

A REPORT TO BOARD MEMBERS OF THE WORLD BANK AND IFC

Analysis of and Recommendations on the Proposed Bertin Project and IFC Investments in the Livestock Sector¹

1. Introduction

This report reviews a proposal by the International Finance Corporation (IFC) to invest approximately US\$90 million in a \$424 million expansion of the Bertin Group's operations in the Amazon tropical forest region of north-central Brazil and elsewhere. Major components of this project would include cattle ranches, feedlots, and associated slaughterhouses; and meat processing, leather tanning, and pet food operations.

The report reviews the disclosed documentation for this project² in relation to the potential environmental and social risks and impacts of the project and the livestock sector, IFC's Board-approved Performance Standards, Policy on Disclosure of Information, and Country Assistance Strategy for Brazil; IFC's Policy on Fraud and Corruption; World Bank strategy documents on livestock and nutrition; and other relevant standards.

This report contains recommendations based on this analysis regarding project-specific issues relating to the proposed Bertin project, and also regarding sectoral issues that are raised by this proposed project but are also relevant to other large-scale projects in the livestock sector.

Box 1: Bertin Project Description

Bertin Ltda, part of the Bertin Group that operates in more than 80 countries worldwide, is a leading integrated beef and hide processor in Brazil, with existing capacity to process about 5,400 head of cattle per day. IFC's investment of \$90 million toward Bertin's \$424 million 2005-2007 expansion and modernization investment program would enable Bertin to process 5000 additional head per day, at facilities including one acquired in 2005 in Marabá in Brazil's Amazon region. IFC has stated that the decision to finance Bertin will be considered by IFC's Board of Directors on the basis of the project's merits and potential to set standards for sustainable cattle grazing in the Amazon. (Further information about the Bertin Group is contained in Box 2 below.)

¹ Compiled by Sierra Club U.S. and Sierra Club of Canada.

² The disclosed project documentation consists principally of the Summary of Project Information and various documents filed under the Environmental and Social Review Summary on IFC's public website, as well as an ESIA, written in Portuguese only, that discusses only part of the project's potential impacts.

2. Climate Change Issues Relevant to the Proposed Bertin Project and the Livestock Sector

The World Bank and IFC have each issued various statements expressing their concern over climate change, its expected disproportionate impact on developing countries, and the expectation that private companies “can play a significant role in combating climate change.”³

Impacts from the Proposed Bertin Project

IFC’s Performance Standard 3 sets requirements for projects that will be responsible for 100,000 tons or more CO₂ equivalent per year. At its projected capacity of 10,400 cattle per day or 3,796,000 per year, Bertin will be responsible for approximately 9,360,000 tons CO₂ equivalent per year.⁴ However, the disclosed documentation for the proposed project does not acknowledge the requirements of IFC’s Performance Standard 3, or present a plan to meet them.

Impacts from the Livestock Sector Generally

Sources including the FAO, a sister UN agency to IFC, show that the livestock sector is probably the source of more greenhouse gas (GHG) emissions than any other, including the power or transport sectors.⁵ One recent study calculated that animals eaten by humans emit – just through the physiologic processes from their being alive – 23% of all the carbon dioxide that can be attributed to human activity.⁶ The number becomes much higher – as much as 40 percent or more – if the following three categories of emissions are also included:

- (a) GHGs attributable to human-induced changes in land use, primarily deforestation and fire, in order to graze cattle and grow crops to feed cattle and other livestock (such as poultry, pigs, and fish);
- (b) GHGs attributable to the processing, transportation, and refrigeration of livestock and their products; and

³ http://www.ifc.org/ifcext/media.nsf/Content/Climate_Friendly_Investments

⁴ Each cow produces approximately 5,200 CO₂-equivalent kilograms of methane over its life, or 2,600 per year; detailed calculations are provided in Annex A below.

⁵ *Livestock’s Long Shadow: Environmental Issues and Options*, Rome, FAO, 2006, which shows livestock is also a major source of land and water degradation; see <http://www.fao.org/newsroom/en/news/2006/1000448/index.html>.

⁶ Alan Calverd in *Physics World* (July 2005).

(c) GHG emissions that could be averted if land used to graze cattle and grow crops to feed cattle and other livestock were used instead to grow crops for conversion to biofuels to be used to replace coal, oil, and gas.

According to the FAO's recent major study on livestock and climate change:

*Resource costs, price distortions and externalities vary among livestock products. Beef has been identified as carrying the largest costs in terms of land and water requirements for its production, as well as in terms of contribution to climate change. It can, therefore, be argued that relative to other forms of animal protein, beef carries the largest externalities and benefits most from price distortions.*⁷

In other words, among the different types of livestock projects that IFC might choose to finance, a large-scale cattle project promises to generate dramatically more risks and impacts than any other type of livestock project. According to the FAO:⁸

- respiration of cattle yields 30 times the amount of CO₂ equivalents as those deriving from chicken, per net produced unit of weight;
- feed for cattle yields CO₂ equivalents proportional to 51 MJ of fossil fuel inputs required per kg of beef vs. 35 MJ per kg of chicken (See Annex 1);
- processing each kg of beef yields 70 percent more CO₂ equivalents than each kg of chicken;
- “beef productivity” averages 26 kg per head in developing countries vs. 46 kg/head at the world level;
- protein conversion efficiency is 5 percent for beef vs. 40 percent for chicken;

It is not IFC's role to make decisions for consumers, or to pick winners and losers for the food industry. But IFC has a responsibility to exercise discretion in its own investment decisions so they are consistent with the World Bank Group's interests in combating greenhouse gas emissions and climate change.

Recommendation:

In light of the very significant undesirable impacts of this proposed project on greenhouse gas emissions that cause climate change, it is recommended that the Board of Directors not approve the proposed Bertin project.

