements and encourage a dynamic and participatory process towards the improvements of the representatives of neighboring communities. Within that perspective, those who feel affected by any operation to be established will receive all the relevant subsidies and there will be transparency in the conduction of the issues.

4. Communication Guidelines

The process of communication on the characteristics of the projects that will be carried out, location of operations, cronogram of the construction works, events, labor which will be mobilized, mitigation measures and measures to enhance positive impacts, will have an ongoing, pro-active and interactive nature, without any intention to publicize or carry out propaganda.

The idea is to create, with the aid of communication programs, the necessary conditions for stakeholders to position themselves and act accordingly before the facts that may come to affect their livelihoods.

Renewed with two months in advance of the start of construction works/expansion works, these programs are not limited to reactive actions of information provision, in the sense to correct mistaken understandings, due to lack of information or conflict of interest. It will, rather, assume a role of grievance mechanism, an open and ongoing space to comprehend the expectations on the company and its operations.

Target Public

- Company employees;
- Producers of the cattle -raising production chain: small, medium and average rural producers;
- Family Agricultural Farmers;
- Governmental Sector;

- Communitarian leaderships and civil society organizations, such as associations and Non-Governmental Organizations (“ONGs”) that manifest interest in the related matters;
- Institutions which actuate in the formation of the public opinion (Churches, Unions, Associations)
- Printed Press; Radio, TV;
- Local community directly affected by the enterprise.

5. Communication Tools for the Bertin Group

All the responsibilities of the Bertin Group both in the social and in the environmental aspect, are communicated to the involved publics and are registered in our www.grupobertin.com.br website, in which all the interested parties may obtain required knowledge and any doubt, criticism or suggestions also must be sent through the link that is contained in the website, which will be answered at most within the time period of 48 hours.

The same information and others also may be acquired through the SAC 0800 17 6000, consumers attending service, which is a free system where all have access to any place in the territory of Brazil. There will be an attending employee to listen to your doubts, complaints, suggestions and eulogies; the same are registered in the Bertin system for monthly analysis, which may be promptly answered or forwarded to the department responsible for giving all the required support. These information serve as basis for taking of decisions referent to some approached matter.

Our employees also receive bimonthly the “Bertin Notícias” (Bertin News), a house newspaper elaborated for all the collaborators to interact with all actions effected by the Group, as well as to be in contact with the other units of the Group. The same are distributed to our 22 thousand employees in all of our 28 production units. Also, there are ongoing campaigns for endo-marketing, seeking to raise awareness, inform, motivate, educate, engage and commit employees.

There is also a video integration program for those workers who enter the company and periodic visits of the teams responsible for each unit to unify Corporate Communication and discuss relevant themes.

All of our plants receive, on a monthly basis, auditing visits, but, it should be pointed out, that we also receive visits from schools, to aggregate knowledge, to know better the operations. The same must be requested through our website www.grupobertin.com.br and with the demand, we will be scheduling according to our possibilities (audits).

6. Communication Program for Marabá – PA

The Social Communication Program for the Marabá unit took place as part of strategic planning for Pará, as a future export-oriented State.

It was structured according to the following sub-programs and respective actions:

Action 1 – Ongoing Public Consultation

I) Procedures adopted: Ample divulgation and involvement of the stakeholders which actuate in the region of the enterprise.

The Public Consultations occurred in appropriate place and time, of easy access to the several involved publics, with ample divulgation in the several local communication channels – radios, newspapers, and with the utilization of language adequate to the local area, with at least five (5) days of antecedence of the event.

Insertions have been made in the “Tocantins” and “Jornal Opinião” newspapers and in the AM and FM Rádio Clube with at least five (5) days of prior notice to the event.

The several publics – which have been involved in the process of knowledge and discussion of the Project, are to be consulted and informed on the development of the activities, particularly, of the Public Consultations. This action is in accordance with the effort that the Group will make in order that the partnerships and collaborations anticipated in the several programs be accomplished, always directed to the attenuation and/or enhancement of the positive impacts waited with the expansion of the Group in the Regions.

The meetings were documented in an organized way, allowing that there is a written record of all the criticisms and/ or suggestions. Besides verbally manifesting

their opinions, the interested parties may, if they so wish, make a written registration.

All manifestations will be forwarded to the responsible for the affected department, for analysis, in such a manner that he/she may verify whether it is viable or not to implement, for example, the suggested suggestions, these will be answered to the interested publics, through a letter.

Action 2 – Field Approach

The “Social Participation” was implemented by the Bertin Group in the selected municipalities, with the execution of a Series of Public Consultations and other field approaches. These actions prove themselves fundamental for the sensibilization of the local community, leaderships and opinion makers, both in what concerns the project proposed by the Group and the opening of the same for the collaborative actions. The field approaches consisted in: I) Qualitative Interviews; II) Field Survey with Rural Producers and III) Public Consultations – Workshops and Focal Meetings, as discriminated next:

I) Qualitative Interviews

The set of qualitative interviews made with selected institutional entities had as objective, in a first moment, to identify who direct and/or indirectly has responsibilities, political, administrative, economic and social interferences in the region for, in the future, allow us to select those who by degree and importance of actuation, combined with the objects of the project, were target of new qualitative approaches.

Representatives of the following institutional entities have been approached:

Belém

Public Entities: Secretaria Executive Secretary of Science, Technology and Environment - SECTAM, Special State Secretary of Production - SEPROD, Labor Regional Delegacy - DRT, Lands Institute of Pará - ITERPA, Agency of Defense of the Agriculture and Cattle-Raising of Pará - ADEPARA, EMBRAPA, Executive Secretary of Social Protection - SEEPS, Bank of Amazon.

Non -Governmental Entities : Institute of Environmental Research of the Amazon - IPAM, Institute of Men and Environment - IMAZON, Federation of the Agriculture of the State of Pará - FAEPA, Cattle -Raising Consultive Chamber.

São Paulo

Repórter Brasil, ETHOS Institute

Marabá

Public Entities: National Institute of Colonization and Agrarian Reform – INCRA, IBAMA, Federal University of Pará - UFPA, Secretary of the Agriculture, Secretary of the Social Protection, Secretary of the Environment, Secretary of Planning, Public Prosecution Service, National Foundation of the Indian - FUNAI, ADEPARA Marabá.

Non-Governmental Entities: Agriculture Workers Federation - FETAGRI, Rural Producers Union, Pastoral Commission of the Land - CPT, Municipal Health Council, Environment Municipal Council, Cooperative of Services Rendering COPSERVIÇOS, National Council of the Rubber Extractors (*Seringueiros*) – CNS.

II) Field Survey with Rural Producers

The field survey had as objective to characterize the cattle-raising production in the 16 municipalities that compose the AID of the Bertin Frigorific. For such, it covered two main fronts: the characteristics of the Production System adopted in the slaughtering cattle-raising, such as exploration area, performance indicators and agriculture and cattle-raising handling; and the Environmental and Labor Legislation, with issues related to the conditions of health and security of the worker, to the environment and to the social and cultural level of the producer.

The survey was based on the application of a individual questionnaire (annex 2), held between the days 15 and 31 of May of 2006 by a team of local surveyors, duly trained between the days 11 and 13 of May of 2006.

III) Series of Public Consultations – Workshops and Decentralized Focal Meetings

Workshops and focal meetings have been held, as explained as follows, with interest groups, having as purpose to inform about the intended objectives: to provoke reflections about the cattle-raising activity; to continuously listen to experiences and expectations and to obtain contributions and subsidies of the local communities;

Opening Workshop – Sustainable Cattle-Raising Model: Perspectives and Challenges in the Southeast of Pará State - 04/11/2006 – Marabá

Final Workshop - 07/06/2006 - Marabá

Focal Meetings

Middle and Big Producers -05/12/2006 – Marabá

Small Producers: Itupiranga, Pauapebas, Eldorado dos Carajás and São Domingos do Araguaia - 15 thru 18 of May, 2006.

Environment Municipal Council -05/19/2006 - Marabá

Consultive Sectorial Chamber of the Cattle-Raising - 05/22/2006 – Belém

7. Communication program 2007

Aware of its role, the Bertin Group will be giving continuity to its communication with all stakeholders as part of its core business. Besides this, it will establish two new communication channels as from next year: - a Socioenvironmental Communication Unit in its Headquarters (Lins) and another in Marabá.

7.1 Creation of Social and Environmental Communication Central

An attendance central will be installed in Lins headquarter offices, in order that it may give support to the other units, and in this way the service becomes centralized to provide us with an standardized and more efficient communication. Any citizen may obtain information on the company and the projects and, at the same time, make suggestions and criticisms.

The Social Communication will have instruments (forms or structured script) of collection of information capable of picking up impressions, suggestions and evaluations of the local community, both as regards the Communication Program and the actions of the enterpriser in the region, so as to function as a “Grievance Mechanism” (“Ouvidoria”) of the Group in the institutional entities and other social actors.

This placing which will give to the Bertin Group credibility and image of efficiency and effectiveness of the Communication Central, indispensable for the success of the same, is governed by its agility in promptly clarifying the doubts of the users.

In this perspective, we will start with the formation of a Coordination Team, formed by Bertin Group technicians and that will exert the following attributions:

- to select and capacitate the general coordinator to supervise all the actions of social communication during the five years of validity of the program, assuring a single and official version about the themes to be worked;
- to form and capacitate local teams, which will actuate in the implementing of social communication actions in the municipality of the enterprise.
- to establish the required connections with the institutional public, target of the social communication program.

The Local Coordination Team of the Program will adopt a participative methodology in the conduction of the Social Communication Program.

7.2 Social and Environmental Communication Central - Marabá

In the Marabá Project the direct contact will be with the manager of the Marabá unit, who will be duly habilitated and capacitated by the Communication Program Coordination Unit, to interact with these several publics, as well as technically munitioned to give clarifications about questionnaires and other instruments utilized for the collection of information.

Some actions to be accomplished:

Action 1 – Divuligation of the Social and Environmental Communication Central

Development of a specific campaign of divulgation of the existence of the Social Communication Central, and its established times of attendance of the public. The divulgation strategy will consider the formation of the knowledge of population inserted in the most distant areas of the cities, particularly those located in the rural zone.

Action 2 – Collection and systematization of the opinions and suggestions of the users of the Social and Environmental Communication Central.

The Bertin Group will select a set of relevant information that may signal about the need of changes and complementariness of the social communication program and/or of the project, which consubstantiate themselves in qualitative and quantitative indicators. These indicators, as previously defined, will be the boundary markers of decision makings about strategic alterations of the Group.

The information that will compose these indicators will be obtained in the Communication Central by means of forms and questionnaires that may be filled out by the users of the Central.

These forms will be elaborated by the Coordination team of the program, both as refers to the format and to the specific contents, and the employees of the Social Communication Central will incentive the users in order that they express their opinions and make their evaluation by means of the same.

This material will be tabulated and its results will be divulged in a semesterly basis in the company itself in the corresponding murals. But, in case of any doubts, suggestions will be answered to the applicant.

Action 3 – Participation in newspaper columns and insertions in local radios

An initial meeting will be held between the coordination of the Program and the representatives of the means of communication of interest, in order to consolidate partnerships for the realization of said activity.

The local newspapers and radios will be used for publication and divulgation of information about the Bertin Group, development of the Social and Environmental Programs, among other aspects related to the group. To promote work in partnership with these means of communication, sending releases and related material.

Action 4 – Development and production of divulgation material: Folders and Information Bulletins

To confection folders and Textbooks containing basic and summarized explanations about the project of the enterprise and Environmental Programs, so that the population may closely follow the development of the activities. The Bulletins will have a six months periodicity.

These instruments should be put into circulation among all the target publics of the program.

Action 5 – Environmental Education Program

The Bertin Group will be establishing a permanent dialogue with its collaborators and the community, aiming at the improvement of joint environmental actions, such as:

- To educate and train its collaborators in order that they always actuate in an environmentally correct manner;
- To demand from its suppliers products and components with environmental quality compatible with that of its own products; environmental textbook to give training to its employees, as well as training courses;
- A monitored endo-marketing work will be accomplished in order that all may have knowledge of the Bertin Group environmental policy; developing pedagogic actions (capacity-building, courses, workshops, education campaigns, textbooks and related materials), cultural actions (use of the image, of the theatrical language – games – while form of expression of the reality and, of the music, both in the courses and in the events) and operational actions (such as projects of selective collection of trash and of reutilization of materials, creation of centers of screening of recyclable materials, reforestation actions, fighting against erosion, monitoring of the quality of the water, monitoring of the aquatic population, among others).

Action 6 – Social Responsibility Policy

It aims at establishing the premises which guide the understanding about responsibility and social development, the welfare of the collaborators (employees) who produce the goods and commercialized services.

The fulfilling of these principles is a commitment of the Direction of the Company towards its clients, consumers, partners and official agencies, and, as such, it must be understood and adopted by all employees of the Bertin company.

Action 7 – To communicate the results according to the licenses of operation of the units with the means of communication, such as:

- limnologic monitoring
- quality of the water

Action 8 – Divulcation of the Job Opportunities Generated by the Bertin Group throughout the region.

The Social Communication Program team also will be responsible for divulging to the community, according to orientation of the enterpriser, the job opportunities.

Action 9 – Filing of all the materials produced about the enterprise, all the communication matters and materials.

The material produced for the divulcation of the enterprise and Environmental Programs will be filed, so as to constitute a database of the originals and respective proofs (negatives, rough copies, photoliths, among others).

The Program team will be held responsible for the clipping, that is, collection and filing of all material published in the media about the enterpriser and the enterprise.

8. Social Reaction as an attribute of Social Communication

The fact of supplying information to stakeholders who may position themselves or criticize the company is far from signifying acceptance of its operations and effects on local livelihood conditions (local/regional), as well as unapproachable acceptance of the actions idealized to minimize diverse effects or enhance positive effects. However, the Communication program gains credibility and efficiency in so far as it avoids a lack of subsidies, promotes transparency and interaction with different stakeholders.

9. Institutional representatives

The Social Communication Program will be of exclusive responsibility of the Bertin Group, and partnerships may be established with the local entities during the development of the stages.

To enter in direct contact with the corporation communication manager, Mrs. Suélen Daiane, will be through the e-mail: suelen.daiane@bertin.com.br.

10. Social and Environmental Communication Chronogram

CHRONOGRAM	YEAR I				YEAR II				YEAR III			
Sub-programs/actions	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND
Social Participation in the Development of Social and Environmental Communication Program												
Creation and capacitation of Local Coordination Team of the Program	•••	•••										
Determination of Calendar and Procedures for the Realization of the Continued Public Consultations	•••	•				•				•		
Creation of the Social and Environmental Communication Central												
Divulgence of the Social and Environmental Communication Central	•	•••			•••				•••			
Collection and systematizing of the opinions and suggestions of the users		•	•	•	•	•	•	•	•	•	•	•
Development and production of divulgation material			•			•				•		
Periodic Articulation of the Bertin Group with the Local Media												
Participation in newspaper columns and insertions	•	•		•		•		•		•		•
Periodical dissemination of the results of the environmental monitoring				•				•				•
Divulgence of the Job Opportunities Generated by the Bertin Group throughout the region		•		•		•		•		•		•
Dissemination of the information of the Attendance Central			•		•		•		•		•	
Filing of all the materials and communication material				•				•				•



NATIVE COMMUNITY

DEVELOPMENT PLAN

1 – INTRODUCTION

The PCH (Pequena Central Hidrelétrica = Small Hydroelectric Power Station) SACRE 2 (SALTO BELO) has been conceived with the purpose to meet the increasing demand for electric power, supplying the north east region of the State of Mato Grosso.

Near the PHC, some 2.5 km away, on the other side of Rio Sacre, there are localized the two indian villages, Sacre 2 and Bacaiuval, which are part of *Terra Indígena Utiariti* of the Paresi Group, organized in several villages that compose 3 (three) Native Associations (Halitinã, Waimaré and Zaloya). The population of the Paresi group counts 1,875 indians, where 62 belong to Sacre 2 Village and 39 to Bacaiuval Village.

Since the construction of the PCH has as commitment social and environmental issues, it has been technically designed so as to avoid the obstruction of the Sacre River. Power generation will be accomplished by using 50% of the volume, which will be deviated through a by-pass channel for a distance of approximately 1,000 meters and, then, returning to the Sacre River.

In this manner, a sufficient volume of water is assured in the Sacre River watercourse, and, consequently, will be assured the preservation of the flora, fauna and the wonderful scenery of the Salto Belo waterfall.

The installing of the venture will warrant, also, an improvement of permanent preservation areas, specially the PCH upstream.

This set of measures is essential in order to warrant that the PHC implementation will contribute to the process of social and environmental sustainability of the region, which is our joint responsibility.



Salto Belo Waterfall – after full power generation by the PCH SACRE 2 (SALTO BELO).



2 – LICENSING PROCEDURES

Brasil Central Energia S. A. has filed with the State Secretariat of Environment of the State of Mato Grosso – SEMA-MT, the Licensing Process of the PCH Sacre 2 (Salto Belo), at the end of 2001 (under No.6036/01), undertaking located at Rural Zone of the municipality of Brasnorte/MT, Geographic Coordinates 13°01'03.1" W and 58°11'23.1" S, right margin of the Sacre River, sub-basin of Rio Juruena, Amazon Hydrographic Basin, with the capacity of generating 30 mW (03 Turbines of 10 mW each), with a MLT (Mean Long Term) outflow of 162,10 m³/s and ecological outflow of 81,05 m³/s.

The environmental restrictions, both mitigating and compensative, more specifically of the physical, biological, socio-economic and cultural means, are registered since the first Technical Report issued by the licensing body - SEMA/MT, under No. 032/COINF/2001, at the moment of issuing the PL (Preliminary License) No. 022/2002 on 01/17/2002.

3 – PARTICIPATION AND CONSULTATION

For preliminary studies, FUNAI has informed that, after being consulted, the inhabitants of the T.I. (Indian Land) Utariti, composed by the Villages Seringal, Salto Mulher, Bacaval, Sacre II, Vale do Papagaio, Bacaiuval and Cabeceira, gave their “approval for proceeding with work” (NOTICE No. 094/GAB/SEPIMA/ERA/TGA, of 07/30/2001). At the occasion, FUNAI has informed, “that the Regional Executive Administration of Tangará de Serra – MT has observed on the notice that it will assign an official to follow -up the whole work”;

On 10/11/2001 the company that is responsible for Archeology and Anthropology has notified FUNAI on its responsibility at performing the job of ‘PCH Project Diagnostic’... “related to the Historic, Archeological and Anthropologic Patrimony, in this case related with native community Paresi, established at TI Utariti”. Informed also that “With the objective of presenting a study that will include an accurate picture of the present status of the indian community, it is necessary ... to accomplish a field work, which is planned for the period between 17 and 25 of next October”. On that occasion, in 2001, it presented the professional from the University of Brasilia who will develop the work and informing when the field stage will be establishing contact;

There were held, with the presence of FUNAI and Brasil Central, several meetings with the Associations of Indians, aiming to discuss with them the construction of the power-station, in a manner to cause the minimum possible impact, having in view that the Sacre River, at that location, separates the Indian Land from the rural area of open pasture, of private ownership, serving also as a divisor mark between the municipalities of Campo Novo do Parecis and Brasnorte;

On July the 2nd., 2003, Brasil Central has executed, with the assistance of National Indian Foundation – FUNAI, Regional Administration of Tangará da Serra – MT, a “Term of



Amicable Compensation” with the Indian Associations Waimaré and Halitinã, assuming responsibilities to be met during and after the PCH construction.

In parallel to that, contacts have been held and meetings conducted with FUNAI – Tangará da Serra/MT and Indian communities in order to continue to accomplish the commitments already assumed and begin the improvements of access and job site implementation.

In addition to the Environmental Programs contemplated in Environmental Diagnosis and Environmental Control Plan - PCA, the major issue, with no doubt, would be the relationship and the fulfilling the terms agreed with Indian community.

The confidence and reliability of Indian Communities, mainly the Sacre 2 and Bacaiuval Villages, would be essential for the success of the commitments assumed, what has been occurring gradually through the environmental coordinating, officials and shareholders, in periodical inspections.

The role of FUNAI – Tangará da Serra/MT, initially through Mr. Carlos Márcio Vieira Barros, and presently through Mr. Rony Valter Azoimayce, representing FUNAI and establishing the relationship and interchange between the Indian communities and the Company, giving credibility and legality to the process, has been essential for the good relationship and success of the work with the Indian Associations of Waimaré, Halitinã and Zaloya, so as with the nearest Villages to the venture, Sacre 2 and Bacaiuval.

As Brasil Central (Grupo Bertin) has established since the beginning and continues till now, only one representative for handling with Indian issues, supported when necessary by the company administration, this strategy has created a confidence bond with both Indian community and its Tribal Chiefs (Cacique Tarcilo – Sacre 2 Village and Cacique Dna. Ivone – Bacaiuval Village), Indian Associations of Waimaré, Halitinã and Zaloya and FUNAI.

Considering that, because the process in dynamic, there was a need to alter the agreements established, through the “Amicable Composition Additive Term” signed on 03/11/2005, as well as the posterior “2nd. Additive Term of Amicable Composition”, signed on 12/06/2005, and there was in both of them, participation of Indian Communities (Associations), FUNAI and undertaker, and this has occurred in a positive manner for both parties.

The meetings held with the objective of discussing and consolidating the actions related with PCH implementation, were attended by the Paresi Community (indians), or their legal representatives (associations) when delegated by them, as well as of Funai and the Undertaker.

Below, follows the chronological Record of minutes and documents signed by the parties:

- ❑ Minute of the Meeting of Halitinã and Waimaré associations (ATTACHMENT 01)
 - o Date: 10/30/2001;
 - o Participants: Leaderships, Paresi Community and FUNAI;
 - o Locality: Sacre 2 Village.



- ❑ Minute of the Meeting – Paresi Community (ATTACHMENT 02)
 - o Date: 10/02/2002;
 - o Participants: Leaderships, Paresi Community and FUNAI;
 - o Locality: Sacre 2 Village.
- ❑ Signing of Document of “Amicable Composition and Other Agreements” (ATTACHMENT 03)
 - o Date: 02/07/2003;
 - o Participants: Indian Associations Halitinã and Waimaré, undertaker and witnesses;
 - o Locality: Sacre 2 Village.
 - o
- ❑ Signing of the “Additive Term to the Amicable Composition Term and Other Agreements celebrated on 07/02/2003”, referring to environmental compensation of the PCH Sacre 2 (Salto Belo) (ATTACHMENT 04)
 - o Date: 11/03/2005;
 - o Participants: Indian Associations Halitinã, Waimaré and Zaloya, the undertaker, FUNAI and witnesses;
 - o Locality: Municipal Office of Campo Novo of Parecis/MT.
- ❑ Minute of the Meeting – Paresi Community (ATTACHMENT 05)
 - o Date: 13/11/2005;
 - o Participants: Leaderships, Paresi Community, FUNAI, SEMA/MT and undertaker;
 - o Locality: Sacre 2 Village.
- ❑ Signing of the “2nd. Amendment to the Amicable Composition Term and Other Agreements celebrated on 07/02/2003”, referring to environmental compensation of PCH Sacre 2 (Salto Belo) (ATTACHMENT 06)
 - o Date: 12/06/2005
 - o Participants: Indian Associations Halitinã, Waimaré and Zaloya, undertaker, FUNAI and witnesses;
 - o Locality: Tangará da Serra/MT

4 –STUDIES ACCOMPLISHED

ARCHEOLOGICAL AND ANTHROPOLOGIC

There were accomplished, from three axis of investigation on, as follows:

- a) Performance of a field-inspection at the area to be directly impacted by the PCH and its neighborhood, with the purpose of obtaining a first acknowledgement of physical, environment and archeological and anthropologic aspects of the venture;



b) A systematic finding of the bibliography, so as to obtain a regional picture that could serve as reference and contexture for the elements found in the area;

c) The study of information collected from both preceding items, so as the reviews and evaluations that integrate the Diagnosis, Prognosis, Evaluation of the Impacts and Propositions of Migratory Measures.

The accomplishment of field works has been duly notified with the involved responsible bodies, which are:

- IPHAN (Instituto do Patrimônio Histórico e Artístico Nacional – Institute of National Historical and Artistic Patrimony), more specifically the 14th. Regional Superintendence /18th. Sub-Regional of Cuiabá;
- FUNAI (Fundação Nacional do Índio – National Indian Foundation), more specifically the regional of Tangará da Serra.

The Sacre River valley had never been object of archeological research. Therefore, the procedures adopted by the team during the fieldwork had to take into account, initially, the lack of objective information on the locality and the features of possible existing archeological sites. Being so, it became necessary to perform a comprehensive and generic recognition of the area, so as to identify the nature and the diversity of the patrimony involved.

The methodology that has shown itself most adequate was the accomplishment of systematic search, aiming to detect archeological evidence in different points of the area. The searches were based, mainly, on observation of topographic and location characteristics of the landscape, aiming to examine physical segments and different environmental contexts, as to identify the greatest possible variety of archeological evidences, related with the different forms of landscape occupation.

With the purpose of recognizing of buried archeological sites, there were performed a number of checks in localities that allowed a stratigraphic reading (such as banks of a road and river, areas of erosion, trenches opened for constructions, among others), so as sequence openings of test-wells on the terrain.

During the studies of “Archeological Diagnosis” performed in the area of PCH Sacre 2 (Salto Belo), developed in 2001, systematic searches have identified 4 sites at ADA (Directly Affected Area) (São João 1 to 4). During the field works accomplished in the present phase of recovery, a new site has been registered (São João 5), completing a total of 5 sites on 05 hectares that compose the ADA (Directly Affected Area).

There were also accomplished searches in four localities outside the ADA (so, in the Indirect Influence Area “IIA”), with the purpose of obtaining an archeological reference picture, necessary for the scientific analyzes of the patrimony. Being identified more 05 archeological sites at the “IIA”, totalizing 10 archeological sites contemplated by this research.



As to the recovery actions at the archeological sites localized inside the “ADA” there were performed systematic researches. The definition of the research type to be performed in each site has varied in accordance with its informative and scientific potential, the rarity of its occurrence, and its conservation status. This evaluation has defined the level of deepening of the research, scaled in 03 levels:

- Level 1: performed in all the sites, involving graphic and photographic registration, opening of sounding lines and collection of the squared total of surface material. Detailed documentation of rock engraved art, if any.
- Level 2: research of details performed in sites with a medium conservation status, involving the opening of some excavation areas, in addition to the total procedure described in Level 1.
- Level 3 comprehensive excavations performed on sites with a good conservation status, in addition to the total procedure described in Levels 1 and 2.

Identification and localization of the 09 archeological sites identified during the search at “ADA” and “AII”.

SITE NAME	TYPE	UTM COORDINATES
São João 1	Lítico Site, in the open	21 L 0371999/8560844
São João 2	Lítico Site, in the open	21 L 0371949/8560956
São João 3	Lítico Site, in the open	21 L 0371519/8560450
São João 4	Lítico Site, in the open	21 L 0371921/8560746
São João 5	Lítico Site, in the open	21 L 0370984/8561299
Shelter 1	Rock Engraved Site in shelter	21 L 0433061/8522314
Sacre 1	Ceramic Site, in the open	21 L 0370846/8557954
Prainha 1	Lítico Site, in the open	21 L 0432937/8522410
Tolosa Village	Abandoned Village	21 L 0394521/8540424
Paresi Site	Abandoned Paresi Village	21 L 0381455/8494047

It is important to stress that at the planning of the beginning of the works (implementation of the job site. Accesses, mines, disposal and other activities), there has been defined a strategy of performing the services, in a manner to protect the localities of archeological sites existing within “ADA”, assuring thus its protection and conservation.

With the definition of constructing a Indian reference center, to be constructed in the city of Campo Novo do Parecis-MT., we will be contributing with that all the studies performed in the implementing of PCH Sacre 2 (Salto Belo), mainly the information and samples referring to the Program of Searching and Recovering of Archeological, Historical and Cultural Patrimony are integrant and consulting part for Indian community of Paresi and the community in general.

In the studies of Environmental, Archeological and Anthropologic Diagnosis, there were searched points of possible environmental impacts with the implementation of PCH Sacre 2



(Salto Belo), so as has been foreseen and proposed in PCA – Plan of Environmental Control programs to be implemented in order to minimize them.