Whether or not the recommendation above is taken, it is recommended – in light of the impacts of the livestock sector on climate change, and the World Bank Group's commitment to combating climate change – that IFC's Board of Directors commission a study to be performed by IFC's Independent Evaluation Group or Compliance Advisor/Ombudsman on those impacts, and on what direction they imply for IFC

⁷ *Livestock's Long Shadow*, op cit, p. 261.

⁸ *Livestock's Long Shadow*, op cit.

activities, particularly its investments in agribusiness. Such a review should include an examination of issues described in the World Bank's livestock strategy publication and its latest major publication on nutrition⁹ (see details on those publications in Annex B).

Pending release of the results of such a study– or even if such a study is not performed – it is recommended that IFC's Board of Directors not approve any further IFC investment in a large-scale livestock project. In effect, this means that IFC's Board of Directors would adopt a moratorium on IFC investments in large-scale livestock projects.

3. Other Issues and Recommendation Relating to the Proposed Bertin Project

If potential adverse impacts on climate change alone are not considered sufficient reason for the Board of Directors to disapprove the proposed Bertin project, several additional issues relating to the project are described briefly below (with details in the attached annexes) which also constitute grounds for disapproval of the project.

a) Provenance of Beef

The Environmental and Social Impact Assessment (ESIA) for the proposed Bertin project states that in the Bertin project's main state (Pará, where Bertin's Marabá slaughterhouse is located), cattle ranchers have no tracking system in place, and no financial incentives exist for one to be established. The ESIA states that Bertin would launch a tracking system in the future. However, this plan is inadequate because it does not meet the applicable requirements in IFC's Performance Standards (see details in Annex C).

Recommendation:

In the absence of an effective, independently verifiable cattle tracking system, the proposed Bertin project should be disapproved. If it is approved, it is recommended that IFC's Board of Directors require as a condition of first disbursement that an effective tracking system for Bertin's sources of cattle first be put in place and be functioning to the satisfaction of the Board.

b) Fraud and Corruption

IFC has recently adopted a policy mandating proceedings possibly leading to sanctions when people involved in an IFC project are found to be engaging in "collusive" and other corrupt practices.¹⁰ Officially the new IFC policy is effective only for mandate letters signed January 1, 2007 and beyond. Now that this new policy is in effect, the fact that Bertin is being prosecuted for price fixing in Brazil by the Brazilian Government, at the

⁹ *Livestock Development: Implications on Rural Poverty, the Environment, and Global Food Security*. Washington, World Bank, 2001, and *Repositioning Nutrition as Central to Development: A Strategy for Large-Scale Action*, Washington, World Bank, 2006.

¹⁰ <http://www.ifc.org/anticorruption>

initiative of its Department of Justice, should be of heightened concern because an IFC investment in Bertin may be inconsistent with the intent and purpose of this policy.¹¹

Recommendation:

The Bertin project should not be approved while Bertin is being prosecuted. If the proposed Bertin project is approved, it is recommended that IFC's Board of Directors require as a condition of first disbursement that the prosecution of Bertin for price fixing be resolved in favor of Bertin, to the satisfaction of the Board.

c) Disclosure of Information

Bertin has disclosed (in English) only a grossly inadequate executive summary of its ESIA, which omits much essential information. Furthermore, the ESIA is unacceptable because it does not cover several major project components. Since the existing ESIA is inadequate, and no English translation of the existing ESIA is yet available, most IFC staff, and members of the Board of Directors and their staff, are thus excluded from reviewing essential information about the proposed Bertin project. Similarly excluded are representatives of many government, business, and other nongovernmental organizations who may be concerned about the transboundary economic, environmental and social ramifications of increasing Brazilian beef and hide exports from the Amazon region (see details in Annex D).

Recommendation:

The Bertin Project should not be approved in the absence of a comprehensive ESIA with an adequate English translation. If the proposed Bertin project is approved, it is recommended that Board of Directors require as a prior condition of approval that a comprehensive EISA with an adequate English translation be prepared and publicly released, with a reasonable period for public review and comment, before final project approval is granted by the Board.

d) The World Bank's Conservation Projects

The World Bank has invested approximately US\$1.4 billion in 19 projects to conserve Amazon forests and their rich natural biodiversity, mainly in Brazil.¹² To protect its investments, the World Bank has a vital interest and responsibility to prevent further uncontrolled deforestation and consequent destruction of natural systems and harm to indigenous peoples dependent on them. In this case the World Bank has a responsibility for ensuring that the proposed Bertin project would not bring about such impacts.

¹¹ "Brazil To Prosecute Meatpackers For Mkt Manipulation –Govt," *Agriculture Online*, August 21, 2006, <http://72.14.253.104/search?q=cache:F7zi5Ce4AEAJ:www.ellinghuysen.com/news/articles/37960.shtml+b+ertin+%22price+fixing%22+beef&hl=en&gl=us&ct=clnk&cd=6>

¹² According to *The World Bank and Biodiversity: 1988-2004*, Washington, World Bank, October 2004.

Recommendation:

The proposed Bertin project should be disapproved because of the likelihood of significant adverse impacts on the Banks existing conservation projects. If the project is approved, the IFC's Board of Directors should require as a condition of first disbursement that relevant World Bank staff shall have provided assurance that the project would not result in significant risks or impacts to the Bank's conservation projects in Brazil, to the satisfaction of the Board.

e) Corrective Actions for the Proposed Bertin Project

For the very limited part of the Bertin project that is covered by the existing ESIA, that document's own Corrective Action Plan (CAP) indicates that, for many of the most critical environmental and social aspects of the project, Bertin is not expected to comply with IFC's Performance Standards until some time after disbursement. If compliance is not achieved before disbursement, then IFC will no longer have the leverage necessary to assure compliance with the CAP (see details in Annex E).