The measures foreseen in the PCA were analyzed under several aspects, such as:

- ✓ Area of direct influence;
- ✓ Area of indirect influence;
- ✓ Sacre 2 and Bacaiuval Villages;
- ✓ Indian land of Paresi;
- ✓ Installation period;
- ✓ Operation period;

ACTIVITIES	ACTIONS	MEASURES	IMPACT APPRAISING
Anthropology	PCH Implementation	All the measures were taken so as to mitigate at a maximum the possible negative impacts, with the purpose of assuring the social-cultural integrity of the Indian Community, mainly of Sacre 2 and Bacaiuval villages.	<u>During the LI</u> Moderate <u>During the LO</u> Insignificant
Archeology	There were performed studies of data surveys, searches of data, searches and recovery of identified archeological sites.	Based on surveys and identification of archeological sites, there were promoted their protection and recovery. Specifically for the site that has occurred at an area of 102.17 ha, it was protected and the old access road to the waterfall has been deactivated. There was a dissemination of this work, through lectures, meetings and panels, to employees, Indian community and scientific community. Note: The activities of construction the PCH did not interfere with any archeological site.	<u>During the LI</u> Moderate <u>During the LO</u> Positive

ACTIVITIES	ACTIONS	MEASURES	IMPACT APPRAISING
Opening of access roads	There were accomplished improvements of access roads to the undertaking, so as internal	All the access roads were improved and constructed with a previous planning, contemplating the environmental issues, so as to contain the erosion process, avoiding the transport of materials to the	<u>During the LI</u> Moderate <u>During the LO</u> Positive

	openings.	rivers.	
Increase of vehicle traffic	Improvement and graveling of drainage trenches of access roads.	Opening of gutters and trenches, construction of speed reducers, construction of a concrete bridge, installation of signaling plates and other information, mainly near the Indian land.	<u>During the LI</u> Moderate <u>During the LO</u> Insignificant
Increase of people circulation	Guidance for employees, service renderers and indian community (Sacre 2 and Bacaiuval Villages)	Lectures to employees, service renderer and Indian community. Implanting of sewerage treatment system at the job site, selective garbage collection, forbidding of hunting and fishing activities, among others (primers, folders and audiovisuals)	<u>During the LI</u> Big <u>During the LO</u> Insignificant
Use of heavy machines and equipment	Transportation of materials, excavations and explosions.	Permanent orientation of machine drivers and machine operators as to adequate use of the equipment.	During the LI Big <u>During the LO</u> Insignificant

ACTIVITIES	ACTIONS	MEASURES	IMPACT APPRAISING
Access to Indian land and Vice-Versa	Contact with Indian community. Mainly during the period of construction of houses in villages of Sacre 2 and Bacaiuval	With the previous authorization of FUNAI and Tribe Chiefs, this access has been restricted only to the undertaker and his legal representatives. In case of need for other professional and other visitors, since they are escorted by them.	<u>During the LI</u> Moderate <u>During the LO</u> Insignificant
Removal of vegetation	Opening of access areas, channel, powerhouse, and job site. At the undertaking's area.	Previous planning, so as to open only the necessary to attend the demand of the work (approximately 20 hectares) Preparing of the PRAD (Program of Recovery of Degradated Areas), contemplating the recovery with native specimens (in accomplishment phase).	<u>During the LI</u> Moderate <u>During the LO</u> Insignificant

Removing of soil and rocks	Excavation of channel and powerhouse areas.	Previous planning of local disposition places, so as previous classification of different soil and rock types, for their use in other phases of the work. Orientation on the disposal of these materials, foreseen in the Program of Combat and Control of Erosion Processes and Hillside Stability.	<u>During the LI</u> High <u>During the LO</u> Absent
Disposal	Receipt of materials from excavations of the channel and powerhouse.	Previous planning so as to stay parallel to the upper part, reverse to APP (Permanent Preservation Area), operating as a natural contention barrier. Already conformed and being recovered with grass and native forest specimens.	<u>During the LI</u> High <u>During the LO</u> Insignificant

ACTIVITIES	ACTIONS	MEASURES	IMPACT APPRAISING
Sacre River Water Quality	Deviation of a part of Sacre River water, where up to 50% of the Sacre River's water, during the dry season, that is 81,05 m3/s. Over a distance of 1,000 meters.	Technical and environmental orientation on all the construction phases, to employees, and service providers, mainly in activities performed near the Sacre River. Campaigns of "Limnology and Water Quality", before, during and after the PCH construction, controlled by the licensing body. Note: the results of these programs indicate to us that there has been no interference in the water quality of any of the stages of the undertaking, and there was no prejudice to the ichthyo-fauna (fish population).	<u>During the LI</u> Moderate <u>During the LO</u> Insignificant
Waterfall	Opening of water inlet and channel passage (upstream of the waterfall).	The project has been conceived with a warranty of passing of, at least, 50% of the volume of water through the waterfall, uniform distribution on its crest so as to maintain the beauty of the landscape during all the seasons of the year. -Already in full operation, with 03(three) machines in operation, the uniformity of water distribution of the waterfall's crest has been maintained, so as its landscape	<u>During the LI</u> Insignificant During the LO Insignificant

5 – MITIGATION AND COMPENSATION PROGRAMS

5.1 – MITIGATION

With the purpose of mitigating the possible environmental damages caused by the undertaking implementation, mainly during the construction phase, there were implemented “Environmental Programs” foreseen in Environmental Diagnosis, Environmental Control Plan and Opinions of the licensing body. For accomplishing all this, all the foreseen programs were implemented, such as:

➤ ANTHROPOLOGY PROGRAM

Aims to prevent, reduce or mitigate impacts on native community, having as base the differentiated principle that assures protection of the environment and welfare of the involved groups, where, therefore, were taken actions before, during and will be kept after the undertaking operation, so as to assure the integrity of its socio-cultural aspects, as well as the maintenance of the physical environment of Paresi Indian land.

Orientation and information of construction job employees

Aims to bring information to the employees, through informative lectures and training, distribution of information primers on specificity of Indian issues, and on the Paresis, to avoid contacts that are harmful to both indian community and workers;

Orientation and information to Paresi community

Aims to inform to the native community on the justifications and risks of the undertaking, so as on the planned events of the work and its dynamics, aiming to prevent risks and their physical and cultural integrity, through informative lectures and training, and distribution of informative primers;

Protection and inspection of TI and its neighborhood

Promotes actions for hindering that the work implementation may cause impacts and become prejudicial to the native group, mainly to those who live near the undertaking, where, therefore, has been prepared an ethnic-ecological study of the Indian Land of Utariti, Environmental Monitoring of the area, specially of the part of the TI more directly linked to the work, and preparing of signaling plates on the TO border, aiming to alert on its limits, to forbid the entry of foreigners, and to avoid personal/environmental accidents;

Patrimonial Education



Has conducted actions of divulging of research and results reached by the Archeological, Historic and Cultural program, with the purpose of appraising and preserving the involved assets, through the preparing and mounting of itinerant exposition (panels), circulating in the native community and in non-native community;

Scientific Divulging

With the objective of disseminating the actions of research and results accomplished by the Archeological, Historic and Cultural program to the scientific community, aiming its integration into the knowledge of the subject matters involved, there were accomplished the following activities:

- Presentation of the Research at XIII Scientific Meeting of Brazilian Archeological Society (SAB), held in September of 2005 in Campo Grande/MS – presented by Prof^a. Dr. Érika M. Robrahn-González (Archeologist who had the license of IPHAN to conduct the program of search and preservation of archeological and historic patrimony of PCH SACRE 2 (SALTO BELO) – governmental decree No.114, of 06/07/2004);
- Discussion and analysis of the works at Public Archeology developed by this Program, in Assistant Professor Thesis presented by Prof. Dr. Érika M. Robrahn-González, at the Museum of Archeology and Ethnology of University of São Paulo, under the title of “Society and Archeology”;

➤ **RESEARCH OF HISTORICAL, CULTURAL AND ARCHEOLOGICAL PATRIMONY**

It had as objective to identify, register and research the objects that constitute the Archeological, Historic and Cultural Heritage of the region, so as to contribute to the rescue of the cultural heritage of its community for programs of social sustainability, where, therefore, were adopted actions before, during and that will be maintained after the undertaking's operation, so as to assure the integrity of its socio-cultural aspects, as well as the maintenance of physical environment of the Indian Land of Paresi;

➤ **HIDROLOGIC MONITORING PROGRAM**

There has been implemented the monitoring system for monitoring the variations of the Sacre River before, during and after the construction, upstream and downstream of the PCH. *The program referred to will continue during the useful life of the undertaking;*

➤ **LIMNOLOGY AND WATER QUALITY PROGRAM**

There was implemented the program with the objective to monitor the evolution of the water systems before, during and after the construction of PCH, upstream and downstream of it, where through it, we may monitor and evaluate eventual changes in water quality in their several aspects.



Other programs referred to will be continued with four-monthly campaigns, contemplating the periods of dryness and flood;

➤ **PROGRAM OF PREVENTION AND CONTROL OF EROSIVE, SILTING UP AND RIVERSIDE STABILITY PROCESS**

That program has been implemented before the beginning of the construction, with the purpose of identifying, localizing and presenting of proposals to be adopted for control and contention of erosive, silting up and riverside stabilization process of the undertaking area. That activity has occurred in a syntonized manner with the construction of the PCH;

➤ **PROGRAM OF RECOVERY OF DEGRADATED AREAS**

This program aims the recomposing of vegetal covering with native specimens in areas altered by the construction of the undertaking (areas of lease and disposal, job site, mines, access among others). The preparing of recovery areas is occurring during the construction of the undertaking, and the services of planting of molts have been already started at he end of 2006 with maintenance foreseen till 2008;

➤ **PROGRAM OF ENVIRONMENTAL MANAGEMENT**

This program, of continuous nature, has as objective to synthesize the social, cultural and environmental actions, in a manner to meet the objectives and goals proposed in other programs.

The Environmental Management Program has as its main principle the follow-up of implementation and development of different programs, so as the interface between the Undertaker and the bodies involved in the process of PCH construction, such as: FUNAI, SEMA/MT, ANEEL, IPHAN and CREA.

5.2 – COMPENSATION

With the purpose of compensating eventual environmental damages caused by implementation of the undertaking, mainly during its construction phase, there were made compensatory agreements, to benefit the native community of Paresi, through its legal representatives (Associations), with participation of FUNAI, and there is in force the “Term of Amicable Composition and Other Agreements”, entered into on 07/02/2003, referring to the Environmental Compensation - PCH Sacre 2 (Salto Belo), and its 1st. abd 2nd. Amendments, the latest celebrated in December of 2005, with the Native Associations of Halitinã, Waimaré and Zaloya, representative entities of the whole Paresi community of the State of Mato Grosso, which content is summarized below:

I – Construction of 15 (fifteen) houses: being 9 (nine) in the Sacre Village 2 and 6 (six) in the Bacaiuval Village, the work launched on 05/01/2006, with water supply,



electric power supply, concrete cesspit in each home (according to design presented by the National Indian Foundation - FUNAI). The works have been received by the engineering team of Municipality of Campo Novo do Parecis;

II – Construction of the Center for Cultural Reference of Paresi People, in the town of Campo Novo dos Parecis MT, with 180 m² (according to design that has been presented by the Municipality of Campo Novo do Parecis and Indian Associations, for analysis and further approval by FUNAI). The Municipal Office has already defined and made available the terrain. The start of construction is foreseen for November/2006 and the finish for February/2007;

III – According to deliberation of General Meeting of Paresi People and FUNAI, there has been deliberated the replacement of the House of Health construction, in the Town of Tangará da Serra/MT, as has been included in the “Term” celebrated in 2003, by vehicles for the Indian Health Program of Haliti – Paresi, co-coordinated by Indian Association of Halitinã, being two (2) of them L 200 station-wagons, with air conditioner, 4 wheel traction, driven by diesel oil, double cabin, hydraulic drive, and 01 (one) vehicle VW GOL, 1.0, FLEXPOWER, 4 doors, with air conditioner, being those vehicles registered in the name of Indian Association of Halitinã and delivered in a solemnity on 02/03/2006, with participation of FUNAI, Associations, Paresi Community and municipal authorities of Tangará da Serra/MT;

IV – Annual transfer, till November 20th of each year, to Waymaré, Halitinã and Zaloya Associations, of the amount of:

A) R\$ 30,000.00 (thirty thousand reais), in the years of 2005 and 2006 (in 2006 the value to be transferred will be equivalent to the months in which the PCH will be in construction).

B) R\$ 200,000.00 (two hundred thousand reais) per year, from the moment in which the undertaking will be producing electric power at full force, foreseen in the schedule for 08/15/2006;

C) R\$ 3,000.00 (three thousand reais) per year, from the effective domiciliary electric connection in Sacre 2 and Bacaiuval Villages. This amount will be transferred to the Indian Association of Zaloya and must be used for payment of the corresponding bills/invoices of electric power that will be issued by local power supplier, referring to the consumption of 15 (fifteen) homes referred to in paragraph 2 and of two water pumps effectively connected on behalf of the corresponding Association.

These compensations will be occurring naturally, being readjusted by IGPM, and having as reference the month of March, 2005 and transferred by Brasil Central directly to the Associations, which represent the Application Plan, for analysis and approval by FUNAI that submits it to Brasil Central. The compensation id being deposited on a specific account of each Association, according to the percentages:

Waymaré Association: 37,5 % (thirty-seven and a half percent);

Halitinã Association: 37,5 % (thirty-seven and a half percent);

Zaloya Association: 25 % (twenty-five percent).



Taking into account that FUNAI – Brasília, through Notice dated on 07/19/2006, of the General Coordinatorship of Indian Patrimony and Environment, addressed to Brasil Central, understood that the undertaking PCH SACRE 2 (SALTO BELO) despite of being some 12 kilometers away from the Indian Group Nambikwara from Indian Land of Tirecatinga, should be considered as a program of mitigation and/or compensation.

In face of this situation, there has been held a meeting with indians and Association leaders, with the presence of FUNAI and after the consensus, there has been signed the “Term of Amicable Composition and Other Agreements” with the Indian Association of Wاكلitsu, T. I. Tirecatinga, Indian Village of Três Jacu, in Sapezal – MT, on 08/02/2006, in which as an effective provision the parties agree that the compensation measure will consist of the amount of R\$ 40,000.00 (forty thousand reais) per year, as long as lasts the electric power generation of the PCH SACRE 2 (SALTO BELO), and the Association must present an “Application Plan” with knowledge and favorable opinion of FUNAI, for releasing the resources, what will occur till the fifth business day of December of every year. The amount agreed upon must suffer adjustment according to IGPM-FGV (ATTACHMENT 07).

6 – MANAGEMENT ABILITY

With the purchase of the undertaking by Heber Participations Ltda (Bertin Group), the first measure has been the contracting of personnel for accomplishment of “Environmental Programs”, so as to inform the Said purchase to the bodies such as: Secretariat of Environment - SEMA-MT, National Agency of Electric Power – ANEEL, National Institute of Historic Artistic Patrimony – IPHAN, National Indian Foundation – FUNAI, Regional Council of Engineering and Architecture – CREA among others, so there may be performed the due alterations.

Before the very purchase, the company Heber Participations Ltda., has contracted a specialist for performing the survey of “environmental liability” of the PCH, and since the works had not began yet, and who, after a meeting with SEMA/MT, FUNAI-Tangará da Serra/MT and Indian Communities, have visited the site of the undertaking, what allowed the Group to establish a strategy of action for starting the works.

7 – MONITORING

As the environmental programs proposed progressed within the pre-established terms, the civil construction of the PCH has evolved in a joint manner with the performance of mitigating measures. Therefore, through visits, lectures and meetings, the Indian Community has been able to know and follow up on all the steps and phases of the undertaking.

From now on, according to environmental conditions, included in Operation License, issued by the State Secretariat of Environment - SEMA - MT, there is provisioned the **quarterly** collection of environmental data (referring to water quality and others).



The preparing of booklets, periodical visits, meetings/lectures at Indian Community, visits to the PCH work in progress by the Indian community and FUNAI representatives, have contributed to the establishment of a positive dialogue between both parties in this partnership process.

Before the beginning of the works, there has been taken care to preserve the integrity of the Indian Community, aiming always to minimize the possible environmental impacts resulting from PCH implementation, within the philosophy of respect and social responsibility that the company adopts for the community where it operates, and mainly in this undertaking.

The contentment of the company is to see the satisfaction of the Indian Community and its representatives in perceiving that the information on the project, initially on paper, and the commitments assumed, were and are being met.

There remains pendent for being met the “Term” with the Indian Associations, the implementing of Indian Cultural Reference Center. Till the end of this task, there will occur **weekly periodical meetings** with the Indian Authorities and other partners, in order to assure the success of the task.

From the implementing of Indian Cultural Reference Center onwards, there will remain be the ongoing deposit of monetary amount agreed upon in the “Term of Compensation”.

In addition, if there is any doubt, suggestion or problem as to the undertaking, the Indian Associations, via FUNAI, may enter in contact with the company, which is open for meetings, and dialogs in order to clarify and give information held as necessary.

To contact of Brasil Central Energia S. A. – PCH SACRE 2 (SALTO BELO) – (Bertin Ltda) is:

Ms. Suélen Assaiante (Manager of Corporative Communication.)

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ENVIRONMENTAL AND SOCIAL ACTION PLAN

BERTIN'S SLAUGHTERHOUSE IN MARABÁ AND ITS CATTLE SUPPLY CHAIN

November 17, 2006



ENVIRONMENTAL AND SOCIAL ACTION PLAN

1. ENVIRONMENTAL MANAGEMENT

This Environmental and Social Action Plan (ESAP) comes as a result of the Environmental and Social Impact Assessment (ESIA) of Bertin's slaughterhouse in Marabá and its cattle supply chain, prepared by the Brazilian branch of the international consultancy ARCADIS Tetraplan. The ESAP is also an integral part of Bertin's Corporate Action Plan (CAP) that applies to all the company's facilities in Brazil.

In addition to the items covered by the ESAP, Bertin's Corporate Action Plan includes the following components: (a) Environmental and Social Management System; (b) Pollution Prevention and Abatement Plan; (c) Indigenous Peoples' Development Plan for the Bertin small hydroelectric facility Sacre II; (d) a Public Consultation and Disclosure Plan, all of which have been disclosed to the public.

The ESAP consists of the set of mitigation, management, monitoring, and institutional measures to be taken during implementation and operation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. The plan also includes the actions needed to implement these measures.

To prepare an action plan, Bertin through the Tetraplan team: (a) identified the set of responses to potentially adverse impacts; (b) determined requirements for ensuring that those responses are made effectively and in a timely manner; and (c) described the means for meeting those requirements. More specifically, the ESAP includes an important environmental management component.

Environmental Management: Effective implementation of an ESAP begins with sound company policies on environmental and social issues, together with senior management commitment to their effective implementation. The goal should be to continually improve performance in these areas.

The ESAP hereby provides a specific description of the project company's current arrangements. However, in order to discharge Bertin's new responsibilities under contract with IFC, the company environmental and social capabilities must be enhanced both at corporate level and, particularly, in Marabá. The company is committed to do this by appointing key additional staff and hiring consultants to help Bertin develop its Environmental and Social Management System (ESMS).

Bertin's Environmental and Social Management System (ESMS), system will become part of the company's overall management system. Such a system includes appropriate organizational structure, responsibilities, practices, and resources for the successful implementation of project-specific social and environmental management programs such as that of Marabá.

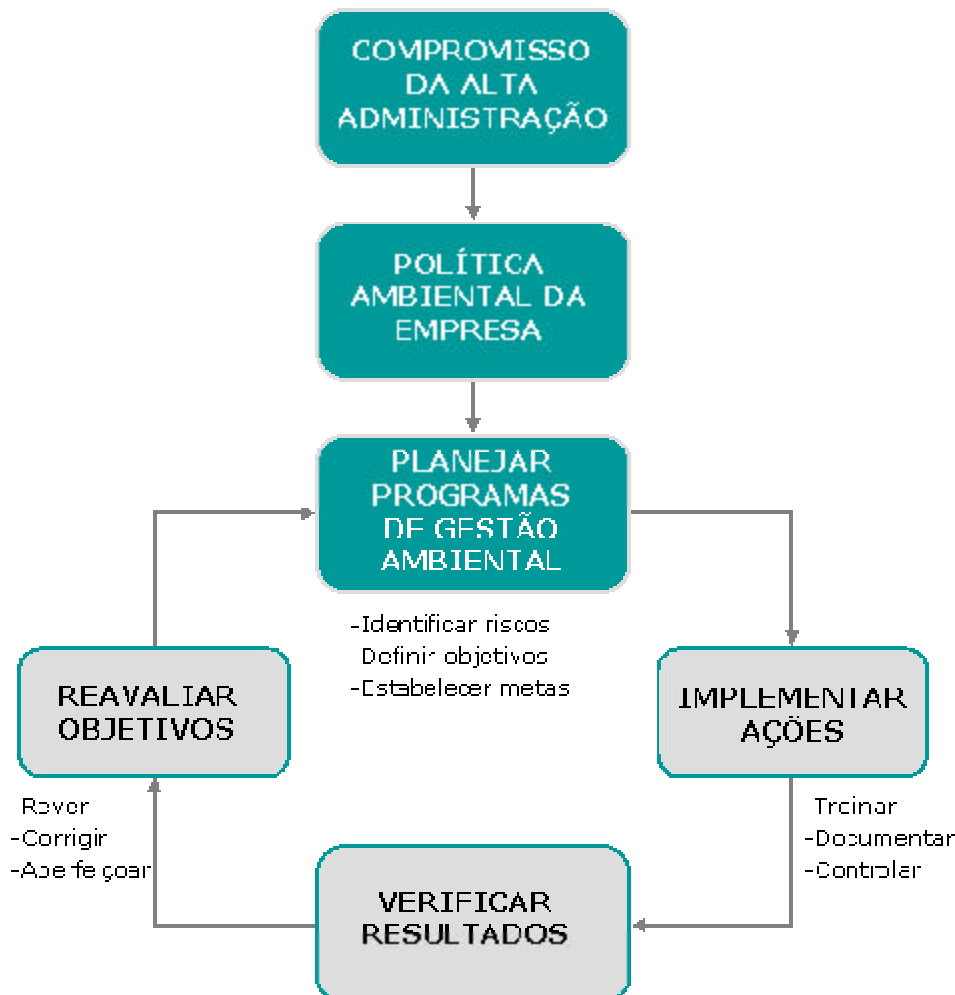
Through its management system Bertin intends to achieve a continuous improvement of the project's social and environmental performance and lead to improved financial, social and environmental project outcomes.

Bertin will establish and maintain a social and environmental management system appropriate to the nature and scale of its plans for corporate development and commensurate with the level of social and environmental impacts and risks. At a minimum, the management system will include the following elements:

- Review of the social and environmental impacts and risks of the operations
- Definition of a set of policies and objectives for social and environmental performance.
- Establishment of a social and environmental management plan to achieve these objectives
- Monitoring performance against these objectives
- Reporting of the results appropriately
- Review of the system and outcomes, striving for continuous improvement

The ESMS will be structured with interrelated procedures, allowing also the possibility of amendments according to the need and reality of the company's circumstances. The proposed ESMS is based on a cycle of actions of environmental management, aiming at the continuous improvement in the environmental performance of the organization, as shown below.

Figure 1 - Cycle of actions of environmental management





The implementation of the system will occur by means of the integrated environmental and social management program, understood as dynamic processes with a systemic approach, environmental and social objectives and goals to be reached within a set timetable.

1.1 THE COMPANY: BERTIN GROUP

The Bertin Group is a holding company with 100% national stock that operates in the segments of agribusiness and infrastructure. Headquartered in the State of São Paulo, during its 30 years of existence it has grown to 28 productive units distributed throughout Brazil, with a workforce of 24.000. Bertin has become a strong and reputable trademark that provides a range of products and services offered in Brazil's internal market and more than 80 countries, in the five continents.

According to the precepts of the agribusiness industry, the Bertin Group seeks to optimize the utilization of the entire cattle network. Following a diversification strategy, the company has developed an industrial conglomerate focused in nine businesses divisions: Agriculture and Cattle Grazing, Foodstuff, Biodiesel, Cosmetics, Leather, Dog Toys, Personal Protective Equipment, Hygiene and Cleaning and Industry. The infrastructure division has three areas as follows: Civil Construction, Basic Sanitation, Energy and Transport.

All the sectors of the Bertin Group share a common vision: continuously investment in quality, technology, research, training of the workforce, logistics, processes of marketing management and strategy.

The mission of Grupo Bertin is to add value and promote development amongst its various stakeholders – shareholders, staff, clients, suppliers, partners, investors, public authorities, the community and the media.

1.2. ORGANIZATIONAL STRUCTURE - THE BERTIN SLAUGHTERHOUSE AT MARABÁ

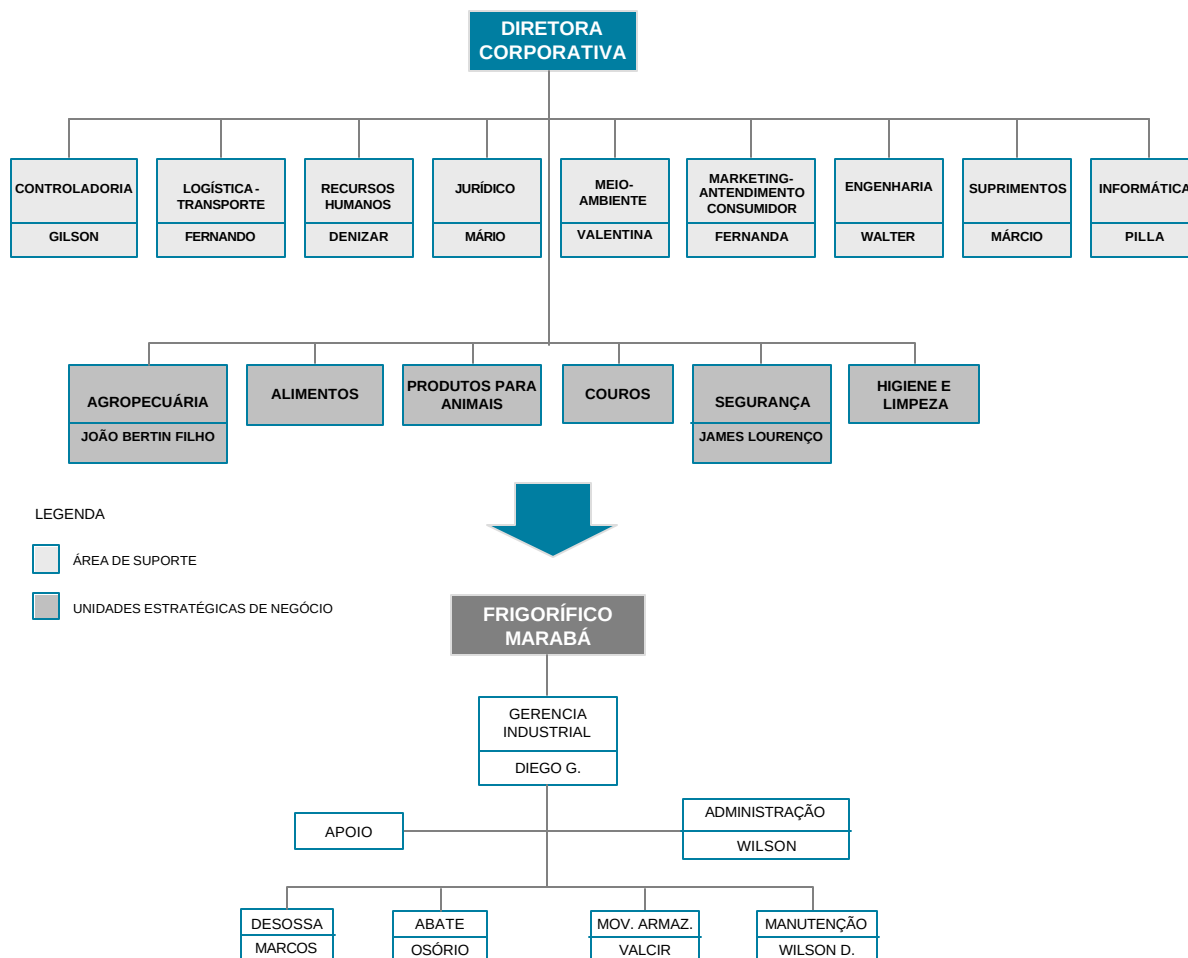
The newest acquisition of the Group, a slaughterhouse located in Marabá, in the State of Pará, in Legal Amazon Region, is developing in a manner consistent with Bertin's vision and mission. This plant will be expanded to double its slaughter capacity to 1600 heads of cattle per day, which requires a commercial and productive relationship with some 600 regular suppliers located within a radius of approximately 250 km.

Although the Marabá plant is a recent acquisition, it has already been considered within the company's corporate Environmental and Social Management System. The environmental and social impact assessment undertaken by Tetraplan will provide valuable inputs for the implementation of the management program for Marabá (i.e. the ESAP).

1.2.1 Bertin's Organization

Bertin's organizational structure follows a functional model, suitable to a company with multiple plants throughout Brazil and abroad. The following figure shows the relations between the components of the company's senior administration including the environmental management responsibilities.

Figure 2 Bertin's Organizational Flow Chart including the Slaughterhouse in Marabá



1.2.2 Mission - Environment, Occupational Health and Security

Bertin's mission regarding environment, occupational health and safety is as follows: Guarantee the health and physical integrity of the collaborators of the Empresas Bertin Ltda., as well as of the prevention of accidents and the preservation of the environment.

This mission is supported by the following tools and Programs:

- LTCAT - Technical Report of the Work Environments Conditions.

Document that gives authorizes all the environments and work stations of the Empresa Bertin Ltda. – Unidade Alimentos de Marabá/PA, aiming at the physical recognition of the work environments, of the machines and equipment, of the cycles of activities correspondent to each work station and of the occupational, environmental and operational risks existent in them. Such document gives foundation to the elaboration of the



Environmental Risks Prevention Program – PPRA and to the Occupational Health Medical Control Program – PCMSO .

- PPRA – Environmental Risks Prevention Program

The Program aims at the preservation of the health and physical integrity of the workers of the Empresa Bertin Ltda. - Unidade Alimentos de Marabá/PA, through the anticipation, recognition, evaluation and control of the environmental risks existent or that may come to exist in the work environment, having in view the protection of the environment and of the natural resources. The program follows the following structure:

- Annual planning with the establishing of goals, priorities and timetable;
- Action strategy and methodology;
- Registration, maintenance and divulgation of data;
- Annual periodic evaluation.

- PCMSO – Program of Medical Control of Occupational Health

Program established based on the risks to the health of the workers specially identified in the Labor Environmental Conditions Report – LTCAT of the Alimentos de Marabá/PA Unit, it has preventive character with tracking and precocious diagnosis of the harms to the health related to the work, including of sub-clinic nature, besides the finding of the existence of cases of professional illnesses that may be irreversible to the health of the worker.

- PGR – Risks Management Program

It consists in a program of patrimonial risks management focused in the installations of the company, in the proposition of continuous improvements and in the administration of the same through periodic inspections.

1.2.3 Environmental and Social Control and Management

The environmental and social management of the slaughterhouse in Marabá is supported by the following Programs/ Plans:

a) Environmental Management:

- PGR – Risks Management Plan

It consists in a structured system for the control of damages risks involving harmful products handled and or stored in the company with emphasis in the process, in the critical machines and equipment and security devices.

Regulation : CETESB/SP;

- PAE – Emergency Action Plan

Consists of a plan that anticipates emergency and organized actions in the case of damages, with emphasis in the abandonment of area, fire fighting and containment of hazardous materials and waste

Regulation : CETESB/SP;



- PCA – Environmental Control Plan

It consists in a plan that anticipates the amplification and improvements in the system of treatment and handling of waste waters and solid residues, presenting as purpose to provide the company of system capable of reducing the organic charges, aggregating environmental value to its products.

b) Corporate Social Responsibility (Code of Conduct – Bertin Ltda.)

It aims to establish the premises that guide the understanding about responsibility and social development, the welfare of the workforce that produce the commercialized goods and services.