Recommendation:

The Bertin project should be disapproved because the existing CAP is inadequate. If the proposed project is approved, Board of Directors should require that a condition of first disbursement be completion of all terms of the CAP, to the satisfaction of the Board.

f) Environmental and Social Impact Scoping and Assessment

According to the ESIA as disclosed for this project, Bertin has scoped and assessed the environmental and social impacts for only a very limited part of the project's several large components. To be useful in decision-making, an ESIA should provide a comprehensive assessment of reasonably foreseeable impacts – direct, indirect, and cumulative – for all project components. If this inadequate analysis is not corrected before Board approval, relevant parts of IFC Performance Standards will not be met (see more detailed analysis of deficiencies in the ESIA in Annex E).

Recommendation:

The Bertin project should be disapproved because the existing ESIA is inadequate. If the proposed Bertin project is approved, the Board of Directors should require that a condition of approval be the timely scoping, public review, and completion of a comprehensive ESIA, to the satisfaction of IFC's Board of Directors.

4. Conclusions

The proposed Bertin project fails to meet numerous important IFC and World Bank standards and policies for sustainable development. If the Board were to approve the project as it now stands, this decision would be viewed as a departure from those standards and policies, which would not be in the long-term interests of either the IFC or the World Bank Group. **Therefore, it is recommended that the proposed Bertin project not be approved, due to its excessive levels of environmental and social risks and impacts, and the absence or inadequacy of many measures needed to avoid, minimize, mitigate, or offset these risks and impacts.**

In addition, approval of this project would set an undesirable precedent: an approved high-risk project with outputs – beef, leather, pet food, and dog toys – that do not warrant its high levels of environmental and social risks and impacts. In some industrial sectors, such as local community infrastructure, project outputs for the poor might be worth some substantial level of risk. But this project’s principal commercial outputs, all intended primarily for export to developed countries, do not fit such criteria.

Many less risky investment alternatives exist. IFC should continue to seek to finance agricultural projects with low environmental and social risks and impacts, especially projects to assist small-scale farmers. While IFC is not always able to provide direct financing efficiently to small-scale farmers, it should continue to lend to financial intermediaries that on-lend to small-scale farming enterprises. Such an investment strategy fully meets IFC’s developmental priorities, generates jobs, reduces poverty, and is far more sustainable than large-scale livestock projects.

In light of the impacts of the livestock sector on climate change, and the World Bank Group’s commitment to combating climate change, it is also recommended that IFC’s Board of Directors commission a study to be performed by IFC’s Independent Evaluation Group or Compliance Advisor/Ombudsman on those impacts, and what direction they imply for IFC activities, particularly its investments in agribusiness. While the results of such a study are awaited, it is recommended that IFC’s Board of Directors not approve any IFC investment in a large-scale livestock project.

Box 2: The Bertin Corporation

(a) The Bertin Group is Brazil's leading producer in the meat and meat by-products industry. Bertin ranches cattle in Minas Gerais, São Paulo (1.2 million head/year), Bahia, Pará, Goiás and Mato Grosso do Sul. Bertin already has seven slaughtering and boning plants and two meat processing plants. It ranks second among Brazil's leading beef exporters. Bertin's main markets are the United States, Italy, Chile and Hong Kong.

(b) In May 2006: Bertin Ltda. received a BNDES credit equivalent to US\$ 9.5 million.

(c) On August 24, 2006, Bertin announced the construction of Brazil's biggest (\$46 million) slaughterhouse (and the world's second biggest), in the Amazon state of Mato Grosso. The plant is expected to be ready by May 2007, beginning with 1,000 kills/day, and reaching 3,000/day by the end of 2007.

(d) Foot-and-Mouth Disease infects more than one site in Brazil, which closed its border with Paraguay near Bertin's new slaughterhouse in August 2006.

(e) In late 2005, Bertin expanded its BNDES-financed cattle operations in the Amazon forest region, especially around Marabá and Conceição do Araguaia, both of which are in the heart of the Amazonian forest State of Pará.

Annex A: Climate Change from Cattle

A single cow produces 114 kg of methane (CH₄) per year by enteric fermentation,¹³ or 228 kg of methane during its 24-month lifetime.¹⁴ As 1kg CH₄ is the equivalent of 23 kilos of CO₂, each cow produces 5244 CO₂-equivalent kilograms of methane over its life. Calculating 5244/2000 produces 2.6 CO₂-equivalent kilograms of additional greenhouse gas emissions from methane, per burger, or about 5 to 10 times more greenhouse gas produced from cows than from all of the energy used to clear Bertin's Amazon forest ranches, raise the cows, and produce all of the components of a completed cheeseburger. 2.85-3.1 kg of CO₂ equivalents per burger means 428-465 kg of greenhouse gas emissions per year for an average burger consumer.

The four main assumptions vary depending on environmental factors including climate, individual cow, genetic variety and nutrition. The four assumptions used here are: (1) a single IFC-financed Bertin's cow produces 500 lbs of meat for boneless steaks and ground beef; (2) Bertin slaughters cows at about 24 months; (3) an 'average' hamburger starts off containing a quarter-pound of pre-cooked meat, translating into 2,000 burgers per cow; and (4) the average hamburger consumer (e.g., in the U.S. or Hong Kong, China) eats three burgers per week, or about 150 burgers per year.

Annex B: World Bank publications on Livestock Strategy and Nutrition

Livestock Strategy

A key statement of international standards for livestock projects is the World Bank's Livestock Strategy document of 2001. For the Amazon region, among its recommendations that apply to the Bertin project is the following: "Specific actions to be taken include... payment for ecological services in degraded pastures to address deforestation in the humid tropics."¹⁵

¹³ This calculation deals with GHG from enteric fermentation only. The amount of GHG emitted by cattle ranching would be far higher by also including the GHG emissions described in Section 3 of this Paper – for example, the GHG emitted: (a) when burning the forest to create the pasture, especially nitrous dioxide (b) in the methane from fermenting manure, which would add about one third of that from enteric fermentation, (c) from the diesel consumed in cattle ranching, especially transport (d) from new roads construction and increased use as a consequence of expanded cattle ranching.