The fulfillment of these principles is a commitment of the Company Directorate towards its stakeholders (clients, consumers, partners and government institutions) and, as such, must be understood and adopted by all the employees of Bertin.

1.2.4 Procedures for Operational Management

In the management required to the operations the following Programs are adopted:

- BPF – Good Manufacturing Practices

Trainings Programs in order that the collaborators know, understand and accomplish the personal hygiene, as well as the sanitization and control applied to the processes and products, assuring that the same arrive to the clients and consumers with quality and free from any type of contamination.

- PPHO – Standard Procedures of Operational Hygiene

Document that formalizes the standardization of the procedures in the critical production control points with the employees involved, aiming at guaranteeing the harmlessness and quality of the foodstuffs.

- APCC – Analysis of Hazards and Critical Control Points

Also called APPCC system, it aims to establish critical points in the production process, related to variables of climates, manpower, raw material, inputs, etc. so as to focus the verification actions (inspections) controlled in the predetermined points, with the final objective of guaranteeing the feeding security of the clients.

1.3 EVALUATION AND RECOMMENDATIONS OF THE ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM

Following an evaluation of the main components of the Bertin's current environmental and social management procedures for the slaughterhouse in Marabá, ARCADIS Tetraplan provided the following recommendations:

- Definition of the company's environmental and social policy both at corporate level and for Bertin's plant in Marabá. This is a matter of urgency given that the unit is located in the Legal Amazon where deforestation has traditionally been used to open land for cattle grazing, and where there are still serious social problems involving unscrupulous cattle ranchers.



- Strengthening of Bertin's environmental, health, safety and social development structure. While the company currently has a highly capable corporate environmental manager, and a good OHS team, there is no similar position or team for the management of Bertin's social development responsibilities. Bertin needs to appoint a corporate social development specialist, and enhance the local teams, particularly in Marabá to enable the implementation of the ESAP ;
- Enhancing environmental and social awareness and training the operational staff and particularly the cattle buyers in Marabá to enable them to fulfill the objectives of the ESAP. This work should also be extended to Bertin's suppliers to explain the business case for good environmental and social behavior and for working within the precepts of the law and good agricultural practices..
- Guarantee the involvement of Bertin's staff at all levels in reaching out to the community to understand the company's role in the development of the region. Disseminate information about the company's efforts to improve their environmental and social performance for the benefit of the region and consult the community on the outcomes.
- Provide technical assistance to Bertin's suppliers of cattle, industrial inputs, food and drink for the companies refectories, etc., to encourage them to share the company's values and to seek the high quality that its own clients expect from Bertin.
- Expand Bertin's management systems beyond the realm of quality assurance and equip the organization to develop and implement an ESMS compatible with international standards such ISO 14001 and OHSAS 18001. Given the environmental and social sensitivity of the Amazon region, Bertin's plant in Marabá should be one of the first ones to implement the ESMS.
- Develop and implement a Corporate Social Responsibility Program to enhance the developmental impacts of the company within its area of influence. Again, the Bertin slaughterhouse in Marabá would be an ideal pilot for the implementation of this program.

Bertin is committed to improve the operational performance of the slaughterhouse of Marabá and to prepare itself and its suppliers for the additional requirements that will come into effect when the area opens for export to the most demanding markets, such as the EU. While the above recommendations would take Bertin a long way towards attaining these objectives, other actions would be necessary, including the implementation of internationally accepted agricultural practices, including cattle traceability.

2. STRUCTURE OF THE ENVIRONMENTAL AND SOCIAL ACTION PLAN – ESAP

As part of the Environmental and Social Impact Assessment of the Bertin slaughterhouse in Marabá and its supply chain, Tetraplan identified, evaluated and prioritized the impacts of the project.

Key impacts were then paired with a set of objectives intended to mitigate the negative impacts and enhance as much as possible the positive impacts (the social benefits of the project). The result was a matrix of impacts/objectives, which in turn allowed the identification of management measures grouped as environmental and social programs. The matrices of impacts/objectives and objectives/programs are attached here as a reference.



There are five programs in the ESAP, as follows:

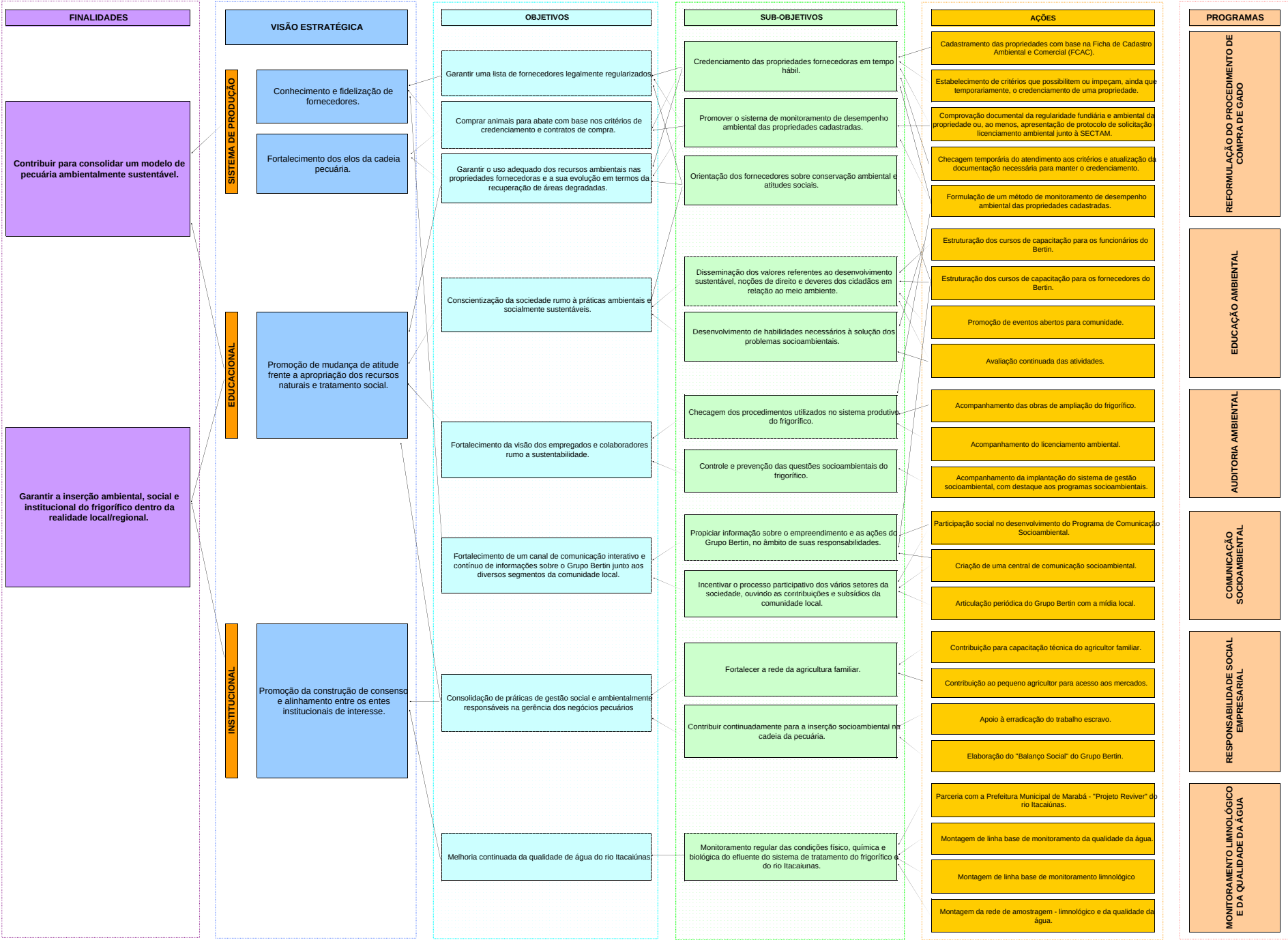
- Reformulation of Bertin Marabá's Cattle Purchasing Procedure
- Corporate Social Responsibility Program
- Environmental Education Program
- Limnologic and Water Quality Monitoring Program
- Environmental Auditing Program

During the development of the Environmental Impact Assessment the company, through Tetraplan, organized a series of public meetings within the area of influence of the Marabá slaughterhouse and three in the city of Marabá. The first two of these meetings were intended to present the Bertin's slaughterhouse expansion project and its potential environmental and social impacts. During the third one Bertin presented the ESAP programs that they committed to undertake.

The attached graph of objectives and means¹ shows the cause and effect relationship between the programs with their measures, converging so that one may reach sub-objectives at middle term (2009) that, by their turn, allow one to attain the objectives in the horizon of the ESAP (assumed as 2014). This structure of objectives and sub-objectives is the outcome of a strategic vision orientated to three main general objectives: sustainable production; environmental and social awareness and education; and enhancing institutional governance with focus on a sound environmental and social performance.

¹ The graph translates the principles of the Systems Theory, evidencing one of the most relevant techniques of the indicative planning.

Figura 9.3 - PROGRAMAS SOCIOAMBIENTAIS - GRÁFICO DE OBJETIVOS MEIOS



3. SOCIAL AND ENVIRONMENTAL ACTION PLAN – PROGRAMS

A number of mitigation, compensation and monitoring measures have been proposed to manage the negative environmental impacts of the project, while enhancing measures have been put forward for the positive impacts identified. These measures form the base for the programs that encompass the Environmental and Social Action Plan (ESAP), described below.

The systematization of the measures allows to them to be organized with the configuration of programs containing: objectives, target-public, proposed actions, timetable and responsible institutional entity. The timetable for the implementation of the ESAP starts on the date of signing the loan agreement between Bertin and IFC.

Each program relies on one or more indicators to accompany its implementation and to assess its effectiveness within the Plan. Based on these indicators, the managers will evaluate the development of the programs and make adjustments in the case there are deviations from the expected results.

The programs presented are consistent with those of the slaughterhouse and the associated cattle production chain.

A great part of the proposed measures linked to the supply chain are consistent with governmental programs regarding forest protection, titling, environmental licensing, cattle traceability, which encourage good agricultural practices and seek the safeguard of the environment. Other environmental and social action programs are being developed within the scope of Bertin's Corporate Action Plan (CAP) and in relation to other initiatives by Bertin to enhance good governance.

3.1 PROGRAM TO IMPROVE THE CATTLE PURCHASING PROCEDURE OF THE BERTIN SLAUGHTERHOUSE IN MARABÁ.

Objectives

- To ensure that the activities of the slaughterhouse do not promote the deforestation in the Amazon; and
- To guarantee that the cattle purchased by Bertin's slaughterhouse in Marabá does not derive, direct or indirectly, from properties involved in forced labor, illicit land titling processes, agrarian violence, recent illegal forest clearing, disrespect of the environmental legislation or invasion of indigenous lands.

Description

The above objective will be attained by the following general actions:

- Incentive to the application of good agricultural practices, including:
 - o Effective use of the already deforested areas in the Marabá region, through the improvement of pasture handling techniques.
 - o Preparation and training of the cattle suppliers for the implementing of the animal traceability system that will be required as soon as Area 1 of control of the foot-and-mouth disease is liberated for export to the most demanding international markets.

- Improvement in the capacity of the Bertin group to monitor the environmental and social performance of its suppliers by means of:
 - o Development and implementing of a register of suppliers of the Bertin slaughterhouse of Marabá, in which it is assured that each registered supplier is in compliance with the required criteria;
 - o Purchasing of animals for slaughtering concerning the environmental and social criteria established, and exclusion of the producers that do not comply with the same; and
 - o Incentive to the implementing of improvements in the use of the suppliers' land and follow-up of the efforts to reclaim degraded areas and reforestation of illegally deforested areas.

Target Public

This program is directed to the Bertin slaughterhouse of Marabá and to the suppliers of animals for slaughtering, currently around 615.

Anticipated actions

Action 1 - Adoption of cattle purchasing criteria for the Bertin slaughterhouse.

The Bertin group will adopt several cattle purchasing criteria considered important and viable in the context of the Marabá area, to accredit farms as "Approved Suppliers". These criteria will be divided between critical and additional criteria. While the former are considered as fundamental conditions required for immediate accreditation by Bertin, the latter are expected to be implemented gradually in a longer term.

Bertin's enhanced cattle purchasing criteria are described below :

Critical criteria:

1. No involvement with forced labor.
2. No involvement with illegal acquisition of lands (grilagem).
3. No involvement with agrarian violence.
4. Absence of illegal deforestations since starting of 2006.
5. That the producer does not possess lands or cattle-raising in properties that invade indigenous Lands - TL.

Additional criteria :

1. Regularity in the titling of the lands.
2. Fulfillment of the environmental requirements.
3. Implementing of the SISBOV traceability system.
4. All cattle sold to Bertin must come, directly or indirectly, from farms that fulfill all cattle purchasing criteria.
5. Incorporation of the Good Agricultural Practices protocol.
- 6.

Timetable: The above criteria will serve as a basis to orientate the cattle purchases of the Bertin slaughterhouse. The non-fulfillment of the critical criteria implies a non-accreditation of the producer and, therefore, that the same will not be able to supply cattle to the Bertin slaughterhouse.

Should a supplier be accredited and, afterwards, comes to infringe one or more of the critical criteria, the monitoring system will identify the infringement and the farm will be disaccredited. The critical criteria will be implemented within a term of until 2 months after the execution of the agreement with the IFC and the other criteria will be implemented afterwards in two stages. The implementation of the cattle purchasing will be further discussed under Action 7 below.

Action 2 - Development of an Environmental and Commercial Registration Template ("ECRT").

This action involves the preparation of an appropriate register template to be distributed to Bertin's suppliers. These will fill out the templates and return them to Bertin, which in turn, will accredit the properties as "Approved Suppliers". The template must include information about the location of the property, the production system involved and whether they fulfill the criteria described in Action 1. The template will be based on the current SISBOV model, so that suppliers start preparing themselves for the obligatory requirement of cattle traceability. This will get into force as soon as the area 1 of the control of the foot-and-mouth disease is liberated for export to the most demanding markets.

Timetable: Two months after the signing of the loan agreement.

Action 3 - Development of a system of property registration.

The system will consist of a computer program that will systematize the information obtained in the ECRT and will make it available, in a simplified manner, to the cattle purchasing team of Bertin. The Actions 2 and 3 are intrinsically related and will be jointly accomplished.

Timetable: Two months after the execution of the agreement

Action 4 - Orientation of Bertin's cattle purchasing team in Marabá and its suppliers on the purchasing procedure and criteria.

The Bertin slaughterhouse will publish the requirements for a property to be approved and will provide assistance about how the criteria may be fulfilled by suppliers that wish to become compliant in the short term. This action considers several ways to provide orientation including training sessions, meeting, printing of folders/pamphlets, etc. The objective is to improve the understanding of Bertin's purchasing team and its suppliers on the importance of the purchasing criteria and how cattle ranchers may become an "Approved Supplier".

The establishment of partnerships, with class entities, for instance, will be important for the success of this action.

Timetable: Two weeks after the conclusion of the actions 2 and 3.

Action 5 - Collecting information of suppliers' properties

The Bertin group will use the ECRT to collect information from all the farms that currently supply cattle, as well as those that intend to become suppliers. During first cattle sale after the orientation described above, suppliers will receive a copy of the ECRT, which shall be completed as a requirement for the next sale, together with the pertinent supporting documents as it is herein ahead detailed. The completion of the form is pre-

requisite for accreditation and must be made by all suppliers that intend to continue selling cattle to the Bertin .