¹⁴ See: (a) "The Hamburger Connection" (p. 181) in Goodland, R., *The Race to Save the Tropics*. Washington, Island Press, 1990, 219 pp. (b) Carlsson-Kanyama, A. & Faist, M., *Energy Use in the Food Sector: A data survey*. Stockholm, Stockholm Univ., Environmental Strategies Research Group [&] Zurich, Department of Civil and Environmental Engineering, Federal Inst. Technology, c1999, 36 pp. (c) Carlsson-Kanyama, A., "Climate change and dietary choices: how can emissions of greenhouse gases from food consumption be reduced?" in *Food Policy* 23 (3-4) 1998: 277–293. (d) Goodland, R., "Environmental sustainability in agriculture: diet matters" in *Ecological Economics* 23 (3) 1997: 189-200. (e) Beach, R., DeAngelo, B., Rose, S., Li, C., Salas, W. & DelGrosso, S., *Mitigation Potential and Costs for Global Agricultural Greenhouse Gas Emissions*, International Association of Agricultural Economists Conference, 16 pp. (f) from: Permalink, J. Cascio 22 Dec 2006.

¹⁵ *Livestock Development*, op cit, pp. xiv and 66.

There is no publicly disclosed IFC strategy document for the livestock sector. IFC has stated that it need not abide by the World Bank's livestock strategy, and even disputes that the World Bank has a livestock strategy, although the World Bank's public website states: "In 2001, the World Bank released a strategy for the Livestock sector."¹⁶

The Bank's Livestock Strategy document states that the Bank will "*Avoid funding large-scale commercial, grain-fed feedlot systems and industrial milk, pork, and poultry production except to improve the public good areas of environment and food safety.*"¹⁷ The exceptions allowed by this statement would be for projects much more strategically and beneficially designed than the proposed Bertin project.

The subtitle of the Livestock Strategy document summarizes the document's main concerns: "Rural Poverty, the Environment, and Global Food Security." The document declares that the livestock sector is growing in ways that mean that there is a significant danger that the poor are being crowded out, the environment eroded, and global food safety and security threatened

The Strategy document also states that the Bank's focus will be to play a role where there is market failure. It expresses concern with the impacts of the "livestock revolution" on environment and equity, including the impacts of subsidized feed and narrowing of the genetic base. Critical environmental problems noted in the strategy document are nutrient loading from industrial systems polluting water bodies, and the creation of pasture, which involves deforestation, loss of habitat and decreases in biodiversity. It states (in Component 2c.) that the Bank's support for small-scale mixed farmers (integrating crops and livestock) should be strengthened, to improve both the environment and social equity.

Since the World Bank 2001 Strategy was issued, the World Bank has not funded a single large-scale livestock project.

The proposed Bertin project would support precisely the type of livestock system that the Strategy seeks to avoid: a large integrated producer, rather than small mixed farmers. The proposed Bertin project would conflict with and undermine other key elements of the Strategy, notably in the areas of environmental management and food safety. For example, it would lead to decreased biodiversity in the region, while the Bank's Livestock Strategy seeks to conserve it.

Many other sources besides the Bank's Livestock Strategy document have recognized such problems. A number of such sources are provided in the bibliography of the World

¹⁶ <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTARD/0,,contentMDK:20452630~menuPK:1308455~pagePK:148956~piPK:216618~theSitePK:336682,00.html>

¹⁷ *Livestock Development*, op cit.

Bank 2001 Strategy. Many findings in the Bank's Livestock Strategy were published earlier (in 1999) in a Livestock Sector Environmental Assessment (EA)¹⁸ compiled at the Bank, describing the major, critical environmental problems that can be attributed to large-scale livestock projects, the most important of which are summarized below.

The most critical environmental problems in large-scale livestock production are:

- Tropical forests are being burned to create land to grow feed for large-scale industrial livestock systems or in some cases for cattle to graze. In all cases this activity destroys biodiversity and pollutes land, water, and air. These systems induce overgrazing, accelerate soil erosion, cause loss of topsoil, soil compaction, decreased percolation rates of rain into soils, depletion of water tables, and desertification.¹⁹ Overgrazing by China's 127 million cattle and 279 million shoats is expanding China's desertification by an average of 2330 sq. km per year. Transition from the traditional diet to the Western diet increases by at least three times the land area needed for food production.
- Petrochemical fertilizers used to produce feed crops for large-scale industrial livestock systems are creating significant amounts and concentrations of toxic nitrous oxides, which are being washed into waterways. The high levels and concentrations of manure from large-scale industrial livestock systems are more than can be absorbed in farming operations, so the excess pollutes groundwater, streams, lakes, rivers, and other waterways, resulting in large "dead zones" in bodies of water such as the Gulf of Mexico. These toxic pollutants are also causing illnesses in people and animals, decreasing populations of fish and other aquatic harvests, and diminishing the availability of unpolluted water.
- The concentrated, toxic airborne emissions from large-scale industrial livestock operations, especially hydrogen sulfide and ammonia, are causing large numbers of both immediate and long-term respiratory problems in surrounding communities.
- The industry sector contributing most to greenhouse gas production is usually thought to be the power/energy sector or the transportation sector, but if all factors are considered, it is probably the livestock sector (as described in Section 2 above).

¹⁸ Goodland, R. 1999. "Livestock Sector Environmental Assessment" (239-261) in Hardtlein M. et al. (eds.) *Nachhaltigkeit in der Landwirtschaft*, Berlin (E.Schmidt) Umwelt Stiftung, Deutsche Bundesstiftung Umwelt, 421 pp.

¹⁹ In 2003, the Centre for International Forestry Research (CIFOR) released a report highlighting how the main cause of deforestation in Brazil was the rapid expansion of cattle pasture – the Hamburger Connection all over again. It found that between 1997 and 2003, Brazilian beef export increased fivefold, and that, in 2003, for the first time, growth in Brazilian cattle production - 80% of which is in the Amazon basin - was primarily export driven.