At the same time, the Bertin will send the ECRT to all its regular suppliers and collect the required information following a pre-determined timetable. Bertin representatives will collect information available directly from government databases and/or from other published sources. This will be a continuing process to allow new suppliers to get accreditation from Bertin. Verification of the fulfillment of cattle purchasing criteria will be as follows:

Critical criteria (to be implemented in until two months after the orientation to the Bertin purchasing team):

- Criterion 1: No involvement with forced labor. The inclusion of a farm owner in the so-called “Dirt List” of the slave labor, divulged every six months by the Ministry of Labor and Employment (<http://www.mte.gov.br/Noticias/conteudo/5773.asp>), disaccredits the same as “Approved Supplier” to Bertin.
- Criterion 2: No involvement with illegal acquisition of lands (grilagem). The declarations of the producers with relation to the property of the land will be checked with the Vara Agrária de Marabá (Marabá Agrarian Circuit Court), by means of checking the list of proprietors convicted of land titling related crimes.
- Criterion 3: No involvement with agrarian violence. In this case the declarations of the proprietors will be verified with the *Vara Agrária de Marabá*, by means of checking the list of convictions for agrarian violence.
- Criterion 4: Absence of illegal deforestation since January 1st., 2007. Bertin will verify whether the farm owners have been charged of illegal deforestation by checking the corresponding list in the Official Gazette or at the State Secretariat for the Environment (SECTAM).
- Criterion 5: Whether the producer has land or cattle grazing in properties that invade Indigenous Lands – IL. Verification of the occurrence of these incidents will be periodically made at the FUNAI Unit in Marabá.

Once in possession of the lists obtained from the public agencies, Bertin’s Marabá purchasing team will be able to check the fulfilling of the critical criteria, at the time of registering new suppliers.

The producers that do not meet these critical criteria will be excluded from immediate accreditation, and will not be able to sell cattle to Bertin. However, their ECRT will be kept if and when they regularize their situation.

Beside the ECRT, all producers will be asked to sign terms of accession, committing themselves to abide by the critical criteria, namely, with a means of production that does not involve slave labor, land fraud, agrarian conflict, illegal deforestation and/or invasion of indigenous lands. Bertin group will continue monitoring the performance of this commitment as described in action 8 below

Criteria to be implemented in one year

- Criterion 6: Regularity in the titling of land. Proprietors must submit annually an authenticated copy of the Rural Territorial Tax – “ITR”.
- Criterion 7: Property complies with government environmental requirements. The proprietors must present the environmental licenses for farms issued by the Executive Secretary of Science, Technology and Environment of the government of Pará – SECTAM. In case the property does not have this license, the proprietor will have one year to present the

protocol evidencing the start of the procedure to acquire the same. Within the period of two years the proprietor must present the definitive environmental license issued by the SECTAM.

If after this period the supplier does not present the protocol or environmental license of the SECTAM, the same will be discredited by the Bertin group.

Criteria to be gradually implemented after the opening of the area for export to the most demanding international markets.

- Criterion 8: Implementation of the SISBOV traceability system according to the requirements and timetable established by the corresponding authorities. Corroboration will be done by means of SISBOV documentation.
- Criterion 9: All cattle sold to Bertin must come, directly or indirectly, from farms that demonstrate, with appropriate documentation, the fulfillment of Bertin's cattle purchasing criteria.
- Criterion 10: Incorporation of the Good Agricultural Practices protocol. The supporting documentation must include a farm management plan, or certification by internationally accepted standards such as EurepGAP, granted by an accredited company.

Timetable: Collection of information will commence two (2) months after signing the loan agreement between the Bertin Group and IFC. All suppliers must be registered six (6) months after the agreement. The collection of information follows in a continuous process. One year after the registration system has been established Bertin will assess whether it is functioning properly and adjust it as necessary to ensure that it responds to its objectives.

Action 6 - Systematization of the information.

The Bertin slaughterhouse will develop and populate an information system with the information provided by the farmers in the ECRT, test the reliability of the system and make it available to the purchasing team. The entry of information will be a continuous process as long as suppliers request accreditation by the Bertin group.

Timetable: Commencing according to the availability of information collected as per action 5 and following a continuous process.

Action 7 - Accreditation of the properties

When the complete documentation of a property is available, it will be checked and, in case of compliance, the farm will be recorded as "Approved Supplier" – the declaration may be conditional in case there are outstanding items. That is, there will be two types of accreditation: 1) Accredited suppliers without pending items, and 2) Accredited suppliers with pending items.

If the property does not fulfill all additional criteria, Bertin will advise about the measures required to become accredited and will provide a timetable for the supplier to comply. The Bertin purchase team will consult the environmental and commercial register of the properties whenever it makes a cattle purchase and will not purchase from the properties that are not accredited or that are not able to fulfill the pending items in the appropriate time.

Timetable: The accreditation of the properties will start as soon as the corresponding information is available in the system. The accreditation of current suppliers will be completed in six months after the signature of the loan agreement, by the time all relevant information on current suppliers has been collected as per action 5. The

accreditation of new suppliers will follow in a continuous process. The Bertin purchasing team will fully adopt the cattle purchasing procedure and commence to take purchasing decisions based on accreditation six months after the agreement

Action 8 - Continued monitoring of environmental and social performance

The Bertin group will create a department to undertake the environmental and social monitoring of the accredited farms in order to ensure that the established criteria are continuously met. This follow-up will include regularly checking the available databases, governmental or otherwise, monitoring of the deforestation by means of satellite images, and eventual visits to the farms as appropriate.

Monitoring measures for the several criteria, as well as their periodicity, are presented in the following tables:

Critical criteria

Critical criteria	Continued Monitoring Mechanism	Periodicity
Criterion 1 – Slave work	Verification of the Dirty List, published by the Ministry of Labor and Employment	Monthly
Criterion 2 – Lands squatting	Checking with the Agrarian Court Circuit of Marabá	Monthly
Criterion 3 – Agrarian Violence	Checking with the Agrarian Court Circuit of Marabá	Monthly
Criterion 4 – Illegal deforestations since January 2006	a) Checking of the issuance of fines by illegal deforestation, in the SECTAM/Official Gazette	Monthly
	b) Independent checking by means of satellite images, based on the geographic coordinates of the properties supplied in the ECRT, and confirmation by the authorities that the clearing was indeed illegal	Annually
Criterion 5 – Invasion of Indigenous Lands	Checking with FUNAI of Marabá	Monthly

In case a registered producer infringes the terms of accession to the Bertin purchase principles, it will be discredited as supplier of the slaughterhouse. When the same regularizes its situation and complies again with the criteria, it will be reaccredited.

Additional Criteria



Critical criteria	Continued Monitoring Mechanism	Periodicity
Criterion 6 – Legality in the property of the land	Copy of the ITR	Annually
Criterion 7 – Compliance with the environmental requisites	a) Presentation of the entry protocol for the environmental licensing in SECTAM	After 1 year
	b) Presentation of the environmental license issued by SECTAM	After 2 years
	c) Proof of the fulfillment of the conditioning items defined in the environmental license	According to the timetable established in the license

Environmental Performance Monitoring

To assess progress in the implementation of land-use improvements Bertin will monitor farmer's environmental performance and make available information, documents and reports to IFC as follows:

- Database of the supplier's registration system, which will also contain:
 - % of Environmental Preservation Area ("APP"),
 - % of properties with Legal Reserve (LR) registered with the pertinent agencies.
 - % Reclamation plan signed by the corresponding authorities,
 - % of the properties that undertake erosion control
- Satellite imagery and the corresponding annual land-use reports
- Reports regarding training on good management practices for Bertin's staff, suppliers, and clients
- Annual monitoring reports including an analysis of the registration and accreditation system and of the environmental performance of Bertin's suppliers

Timetable: Monitoring of Bertin's performance in implementing the cattle purchasing procedure and reporting will start immediately after the execution of loan agreement between Bertin group and the IFC, and will be a permanent activity as presented in the timetable that follows. The evaluation and the monitoring of the environmental and social performance depend on the constant updating of the properties' registry and the use of satellite imagery to detect illegal clearings. The yearly evaluation process will, therefore, start one year from the date the database becomes operational. Satellite imagery will be utilized by the Bertin group until the mechanisms required for the implementing of the Law no. 10.267/01 are established and are in operation, when it is expected that the pertinent state agencies assume the function of satellite monitoring.

Table 1 – Timetable for the Reformulation of Bertin's Cattle Purchase Procedure

[illegible]

3.2 CORPORATE SOCIAL RESPONSIBILITY PROGRAM

The corporate social responsibility implies in the development of socially responsible management practices in the management of the businesses, not only attending the principles of competitiveness, such as low cost and high standard of quality of the products, but also contemplating sustainable development aspects, assuming dialogue practices with the involved communities and, further, employees, clients and suppliers.

Objectives

To develop practices that insert the business in a more ample context of social commitments, both in the local and in the regional level, promoting the interaction of the Bertin group with the local ambience, and strengthening processes and actions, public and private, which aim at better social conditions.

Target Public

- Local and regional community, with special attention to the family farmers,
- Employees, clients and suppliers
- Communitarian leaderships and organizations of the civil society,
- Institutions that actuate in the formation of the public opinion (Churches, Unions, Associations, Written Press, Radio, TV).

Anticipated sub-programs

Sub-program 1 - Contribution for Technical Capacity of the Family Farmer in the terms established by the Ministry of the Agriculture and Agrarian Reform

Description: Contribution for the strengthening and dynamization of the diversification of the local economy, within the parameters presented by the local partners, given the understanding of the relevance of this diversification also for the enterprise.

Action 1 - To establish Partnerships of the Bertin Group with local Universities and with the Technical Support Cooperatives of the Family Farmers for continued formations in social and environmental themes and also in those related to the production of the rural settlement projects.

It should be emphasized that the first contacts of the Bertin group with the LASAT – Laboratório Sócio Agrônômico do Tocantins (Social Agronomical Laboratory of Tocantins) have already been established. This NGO (“ONG”) works since 13 years ago in the region, with formation and development of the family agriculture, in partnership with the NEAF – Núcleo de Estudo da Agricultura Familiar, do Centro Agropecuário da Universidade Federal do Pará - UFPA (Family Agriculture Study Nucleus, of the Agricultural and Cattle-Raising Center of the Federal University of Pará) and has realized continued graduations with the teams responsible for technically supporting the rural settlements of the south and southeast regions of Pará. Among these teams are technicians of the COPSERVIÇOS – Cooperativa de Assistência Técnica dos Agricultores Familiares (Technical Assistance Cooperative of the Family Farmers).

So that the Bertin group will develop procedures for the establishing of partnerships that make possible, among other aspects:

- Financial and/or methodological support to the Continued Graduation Courses of the LASAT, mainly as related to the dissemination of techniques on reform of grazing lands, animal welfare and good agricultural practices.

- To give emphasis in the Environmental Education Program, in a specific method for the family farmers and UFPA and EFA (Agricultural Family School) students, which promotes the reflection on conservation of the natural resources, emphasizing the role of man as transforming subject, as of the key-themes: Environmental Management; socially and environmentally sustainable Cattle-Raising Model; Good Agricultural Practices Systems; Natural Resources (fauna, flora, water and soil); Solid Residues – Recycling; Wasting of natural resources and of energy (day-to-day actions) and Deforestation and relation with the jeopardizing of the biodiversity.

Sub-program 2 - Contribution to the family farmer for the commercialization.

Description: Contribution to the strengthening of the family agriculture with actions of increasing of the commercialization of the products derived from the rural settlement projects.

Action 1 – To establish partnerships with Cooperatives of Production of the Family Farmers for increasing of the commercialization of the settlement projects products.

The Cooperatives of Production of the Family Farmers have worked in the attempt of promoting the viability of the family agriculture in the region, by means of incentives to the diversification of the production, with the inclusion of the production of grains, extractive forestry products, raising of small animals, fish-culture, among others.

The family farmers have been organizing themselves in production cooperatives as a form of enhancing their commercialization channels to beyond the urban fairs and retailers markets.

The Bertin group may, by means of these cooperatives, move several actions such as:

- i) acquire products derived from family farmers, such as milk, fruits and vegetables, to be utilized in the meals that will be offered to the employees who work in its Marabá plant. The demand for 312 days per year is significant, as it is the case of 936 meals involving something around 1100 employees;
- ii) To facilitate by means of the COPSERVIÇOS and of the FETAGRI, the production of seedlings via covenant with the Escola Família Agrícola (EFA) (Agricultural Family School). The EFA Marabá, founded in 1993, is a school specific for the children of family farmers. Nowadays, it attends 180 youngsters, of 80 Settlement projects attached to the FETAGRI, comprising 14 municipalities of the Southeast of Pará, seeking to graduate professionals capable of actuating as agents of social, cultural and economic development of their communities, in an environmentally sustainable manner.

It is believed that the demand for these seedlings must grow in a significant way, as the recomposition of ciliary forests, the TACs that will be realized in attention to the Plan of Recovery and Conservation of APPs e legal reserves will imply in a significant search for these seedlings, whose species should be carefully analyzed.

- iii) Effecting of viability studies about the possibility of developing fishes ration supporting the fish-culture of the family farmers. That is, the Bertin Slaughterhouse may produce inputs with sub-products of the slaughtering, such as fish ration, which would be sold to these farmers through these cooperatives.

Sub-program 3 – Support to the Eradication of the Slave Labor.

Description: Adoption of practices and support to the national and local campaigns of fighting against slave labor.

Action 1 - Adoption by part of the Bertin Group of practices of fighting against the slave labor, as herein below described, and divulgation of these actions by means of the Social and Environmental Communication Program:

- Suspension of the purchases from suppliers whose names are contained in the “Dirt List”.
- Signing of the “National Pact for the Eradication of the Slave Labor”, initiative of the International Labor Organization – OIT – and of the Ethos Institute, whose signatories aim at increasing efforts to dignify and modernize the labor relations in the production chains.
- Inclusion of specific clauses in their contracts relative to the prohibition of the forced labor.

Action 2 - Development of workshops and discussions with the employees of the Bertin group in Marabá in support to the sensitization and awareness about the importance of the fighting against slave labor and the compliance with the labor legislation.

To annually promote sectoral meetings with all employees of the Bertin group in Marabá, dealing about subjects related to the labor rights, preferably organized with the participation of an outside guest, and having as priority themes:

- Mechanisms of the slave labor in present time Brazil and the case of Pará State;
- Collaborators and the unions; Collaborators and the participative management; Collaborators and social participation;
- Land regularization: land titling mechanisms in Pará (avoiding *grilagem*).

These meetings must occur as from pre-defined timetable with responsible people of the administrative and operational areas, within a period of at most 3 hours, in order that there is no impeding of the daily activities of the slaughterhouse.

Action 3 - Support to National and Local campaigns – External Public

In collaboration with public entities and non-governmental organizations, to participate and/or develop campaigns in the sense of promoting the fighting against the forced labor in the links of its production chain, through elaboration of textbook and folders, among others.