Nutrition Strategy

The World Bank's latest major publication outlining a strategy for nutrition provides several case studies that appear to support a reduction in beef consumption. This is inconsistent with the large-scale expansion in beef supply that would be provided by the proposed Bertin project. Following are two passages quoted directly from this Bank publication:²⁰

A recent review of the European Union (EU) Common Agricultural Policy noted that its support for the cattle sector produced excess dairy products and aided consumption of saturated fats. As a result, diet-related disease, particularly cardiovascular disease, claims more than 7 million years of life annually and obesity-related costs are 7 percent of the EU health care budget. In Poland, the withdrawal of large consumer subsidies (especially for foods of animal origin) and subsequent substitution of unsaturated for saturated fats and an increased consumption of fresh fruits and vegetables are believed to have decreased the relevance of ischemic heart disease and mortality from circulatory diseases since 1991.

This second passage shows that the example above is widespread and may be pervasive:

*The European Union (EU) Common Agricultural Policy noted that its support for the cattle sector produced excess dairy products and aided consumption of saturated fats. As a result, diet-related disease, particularly cardiovascular disease, claims more than 7 million years of life annually and obesity-related costs are 7 percent of the EU health care budget.*²¹

This latest major Bank publication on nutrition advocates the fortification of staples and salt where needed, with iron, calcium, folic acid, vitamin A, and iodine as being most economic.

Conclusions that argue against the promotion of increased beef consumption are not new for the Bank. In the 1980s, World Bank staff documented studies in 65 counties in China showing that the heights of adults are strongly associated with the intake of plant-based foods, rather than livestock products. Relying largely on plant-based foods, China reduced infant mortality by about 80%, while childhood growth rates were increasing as rapidly as those observed in Japan during the 1950s-1980s.²²

²⁰ World Bank, *Repositioning Nutrition as Central to Development: A Strategy for Large-Scale Action*, Washington, World Bank, 2006.

²¹ This statement suggests that the Bank's strategy for nutrition promotes more consumption of plant-based foods rather than beef. However, a personal communication from the Bank's Health, Nutrition and Population Department (Kei Kawabata, December 2006) notes that the publication in question does not state "...that consuming more animal products prejudices human health."

²² Piazza, Alan, *Food consumption and nutritional status in the People's Republic of China*, London, Westview Press., 1986.

Another report on this topic – commissioned by the World Bank and written by Drs. Hu and Willett of the Harvard School of Public Health – concluded that when investments in animal products are being considered in development, "the use of plant source of protein and fat, such as soy products, nuts, and vegetable oils, may provide even greater health benefits and should therefore be considered." This report provided a detailed review of relevant epidemiological literature, and concluded "higher red meat [beef, pork, and lamb] consumption probably increases risk of coronary heart disease, colon cancer, and prostate cancer, and possibly breast cancer."²³

Such findings are supported and corroborated outside the Bank. For example, the World Health Organization has indicated that there is an epidemiological transition occurring, whereby the number of people in developing countries afflicted by infectious diseases is being overtaken by the number afflicted by non-communicable diseases – of which degenerative diseases are the most significant²⁴.

By 2020, non-communicable diseases are expected to account for 57% of all disability and 70% of all deaths in developing countries. Public health specialists are especially concerned about increases in degenerative diseases because the cost of treating each such case is usually significantly higher than the cost of treating an infectious disease. Therefore, degenerative diseases pose significant risks to poverty alleviation and to the overall economic development of developing countries. The costs of treating degenerative diseases attributable to the Western diet probably exceed the costs of treating diseases attributable to smoking.²⁵

As the World Bank Group strives to consolidate the gains in health for children below age 15 years (by controlling childhood communicable diseases more effectively), it should not also be promoting projects that allow those gains to be frittered away in midlife (by contributing to increases in non-communicable diseases).²⁶

Scarce agricultural development resources are more economically allocated to promoting increased accessibility by the poor to healthful foods – because such foods have a lower environmental impact, are more efficient in resource use, and are more equitable to poor farmers. Most meat and dairy products are now available in soy-based versions, so this

23 Hu, F. B., and W. C. Willett, *The relationship between consumption of animal products (beef, pork, poultry, eggs, fish and dairy products) and risk of chronic diseases: A critical review*, Report for the World Bank, Boston, Harvard School of Public Health, 1998.

²⁴ WHO, *investing in health research and development: Report of the Ad Hoc committee on health research relating to future intervention options*, Geneva, WHO, 1996.

²⁵ Barnard, N.D., Nicholson, A. & Howard, J.L., "The medical costs attributable to meat consumption" in *Preventive Medicine* 24: 646-655 (1995) and Sturm, R., "Obesity a greater health risk than smoking" in *Public Health* (June 2001).

²⁶ Reddy, K. S., "The burden of disease among the global poor (Letter to the Editor)" in *The Lancet* 354: 1477 (1999).

alternative would not require lowering nutritional standards; on the contrary, it would likely improve them.

Annex C: Provenance of beef

There are various standards for documenting the provenance (origin and chain of custody) of beef. These standards exist mainly to ensure food safety, but could also be adapted to ensure that beef is not sourced in environmentally harmful ways. In Brazil, the Sistema Brasileiro de Identificação e Certificação de Origem Bovina e Bubalina or SISBOV tracking system was established in 2002, with the primary objective of establishing transparent, unarguable provenance for food safety purposes.²⁷

Unfortunately, the SISBOV system failed within six months of implementation. According to analysts, this happened because of a lack of state and local cooperation, but also because producers “didn’t buy into the concept.”²⁸ Due to these deficiencies, clandestine livestock movements went undetected, and foot-and-mouth disease became epidemic in various parts of Brazil.

For Bertin’s proposed beef tracking system, no timetable or standards are established, no evidence is provided that Bertin is capable of or qualified to perform such tracking, and no provision is made for effective, independent, third party certification or oversight.