Highlight for the Textbook “*Escravo, nem pensar!*” (Slave, don’t even think in it!) developed in a partnership between the Labor International Organization – LIT, Ministry of Education and entity “Repórter Brasil”, which brings information on slave labor in Brazil, in the current days, and, that after language adaptations, specific contents of the cattle-raising sector and format, it must be distributed in the following segments:

- Rural Producers of the southeast of Pará, through partnership with the Union of Rural Producers of Marabá, FAEPA and Consultative Chamber for Cattle-Grazing. This activity would attend one of the demands of these organizations, namely, greater interaction of the Group with the links of the production chain. The traditional event

EXPOAMA – Agricultural and Cattle-Raising Exhibition of Marabá, which concentrates every year in July a great number of rural producers of the southeast of the State, could be the best opportunity for distribution of these textbooks, including with one stand of the Bertin group inside the exhibition.

- Current suppliers of the Bertin group in southeast of Pará, through direct contact in the times of commercialization: Besides being available in the Social and Environmental Communication Center, the textbook may be distributed by the drivers of the Group always that they go to buy cattle in the rural properties or in the times in which the proprietor go to the slaughterhouse to solve commercial pending issues.

A direct mail may still be sent to the suppliers, through which, besides the Textbook, could be sent one of the Bulletins of the Social and Environmental Communication Center, in which the theme was of direct interest of the producers (liberation of the exports, practices of payment of bonus to the producers that come to adopt good practices, for example).

- Workers and migrants who arrive weekly in Marabá through the railway of the CVRD – Maranhão / Marabá.

During the periods of greater migration of workers of the northeast to Pará the program will establish partnerships for distribution of textbooks in the stations and trains. Specifically with this public, confirmedly the main target of allurements of the “cats” for rendering of services in system of slavery or similar conditions, as described in the Chapter 4, the Textbook must contain precautionary notices about the cares that the workers and their families must have in order not to be victims of the mechanisms and traps utilized.

For realization of this action it will be required the designation of a collaborator of the Group staff that must make the technical interfaces with the above mentioned organizations, both as regards to the production of the Textbook and the form of distribution of the same in these indicated segments.

Sub-program 4 – Elaboration of the Social Balance of the Bertin Group

Description: Elaboration and divulgation of the Social Balance as management tool for consolidation of an corporate culture that privileges the transparency and allows to the society to know and valorize the Bertin Group efforts, in the sense of conciliating the economic success with positive results of the social and environmental viewpoint.

Action 1 - Definition of the Management Balance model that will be adopted and realization of the work planning by the directive Team of the Bertin Group in São Paulo, in harmony with the Marabá team.

Action 2 - Designation of specific labor group, including with contracting of collaborator for this function, which will seek to involve all external agents for definition of the parameters that will be observed for analysis, such as:

- Values, transparency and governance;
- Internal public (practices adopted with the collaborators – contracted and outsourced);
- Actions related to the environment;
- Relationship with the suppliers (selection criteria and evaluation of the suppliers; commercial practices); consumers; clients and local community.

Action 3 - The Work Group will make the collection and critic and consolidation of the surveyed data, being that appropriate instrumentals must be developed for this purpose. Afterwards, this material will be analyzed and texts to be disseminated in the Social Balance will be prepared. However, these texts must be divulged only after being submitted to the external audit.

Action 4 - Publication and divulgation of the report. One should stress that the issuances of the Social Balance Sheet must occur in the end of every year, as of the start of the expansion of the enterprise and reflect the results attained by the Group in the adoption of the programs proposed in the ESAP.

Responsible institutional entities

The Corporate Social Responsibility Program is of exclusive responsibility of the enterpriser, but will need to count with the collaboration of several local and regional institutional entities in order that one may guarantee the effectiveness of partnerships fundamental to the accomplishment of the programmed actions.

Actions Timetable

Table 2 – Timetable of the actions anticipated in the sub-programs of the Corporate Social Responsibility Program

TIMETABLE	YEAR I				YEAR II				YEAR III			
Sub-programs / Actions	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND
Contribution for the Technical Training of the Family Farmer												
To establish partnerships with Universities and with the Cooperatives of Technical Assistance of the Family Farmers	●●●	●●●	●	●	●	●	●	●	●	●	●	●
Contribution to the small farmer for access to the markets												
To establish partnerships with Cooperatives of Production of the Family Farmers	●●●	●●●	●	●	●	●	●	●	●	●	●	●
Support to the Slave Labor Erradication												
Adoption by part of the Bertin Group of practices of fighting against the slave labor.	●●●	●	●	●	●	●	●	●	●	●	●	●
Development of workshops and discussions with the employees of the Bertin Group in Marabá.		●●●		●●●		●●●		●●●		●●●		●●●
Support to National and Local campaigns – External Public				●●●				●●●				●●●
Elaboration of the Social Balance of the Bertin Group												
Definition of the Management Balance model.	●●●											
Designation of specific work group.	●●●	●●●										
The Work Group will make the collection, and criticism and consolidation of the data for the social balance.			●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
Publication and divulgation of the social balance				●●●				●●●				●●●

3.3 ENVIRONMENTAL EDUCATION PROGRAM

In order to attenuate the impacts identified in the Environmental Impact Assessment of Bertin's slaughterhouse in Marabá and of the associated cattle-raising chain" project, it was recommended, among other programs, the development of an Environmental Education Program.

Thus, the Environmental Education Program is expected to increase the awareness of the people in the area of influence of the Marabá plan of the importance of good environmental behavior, as well as promoting of the social participation.

It must support itself in the development of pedagogic actions (training courses, workshops, education campaigns, textbooks and related), cultural actions (use of the image, of the theatrical language – dramatic games – while form of expression of the reality and, of the music, both in the courses and in the events) and operational actions (such as projects of selection collection of trash and of reutilization of materials, creation of centers of screening of recyclable materials, actions of reforestation, fighting to erosion, monitoring of the water quality, monitoring of the aquatic population, among others).

The Environmental Education Program works matters related to the uses practiced and to the manner how the local population and, more specifically, the employees and suppliers of the Bertin group, idealize and incorporate the natural resources of their day-to-day routine. It stimulates, therefore, that all rethink their habits and manners of actuating in the ambience in which the live, rendering possible that the attitudes in front to the environment be analyzed in the long term perspective.

The accomplishment of the Environmental Education Program is fundamental to the conservation of the environment, being at the same time an instrument of enrichment of the sensibility of the population.

Objectives

- To contribute for the awareness having in view the recovery and conservation of the natural resources of the region, the improvement of the environmental quality of the living conditions of the local population;
- As of the acquired knowledge, to sensitize and to render conscious the target-public in favor of environmentally sustainable attitudes, recovery and conservation of the natural resources;
- To stimulate the participation of the target-public, disseminating values referent to the sustainable development, as well as notions of rights and duties of the citizens in relation to the environment, with emphasis for the current environmental legislation, pointing out the role of enterpriser as regards his/her responsibilities.

Target-Public

It is understood as target-public referent to the training courses, the employees and suppliers of the Bertin Slaughterhouse who will participate of the anticipated environmental education activities. The program intends to comprise all the professionals of the administrative and technical areas including the management.

In relation to the target-public of the events open to the community, the intention will be to reunite private and public companies, as well as the liberal professionals of these sectors; NGOs – non-governmental organizations turned to the defense of the nature or to the education; associations of dwellers; unions of rural workers, as well as of farmers

and cattle-raisers; religious and cultural entities, besides other public segments which intervene in the region, representing, potentially, leaderships and opinion-formers, with the purpose of rendering them aware and mobilized about the environmental question.

One should stress that the target-public will actuate as Multiplying Agent, who are individuals capable of disseminating and diffusing the ideas contained in the program, both of qualitative and of quantitative manner.

Key Themes

Considering that the Environmental Education Program must promote the reflection about the conservation of the natural resources, stressing the role of the man while transforming subject, six key themes directly related with the daily routine of the employees have been selected:

- Environmental Management and Environmental Legislation;
- Model of Cattle-Raising in a social and environmentally sustainable way;
- Natural Resources (fauna, flora, water and soil);
- Solid Wastes – Recycling;
- Waste of natural resources and of energy (day-to-day actions);
- Deforestation and relation with the commitment of the biodiversity;

Implementation of the Program – Required Actions

Action 1 - Organization of the space of allocation and mobilization of the team and of multiplying agents

For the implementation of the program and realization of courses, workshops and seminars, it will be necessary a physical infrastructure, such as:

- Technical-administrative office, where will be held the meetings of the team referent to the pedagogic activities to be developed during the Environmental Education Program such as: preparation of courses, creation of didactic-pedagogic material, events planning;
- Place appropriate for courses, workshops, event or seminars turned to the target-public.

Concerning the formation of the work team that will develop the Environmental Education Program, the following activities are anticipated:

- Team Allocation – Professionals will be allocated to the different fronts of the program work, which will be involved with its implementation, logistics and confection of supporting materials. One should stress the relevance of contracting local professionals, because of their better knowledge of the place of the enterprise and the social environmental matters of the municipality.
- Team Mobilization – The mobilization meetings have as objective the integration of the members of the contracted team with the general coordinator, and at the same time, to form and capacitate local team to actuate in the implementation of actions of environmental education and detail the format of the training courses and the manual to be utilized.

Action 2 – Structuring of the training courses

Governed by the premise of articulating informative, formative and action processes, the Environmental Education Program unfolds in three distinct parts: courses of training for the employees of the Bertin Slaughterhouse, courses for the suppliers and events for the community in general, with the purpose of making them aware and mobilizing them about the environmental question.

Environmental Education for the employees of the Bertin Slaughterhouse of Marabá

- These will be four training courses to be realized specifically for the employees of the Bertin Slaughterhouse, with groups of at most fifty persons to be selected, representing one course per semester along two years, with work load of 12 hours, counting with specialist consultants in the key themes, articulated by a coordination pedagogically capable of adjusting them to the profile of the students.

Environmental Education for the local community

- Two (2) events (workshops) will be held along two years related to the key themes, open to the community.

During the course and events will be covered the key themes previously described and the classes will be ministered by specialist consultants in the respective themes.

The course will be structured in workshops and/ or seminars, highlighting the relevance of visits to the production process and to the system of treatment of effluents of the company and application of case studies about the Bertin group.

Another extremely important matter is the necessity of establishing of partnerships, such as, for example, with the Federal University of Pará – UFPA, among others to be identified, rendering possible the structuring of these training courses, with basis in the local reality.

One should register that the enterpriser must develop efforts to the practice of these events that, besides disseminating environmental concepts and practices, will deliver messages of the Social Communication Program.

Action 3 – Revision of the target-public, of the educational actions and of their respective demands

The coordination of the program must make technical adjustments: both of the content of the environmental education activities and of the target-public delimited at the time of the idealization of this program. Thus, the first action of the coordination, post-allocation and organization of the team, will consist exactly in the revision, adequacy and consolidation of the program.

Action 4 - Consolidation of the supporting material

The Environmental Education Program coordinating team also must produce the following work instruments:

- To elaborate appropriate supporting material for the accomplishment of each one of the anticipated events (courses, workshops and seminars), one considering the materials to be utilized by the moderators/ exhibitors, as well as the material of divulgation of the events;

- To elaborate a kit, to be produced by the program coordination team, composed by texts and transparencies about the social, economic and environmental characteristics of Marabá and region, and related to the key themes;
- Other supporting materials such as: videos, emblems for participative dynamics must be developed, as well as textbook of environmental cares in simple and accessible language.
- To develop a Manual with the key themes of the training program to be as supporting document during the entire process. Four hundred twenty (42) copies of the Manual must be produced, which bring the key-themes to be worked with the employees and suppliers.

Coordination

The Environmental Education Program is of responsibility of the Bertin Group and will be coordinated by qualified technician, specialist in education or environmental management.

Timetable

Table 3 - Timetable of the actions anticipated to the Environmental Education Program

TIMETABLE	YEAR I				YEAR II			
Actions	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND
Organization of the space of allocation and mobilization of the team	●●●							
Revision of the target-public, of the educational actions and their respective demands		●	●					
Structuring of the Training Course	●●●	●	●	●	●	●	●	●
Training course Employees - 4		●		●		●		●
Training courses Suppliers - 3		●			●			●
Promotion of events for the community		●				●		
Consolidation of the supporting material	●●●				●			
Continued Evaluation of the activities	●	●	●	●	●	●	●	●

3.4 LIMNOLOGIC AND WATER QUALITY MONITORING PROGRAM

According to information made available by the Municipal Secretary of Environment of Cuiabá, the waters of the Itacaiúnas river, in the segment in which it receives the Limão creek, already signal ecologic and sanitary alterations.

Thus, the Program of Limnologic Monitoring and of the Quality of the Water, described in the subsequent items, was developed with the intention of following-up the conditions of these water courses, aiming at detecting eventual alterations arisen from the operation of the enterprise. It should be emphasized that this program comes to be in compliance to the guidelines established by the Municipal City Hall of Marabá in the context of the "Project Revitalize" of the Itacaiúnas river.

Objectives

To follow-up the conditions of the water courses in the area of influence of the Bertin Slaughterhouse, what will allow the taking of preventive and corrective strategic actions for preservation of the water system under study. In this way intending:

- To monitor the quality of the waters of the Itacaiúnas river by means of physical-chemical and bacteriological analysis.
- To follow-up the evolution of the aquatic communities present in the segments of the rivers under study through qualitative and quantitative analysis of phyto-plankton, zooplankton and benthonic macro-invertebrates.
- To detect eventual alterations resulting from the casting of effluents from the slaughterhouse, according to the parameters defined by the Resolution CONAMA 357/05.
- To interpret the hydro-biologic dynamics in the area of influence of the Marabá slaughterhouse, according to the alterations of the annual hydrological cycle.
- To analyze eventual interferences in the waters, arisen from anthropic actions exogenous to the activities of the enterprise.
- To point out preventive and corrective measures required for the preservation of the aquatic ecosystem.

Methodological Procedures

Next, it is herein described the methodological procedures for development of the Monitoring Program of the Quality of the Water, comprising:

- Sampling Network
- Monitored Parameters
- Procedures of Collection and Analysis of the Samples
- Monitoring Frequency

This work plan has been conceived for a period of two (2) years. After the elapsing of this period, in function of the results obtained, eventual adjustments in the proposed methodological procedures must be made, as places of collection, parameters and sampling frequency, as long as duly justified.

In this program are inserted three main sub-programs, as described as follows:

(i) Sub-program 1, denominated Mounting of Base Line of Monitoring of the Quality of the Water, which is intended to consolidate, as from an initial evaluation campaign, the establishing of the actions of monitoring of the quality of the water, object of the Sub-program 3.

(ii) Sub-program 2, denominated Mounting of the Base Line of Limnologic Monitoring, which intends to consolidate, as from an initial evaluation campaign, the establishing of the limnologic monitoring actions, object of the Sub-program 3.

(iii) Sub-program 3, denominated Limnologic Monitoring and of the Quality of the Water, whose parameters and frequency will be defined as of the results of the Sub-programs 1 and 2, previously described.

Implementation of the Program – Anticipated Steps

Next, are described the principal actions of the sub-programs anticipated to be adopted in the context of the enterprise.

Sub-program 1 – Mounting of the Base Line of Monitoring of the Quality of the Water

Action 1 - Definition of the Sampling Network

The sampling network of the Program of Monitoring of the Quality of the Water comprises, in principle, three collection points:

- (i) Point 1 - Treated effluent
- (ii) Point 2 - Itacaiúnas river, upstream of the casting of treated effluents of the slaughterhouse;
- (iii) Point 3 - Itacaiúnas river, downstream of the casting of treated effluents of the slaughterhouse;

Action 2 - Procedures for Collection and Analysis of the Samples

During the collection, will be made photographic registrations and filling out of template s containing the following annotations: date, time, place, coordinates in UTM, temperature of the air, temperature of the water, water course depth, weather conditions, presence of rains in the last 24 hours, water course, type of sediment, conditions of the cilliary forest and of the immediate vicinities, as well as eventual presence of debris, oil and foams in the banks and in the water course.

Next, are described the specific procedures to be utilized for collection and analysis of the quality of the water.

The sampling will be of the simple type (instantaneous samples) for analysis of the following parameters contained in the Resolution CONAMA 357/05 (Art. 15).

- Physical-chemical

- Ph
- Temperature
- Color



- Electrical conductivity
- Chloride
- Chlorophil a
- Biochemical Demand for Oxygen ("DBO")
- Chemical Demand for Oxygen ("DQO")
- Phenols
- Dissolved Iron
- Total Phosphorous
- Total Kjeldahl Nitrogen
- Ammoniacal Nitrogen
- Nitrite
- Nitrate
- Oils and greases
- Dissolved Oxygen ("OD")
- Series of solids (total solids, dissolved solids and solids in suspension)
- Sulphate
- Turbidity
- Heavy metals: aluminum, cadmium, lead, copper, manganese, quicksilver, nickel, zinc.
- Biologic:
 - Total Coliforms
 - Fecal Coliforms (Thermotolerants)

It is herein stressed that, for analysis of the effluents of the treatment of the slaughterhouse (Point 1), the set of parameters will be in compliance with the Art. 34 of the Resolution CONAMA 357/05.

The collection and analysis of the samples will be made according to the procedures contained in the "Standard Methods for the Examination of Water and Wastewater", last issuance.

Action 3 - Establishing of the Actions of the Sub-Program 3

As of the results of this campaign of preliminary evaluation will be defined the strategy of action of the Sub-Program 3, in terms, parameters and sampling frequency.

Sub-program 2 – Mounting of Base Line of Limnologic Monitoring

Action 1 - Definition of the Sampling Network

The sampling network of the Limnologic Monitoring Program comprises, in principle, two sampling points:

- Point 2 - Itacaiúnas river, upstream of the Limão creek;
- Point 3 - Itacaiúnas river, downstream of the Limão creek;

Action 2 - Procedures for Collection and Analysis of the Samples

Next, are described the specific procedures to be utilized for collection and analysis of the phytoplanktonic, zooplanktonic and zoobenthonic communities.

The collection of samples for evaluation of the limnological parameters (phyto-planktonic, zoo-planktonic and zoo-benthonic communities) will be effected only in the superficial waters of the Itacaiúnas river, comprising the Points 2 and 3, not being justified this type of analysis for control of the effluents (Point E).

• Phytoplanktonic Communities

For analysis of the phytoplanktonic communities, the following procedures will be complied with:

- In each point of the sampling network qualitative (taxonomic sampling) and quantitative (organisms density) collections of the phyto-planktonic communities will be made.
- The qualitative samples will be collected by means of horizontal dragging one utilizing 20µm (micra) net of mesh opening.
- The volume concentrated by the net will be packaged in 250 ml capacity flask, provided with pressure lid. For preservation of the sample, 4% formol solution will be used.
- The samples will be sent to specialized laboratory for identification and counting of the main taxonomic groups and issuing of technical report.
- The registered organisms will be identified at the smallest taxonomic level possible, according to specialized literature, one utilizing identification keys for the different phyto-planktonic groups.

• Zoo-planktonic Communities

Concerning the zooplanktonic communities, the following procedures will be observed:

- In each point of the sampling network qualitative (taxonomic sampling) and quantitative (organisms density) collections of the phyto-planktonic communities will be made.
- The qualitative samples will be collected by means of horizontal dragging one utilizing 68µm (micra) net of mesh opening. The volume concentrated by the net will be packaged in 250 ml capacity flask.
- The quantitative samples will be collected by means of vertical dragging of the same net, or with the help of pump (Jabsco 1.200 L hour type). It is anticipated the filtration of 100 L of water, concentrated through net and packaged in 250 mL flasks.
- The preservation of the qualitative and quantitative samples of the zooplankton will be made with 4% formol solution.
- The samples will be sent to specialized laboratory for identification and counting of the main taxonomic groups and issuing of technical report.

- The found organisms will be identified at the smallest taxonomic level possible, according to specialized literature, one utilizing identification keys for the different zoo-planktonic groups.
- Benthonic Communities

The methodology adopted for collection, for identification and for counting of the benthonic community will be based on the Technical Normalization – CETESB L5.309 – Determination of Fresh Water Bents – Benthonic Macroinvertebrates – Qualitative and Quantitative Method (CETESB, 2003).

- In each point of the sampling network collection of sediment (zoobents) organisms will be made.
- It is anticipated the collection of the benthonic organisms with Eckman-Birge type catcher for bottoms or composed of fine, muddy sediments and chips.
- In the impossibility of utilization of the dredger, collections in the borders, utilizing PVC type pipe, will be made.
- After the collection, the sediment will be packaged in appropriate plastic bags and preserved with 4% formol solution.
- The samples will be sent to specialized laboratory for identification and counting of the main taxonomic groups and issuing of technical report.
- The found organisms will be identified at the smallest taxonomic level possible, according to specialized literature, one utilizing identification keys for the different zoo-benthonic groups.

Action 3 - Establishing of the Actions of the Sub-program 3

As from the results of this preliminary evaluation campaign will be defined the strategy of action of the Sub-program 3, in terms of parameters and sampling frequency.

Sub-program 3 – Limnologic Monitoring and of the Quality of the Water

Having as basis the information of the Sub-programs 1 and 2, previously described, it will be defined in this Sub-program the strategy of the Program of Limnologic Monitoring and of the Quality of the Water, including sampling network, set of parameters to be analyzed and collection frequency. In this sub-program are anticipated 3 main actions as detailed next.

Action 1 - Partnership with the City Hall of the Municipality of Marabá

It is extremely relevant the establishing of partnership with the City Hall of Marabá, that is structuring the Project Revitalize ("Projeto Reviver"), which has as objective to assure and accompany the quality of the water of the Itacaiúnas river.

The sampling network of this program must be previously discussed with the local Environmental Organ. One intends, in this way, to optimize the procedures and make the results compatible with the "Projeto Reviver", so as to follow-up the hydro-biologic dynamics in the study area.

Action 2 - Consolidation of the Monitoring Program

As already mentioned, only after the realization of the sub-programs 1 and 2, as regards the results of all the analyses, it will be possible to make the selection of the parameters that will be incorporated in the limnologic monitoring and of the quality of the water and the frequency for the making of the analysis.

For budgetary purpose, one considered for evaluation of the Quality of the Water the realization of campaigns, twelve (12) campaigns along one year, comprising the same sampling points (1, 2 and 3) and the same set of parameters already mentioned. For limnologic evaluation, one adopted as premise the realization of one annual campaign, one anticipating the same control parameters (phytoplankton, zooplankton and bents).

Action 3 - Systemic Verification of the Compliance with Legal Requisites

Having in mind the requisites of the quality of the waters determined by the Resolution CONAMA 357 of March 17th, 2005 for Class 2 water courses, the Program of Limnologic Monitoring and of the Quality of the Water will serve as indicator of the ecologic and sanitary conditions of the hydrological network under study, giving support to eventual interventions in the system of treatment of effluents adopted by the slaughterhouse.

In this case, will deserve special attention the levels of nitrogen and phosphorus detected in the sampling points, as these nutrients normally are responsible for the excessive growth of the phytoplankton in the natural waters.

Action 4 - Formation of the System of Indicators for the feeding of the results

At each campaign accomplished, a Partial Report will be issued, contemplating the following topics:

- Quality of the Waters: Sampling Network, Methodological Procedures, Results of the Physical-Chemical and Biologic Parameters of surface waters and of effluents, Conclusions and Recommendations.
- Limnology: Sampling network, methodological procedures, taxonomic composition, spatial distribution and frequency of the phyto-planktonic, zoo-planktonic and zoobentonic communities, similarity between the collection

Sampling points, quantitative analysis of the aquatic communities, hydrobiologic dynamics of the area of influence, conclusions and recommendations. In view of the fact that the limnology campaigns still do not have the frequency defined, these data will be contained only in the Partial Reports referent to the months in which these collections are effected.

At the end of each complete hydrologic cycle, it will be presented an Annual Report containing the integration of the results of the campaigns realized in the period, what will make possible to follow-up the efficiency of the treatment system of the slaughterhouse, as well as the evolution of the aquatic ecosystem of the rivers which receive these effluents.

In all technical reports, preventive and corrective measures will be indicated, aiming at the preservation of the ecosystem in the area of study, recommending eventual adjustments for the continuity of the Program.

Responsible institutional entities

The Program of Limnologic Monitoring and of the Quality of the Water will be of responsibility of the enterpriser, who will select a team responsible for the elaboration of the works and will propitiate the resources required for the developing of all of its stages.



The technical team must necessarily have a biologist for the function of Responsible Technician, a sanitation engineer, besides technicians specialists in collection of water samples, identification and counting of phyto-planktonic, zoo-planktonic and zoo-benthonic communities.

Timetable

As previously mentioned, it was considered in the planning of this Program of Limnologic Monitoring and of the Quality of the Water 2 (two) years, as timetable presented next.

Table 4 – Timetable of actions anticipated for the Program of Limnologic Monitoring and of the Quality of the Water.

TIMETABLE	YEAR I				YEAR II			
SUB-PROGRAMS - actions	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND
Mounting of Base Line of Monitoring of the Quality of the Water								
Definition of the Sampling Network	●							
Procedures for Collection and Analysis of the Samples	●							
Establishing of the Actions of the Sub-program 3	● ●							
Mounting of Base Line of Limnologic Monitoring								
Definition of the Sampling Network	●							
Procedures for Collection and Analysis of the Samples	●							
Establishing of the Actions of the Sub-program 3	● ●							
Limnologic Monitoring and of the Quality of the Water								
Partnership with the City Hall of the Municipality of Marabá	● ● ●							
Program of Monitoring of the Quality of the Water (monthly frequency)	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
Program of Monitoring of Limnologic Campaigns (annual frequency)		●				●		
Systemic Verification of the Compliances with Legal Requirements				●				●
Formation of System of Indicators for the feeding of the results				●				●

3.5 ENVIRONMENTAL AUDIT PROGRAM

Objective

The environmental audit is a powerful instrument of control for the evaluation of the environmental performance of a work, an enterprise or a program in a given time, namely, it is the social and environmental photograph of a project in a given stage.

The objective of the audit is to contribute to the continued improvement of the social and environmental management of the Slaughterhouse in Marabá. The audits must evaluate whether the commitments assumed and defined with the pertinent environmental organs are being fulfilled, in order that initiatives must be taken.

Target- Public

- Company employees;
- Directors of the Slaughterhouse

Implementation of the Program - Steps and Anticipated Actions

The Environmental Audit Program is structured according to the following actions:

Action 1 - Follow-up of the amplification works semesterly

Periodic visits will be made in the place of expansion of the works and of treatment of effluents, with the purpose of evaluating the status of advancement in these cases. Usual procedures such as pre-elaborated templates filling out (check list) will be utilized.

Action 2 - Follow-up of the amplification works semesterly

Periodic eventual pending issues of documents in the environmental organs will be periodically followed-up, one checking the observance of the environmental legislation and of other procedures defined in administrative regulations, as well as conditionants referred to in the Operation License granted by the pertinent organs, also aiming at preventing lawsuits and administrative and judicial actions, besides reducing the negative environmental impacts.

Action 3 - Follow-up of the implementation of the Social and Environmental Management System – ESMS, with emphasis to the Social and Environmental Programs - ESAP

The objectives and sub-objectives of this system must be followed-up every six months, having in mind the possible occurrence of deviation as regards the established goals, through reports, with annual periodicity.

For the actual follow-up of the execution of the Programs agreed with the Bertin Slaughterhouse, one must submit this monitoring to progress reports, within 30 days of the end of each program. These reports will describe the stage of accomplishment of the activities.



Responsible institutional entities

The Environmental Audit Program will be of responsibility of the enterpriser.

Timetable of the Activities

It was considered in the planning of this Environmental Audit Program 2 (two) years, as timetable presented below.

Table 5 - Timetable of anticipated actions in the Environmental Audit Program

TIMETABLE	YEAR I				YEAR II			
SUB-PROGRAMS - actions	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND
Follow-up of the amplification works		•		•		•		•
Follow-up of the licensing processes in their operation phase	•	•	•	•	•	•	•	•
Follow-up of the implementation of the Social and Environmental System		•		•		•		•

3.5.1 SYNTHESIS OF THE SOCIAL AND ENVIRONMENTAL PROGRAMS

Next, are succinctly presented the Social and Environmental Action Plan Programs, described the respective actions, timetable and responsibility for the execution of the same.

Table 6 - Summary of Environmental and Social Programs (ESAP)

	YEAR I				YEAR II				YEAR III				YEAR IV				RESPONSIBLE GRUPO BERTIN
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	
Reformulation of the Cattle Purchasing Procedure																	
Adoprion of Criteria to Orientate Cattle Purchasing	•															Gerência de Meio Ambiente	
Preparation of an Environmental and Commercial Registry Template (ECRT)	•																
Orientation of the Cattle Purchasing Team and Suppliers	•																
Gahering Information of the Properties		•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••		
Sistematization of Information						•••	•••	•••	•••	•••	•••	•••	•••	•••	•••		
Property Accreditation		•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••		
Monitoramento Continuado de Desempenho Ambiental e Social					•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••		
Corporate Social Responcibility Program																	
Contribution to the Technical Training of Family Farmers	•••	•••	•	•	•	•	•	•	•	•	•	•	•	•	•	Gerência Social	
Contribution to helping small farmers to gain acces to markets	••	•••	•	•	•	•	•	•	•	•	•	•	•	•	•		
Support to Slave Labor Eradication	•••	•••	•	•••	•	•••	•	•••	•	•••	•	•••	•	•••	•••		
Preparation of Bertin's Social Balance	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••		
Environmental Education Program																	
Preparation of Training courses	•••	•	•	•	•	•	•	•								Gerência de Meio Ambiente	
Training Courses - Staff		•			•			•									
Training Courses - Suppliers (three)		•			•			•									
Promotion of two events open to the community (two)		•				•											
Continuing evaluation of activities	•	•	•	•	•	•	•	•									
Limnologic and Water Quality Monitoring Program																	
Establishing a Baseline for Water Quality Monitoring	•															Gerência de Meio Ambiente	
Establishing a Baseline for Limnologic Monitorinig	•																
Limnologic and Water Quality Monitoring Activities:																	
Water Quality				•		•		•									
Limnologic Monitoring				•				•									
Environmental Auditing Program																	
Follow up of the expansion works	•		•		•		•									Gerência de Meio Ambiente	
Follow up of the Licensing Processes	•	•	•	•	•	•	•	•									
Follow ESMS		•	•		•		•										