There is presently no system in place in Brazil to prove provenance transparently and unarguably. The Brazilian government is attempting to put in place regulations for a new system. However, experts say the proposed new regulations will not be easily implemented, “because many herds are located in isolated inland regions where regular monitoring is impossible, given current staffing levels.”

Despite the acknowledged failure of this system of provenance for beef in Brazil, Bertin’s proposed provenance system is based on the old failed system, rather than the new one being proposed by the Brazilian government.

The ESIA for the proposed Bertin project allocates many pages to a discussion of tracing cattle to “Legal Amazon” land, an important issue. The State of Pará (as described by the ESIA) is arguably the most dysfunctional region of the world with regard to reliable land titling. Killing, maiming and intimidation are common in land disputes. However, the ESIA does not describe any plans for the proposed project to support Brazilian government efforts to clean up and regularize land titling in the project region. Without improved land titling in the project area, livestock provenance and traceability cannot

²⁷ SISBOV concerns tracking the live animal and the whole carcass only, because it depends on plastic earrings. Thus beef itself is not traceable by SISBOV.

²⁸ *Food Traceability Report, News and solutions for agriculture, industry and regulators worldwide*, May 2006 (Volume 6, Number 5), Washington, D.C., Agra Informa Inc.

function reliably, and rapid deforestation can be expected to continue and to increase as a consequence of this project.

Good practice in the food industry is for buyers from livestock operations in Brazil to agree not to procure livestock from any area that has been deforested in the previous two years. For example, McDonald's Corporation has committed to undertaking this practice, which may be effective in reducing deforestation. For such practice to be effective in Brazil, it would be necessary to have an effective, reliable tracking system in place, which is not presently the case. In any event, Bertin has not committed to follow this practice.

Annex D: Disclosure of Information

IFC's latest disclosure policy established in 2006 states that "IFC seeks to provide accurate and timely information regarding its activities to its clients, partners and stakeholders (including affected communities), and to other interested parties" and that "English is the working language of IFC."²⁹

Only the executive summary of Bertin's ESIA has been published in English. It includes the following unintelligible phrases: "cattle production as a structuring productive segment"; "effluents are pumped to the static riddle"; and "presencial participation activities were developed."

With no English translation of the full ESIA available, all those who cannot easily read Portuguese are dependent on the inadequate English executive summary, which effectively prevents them from making an independent evaluation of the environmental and social impacts of this project. Bertin's main concern appears to be to save time and money. Key stakeholders such as indigenous peoples in local Brazilian communities who may not be fluent in Portuguese or have the necessary training and resources to perform an effective review of such a large, complex project may be forced to seek support from NGOs to assist them in reviewing this ESIA document – but those NGOs may not have the capacity to review an ESIA in Portuguese. Given the scope of potential adverse impacts of this project, there is no defensible reason for not providing an English translation of the full ESIA.

Annex E: Corrective Actions

For a project that is expected to accomplish environmental and social objectives that have never been accomplished before in the livestock sector in Amazonian Brazil, the postponement until after disbursement of corrective actions by Bertin is troublesome. As the ESIA for the proposed Bertin project does not cover the whole project area, it is likely that there are corrective actions needed beyond those identified in the ESIA. However, examining only the corrective actions proposed in the ESIA, unacceptable weakness is

²⁹ See "Policy on Disclosure of Information" at <http://www.ifc.org/disclosure>.

revealed in Bertin's capacity for environmental and social management. In addition, many of the corrective actions are listed only as goals, and lack specific measures for implementation. For some of the corrective actions, specific mitigation measures are said to be forthcoming from Bertin at some unspecified future date.

The ESIA also reveals that Bertin, as large a corporation as it is, employs very few environmental professionals, and a correspondingly low level of commitment by Bertin for implementing all the conditions of the CAP. It appears that Bertin has never before been obliged to undertake a full-scale environmental assessment of its operations. For all these reasons, it is important that Bertin be seen to fulfill all conditions of the CAP before first disbursement.

Annex E: Environmental and Social Scoping and Assessment

Bertin's ESIA

Not properly scoping and assessing the totality of effects of a project's components within its expected area of direct and indirect impacts would violate IFC Performance Standards, as well as most other well-established institutional and professional standards for environmental and social impact assessment, and therefore provide clear grounds for rejecting a project's ESIA.

For the Bertin project, the proponent's ESIA deals only with the Marabá sub-region in Pará state. The other affected sub-regions of Pará, such as Redenção, are excluded from this assessment, as are those portions of Rondônia and Mato Grosso, also within the Amazon basin, where key project components such as a large new slaughterhouse and tannery would be located. The potential impacts of these project components and their mitigation in those regions are minimally covered in the project's Environmental and Social Review Summary (ESRS). The ESRS does not mention the numerous severe environmental and social impacts that are known to be generated by hide tannery operations, which include heavy loads of organic and inorganic water pollutants, toxic substances and hazardous chemical discharges, and highly noxious odors. The ESRS does not mention issues and their mitigation for the tannery under construction in China, despite notorious problems with land acquisition and labor issues in China. In these ways the proposed Bertin project does not meet requirements in IFC's Performance Standards for scoping and assessment.

Another deficiency is in Chapter 7 of the ESIA where it is claimed that there would be no net increase in cattle herds as a result of the increased slaughtering capacity, because Bertin would absorb cattle that now go to the local market. The ESA postulates that these cattle would not be replaced, as local markets would simply absorb less meat. This is an unreasonable argument, especially in light of the history of cattle ranching in the region. However, the ESIA uses that argument to enable the ESIA to avoid studying all adverse impacts such as greenhouse gas emissions, deforestation, and soil and water

degradation associated with additional cattle. This is a basic conceptual and analytical flaw in the ESIA.

Furthermore, the great majority of potentially impacted people and other stakeholders in Rondônia and Mato Grosso, as well as the stakeholders in the project area outside Marabá sub-region of Pará, have been excluded from meaningful consultation during the preparation of the ESIA. Yet these areas are as sensitive as the Marabá region from an environmental point of view. This failure of the consultation process is another way in which the ESIA has not met the requirements of IFC's Performance Standards. In late January 2007 IFC advised some NGOs and civil society representatives in Brazil that such consultations might be undertaken *after* the IFC Board approves the Bertin project, which does not meet the requirements of IFC's Performance Standards.

Following are some other inadequacies of the ESIA:

- It does not identify or analyze many of the more important potential impacts on the project area – for example, local and regional secondary and cumulative impacts of the project, which could be among the most destructive, widespread, and long-lasting impacts of the project.
- It does not specify how most of the main identified impacts are to be prevented, monitored, or mitigated.
- It does not state how Bertin's own environmental and social assessment capacity for managing this project would be established or made operational.
- It neither identifies nor recognizes the importance of current forest conservation units or Amerindian areas in Bertin's Marabá area of influence (for example, the whole 163 "Sustainable Forestry District" is missing).
- It does not present for consideration, discussion, or analysis any reasonable alternatives to any of the principal components of the proposed project that might achieve the desired objectives with fewer adverse impacts.
- Prudentiary declarations (absence of slavery, no illegal deforestation, no illegal land deeds, non-use of agrarian violence, no invasions of Amerindian lands) all are to be self-reported by individual ranchers, without independent monitoring.
- The slavery textbook is to be handed out to incoming workers, most of whom will not likely be able to read or comprehend it.
- The satellite imagery monitoring system that the ESIA maintains will be set up by Bertin is absent and untested, and therefore unlikely to be able to detect most fraudulent or illegal declarations.
- There is a single mention in the ESIA of the possibility of Bertin inspecting a ranch for compliance with IFC's performance conditions. Given that there are only 162 ranches mentioned as potential suppliers, there is no reason for all of them not to be inspected systematically (preferably by unannounced, independent third-party inspectors if Bertin intends for such compliance measures to be truly effective).
- It does not discuss the likelihood of illegal or slavery-based ranches selling cattle to legal ranches, and thence to Bertin.
- It does not acknowledge that in the region of Brazil chosen for this project, human rights scarcely exist for the most impoverished residents, with higher rates than in any

other region for slavery,³⁰ killing and abuse of indigenous peoples, armed land-grabbing, and violence against the poor, according to Government figures. Police few in number and themselves having been implicated in lethal attacks on the poor.

- It states that the mandatory Indigenous Peoples Development Plan (IPDP) will be completed “according to schedule” – but neither the schedule nor the process for implementing this plan is divulged.
- Two of the three Bertin cattle-ranching areas identified in the ESIA have “medium and high” risk of foot-and-mouth disease (FMD). The beef that would be produced by this project is intended primarily for export. However, the European Union’s International Animal Health Division is warning EU importers that Brazil refuses to ratify the relevant international convention.³¹ The State of Pará, where this project plans major operations, rejected the use of Brazil’s SISBOV cattle tracking system for FMD. This information is not disclosed in the ESIA.
- It does not acknowledge that land titling is chaotic in the project area and is one of the main causes of murders and fire-bombing of Land Registry Offices. Land holdings are highly concentrated in the hands of a few wealthy owners; less than one-third of the land holdings in Pará State are currently registered.
- It does not address adequately the priority goals of the latest World Bank Group Country Assistance Strategy for Brazil.

Because the ESIA, as pointed out above, does not include any meaningful analysis of reasonable alternatives, the prudent alternative of intensifying existing cattle ranching on natural pastures in Southern Brazil has not been considered. Another alternative omitted from consideration is providing support for small-scale agro-forestry with only a few cattle ranches per farmer, with each group of cattle ranches intensively, near already cleared and settled habitat. Small-scale agro-forestry projects can create many local jobs, be effective in reducing poverty, minimize adverse environmental impacts, and inject resilience into a community.

The project documentation claims the project will become sustainable,³² but fails to define persuasively and specifically what it means by sustainability as applied to Amazon region cattle ranching.³³

³⁰ See Government’s official slavery list at mte.gov.br/Noticias/conteudo/5773.asp. Bertin’s Pará state ranching areas has 40% of these slavery listings. Cattle ranching dominates in the sectors using slavery. Over half of Brazil’s slavery cases are in Para.

³¹ This outbreak of FMD in Brazil’s approved export zone is of concern as it could be a warning sign that cattle movement controls may not be adequately implemented. Should this be the case, outbreaks may occur in non-affected areas of the EU-approved export zone from where importations of deboned beef continue undisrupted. Russia, which is Brazil’s biggest beef importer, has also suspended all purchases, as have Israel and South Africa.

³² Arcadis Tetraplan (AT--consultant to Bertin for preparation of the ESIA) has a view of sustainability that seems to exclude local impacts. The Nov ’06 AT report fails to explain what sustainability is. The AT website states: “The concept of sustainability is built around the premise that corporations, governments and communities can improve their financial performance and longer term viability while responsibly addressing more global environmental and social impacts.”

“Raising the Bar” on Agriculture and Livestock in the Amazon

The World Bank Group claims a role to “raise the bar” in financing agriculture and livestock in Brazil.³⁴ This is a laudable goal. Many years of excellent research at the World Bank has identified cattle ranching as one of the most damaging parts of the entire agriculture sector.³⁵ Therefore this is a highly appropriate sector to try to improve, because large-scale cattle ranching in tropical forest areas is arguably the most damaging type of agricultural activity. But there is no independently verifiable track record of environmentally and socially sustainable cattle ranching anywhere in the wet tropics.

Given that the World Bank has persuasively documented how difficult it has been to raise the bar until now in this sector, most observers should be anxious to see whether Bertin can in fact raise the bar. Logic and prudence demand that only if success can be clearly demonstrated in *existing* operations should Bertin substantially expand its operations.

The ESIA for the proposed project indicates that Bertin has not chosen the prudent course of improving quality on their existing ranches, especially on natural grasslands in Southern Brazil. On the contrary, the much riskier course of expansion has been proposed – establishing huge new ranches and livestock processing facilities in the least appropriate place in all of Brazil, namely the Amazon forest basin. The goal of raising the bar should mean mainly supporting intensification of existing cattle ranches in Southern Brazil, partly in order to decrease pressure on the Amazon forest – but this alternative is neither presented nor analyzed in the Bertin proposal.

A case could be made that moving toward the IFC/World Bank goal might be achieved by support of the following activities:

³³ Amazon forest soils are notoriously infertile. Most of the nutrients are contained in the standing forest, so most are lost when deforestation and fires are used to create the ranches. Left unprotected, the soils’ remnant nutrients are lixiviated by the annual 2mts of warm and intense rains. Cattle accelerate nutrient loss by puncturing the soil surface, reducing protective plant cover, and by direct removal when the N, P, K, S contained in the carcass is exported out of the ranch ecosystem. This degradation takes about 2-3 years depending on stocking ratios over which IFC and Bertin have little control or means of monitoring. Worldwide, cattle ranches in tropical wet forest ecosystems have always had to clear more forest after a few years. Where there is a cold season that reduces nutrient loss or where limestone is affordable, usually near cities, this process can be prolonged.

³⁴ E.g., on IFC’s website at http://www.ifc.org/ifcext/disclosure.nsf/Content/Brazil_Bertin_FAQ; also in personal communication from John Briscoe, World Bank Country Director for Brazil, dated August 4, 2006.

³⁵ E.g., (a) Margulis, Sergio, *Causes of deforestation of the Brazilian Amazon*. Working Paper, Washington, World Bank, 2003, (b) Barreto, P., Souza, C., Nogueira, R., Anderson, A. & Salomão, R., *Human Pressure on the Brazilian Amazon Forests*. Washington DC, World Resources Inst., 2007 83 pp. (c) Chomitz, K., Buys, P., De Luca, G., Thomas, T. & Wertz-Kanounnikoff, S., *At Loggerheads?: Agricultural expansion, poverty reduction, and environment in the tropical forests*. Washington DC., World Bank Policy Research Report, 2006, 304 pp. and (d) Anderson, A.B. (ed.), *Alternatives to deforestation : steps toward sustainable use of the Amazon rain forest*. NY., Columbia Univ. Press, 1990, 281 pp.

- Intensification of existing cattle ranch operations in Southern Brazil
- Closure and rehabilitation of the worst Amazon basin cattle ranches (e.g., those using slavery, violating Indigenous Peoples Reserves, or damaging biodiversity hotspots).
- Rigorous prevention of expansion of even the relatively less bad Amazon cattle ranches, preventing fires from jumping from such ranches into the forest, and removal of existing (mostly illegal) roads from sensitive areas.

It takes about 60% less land to produce a given quantity of fat and protein from plant-based foods than from animals – and even much less than that if the animals in question are cattle. The FAO has calculated that livestock grazing and feed production use 30 percent of the planet’s land surface.³⁶ It has also calculated that water usage is 60 times higher for beef than for chicken on a worldwide basis, and 70 times higher in Latin America (figures are not provided specifically for Brazil). It also indicates that at its current rate of use for livestock and feed, the *Cerrado/Savanna* in Brazil could be completely destroyed by 2030. These are some of the numerous reasons for IFC’s Board of Directors not to approve the proposed Bertin project.

Quality of Growth

The World Bank Group’s development objectives include increasing employment, reducing poverty, and environmental sustainability. The *quality* of growth also matters, not just quantity. A recent report by the World Bank Group’s own Independent Evaluation Group (December 2006) questions The World Bank Group’s impact on poverty, and argues that its programs have failed to achieve sustained increases in per capita income.³⁷ The report also notes that development programs cannot focus solely on growth; the distribution of wealth within countries and communities is also critical.

World Bank Group institutions should be taking the lead in seeking to integrate social, economic and environmental goals. The practice of trading these goals off against each other has been discredited. Restoration and rehabilitation of degraded Amazon lands is a worthy objective, and should be pursued by Bertin. There are many ways of achieving this objective, such as investment in Alfred Marshall’s “waiting” or fallow and regeneration program.

Regrettably, Bertin’s proposed aggressive expansion of cattle ranching and associated slaughterhouse, meat processing, leather tanning, and pet food operations is far more likely to accelerate destruction in this Amazon forest region (e.g., cattle, fire, unplanned settlement, illegal logging), rather than to buy time for regeneration of already-damaged tropical forest ecosystem that is of worldwide importance for its biodiversity, its indigenous cultures, and its role in global carbon sequestration.

³⁶ *Livestock’s Long Shadow*, op cit.

³⁷ *Annual Review of Development Effectiveness 2006 – Getting Results*. Washington, DC, World Bank Independent Evaluation Group, 120 p.

The UNDP has postulated that all countries should pay much more attention to the quality, rather than the quantity, of growth. To help ensure that this is done, the UNDP has identified “*five damaging forms of growth.*” A brief analysis follows of the proposed Bertin project in relation to each of those “five damaging forms of growth” in turn, as described by the UNDP.

Jobless Growth: The Bertin project would provide probably the least number of jobs created per dollar invested for any large-scale investment in this region. Cattle ranching is favored in the Amazon basin precisely because it entails the least and lowest-cost employment of any feasible development activity. Bertin openly admits that it wants to expand into this region because labor costs there are the lowest in Brazil. Amazon labor costs are low partly because of widespread slavery, quasi-slavery, debt bondage, or indentured labor, according to the government. Violence is a lower-cost means of resolving disputes and removing the poor than judicial proceedings. In addition, labor costs are so low because most social safety nets (e.g., occupational and public health, worker safety, social security) are rarely available in the Amazon, and certainly not to the same extent as they are in Southern Brazil. Amazon forest region development projects have most labor costs externalized, whereas projects in Southern Brazil have many such costs internalized. This Bertin project would therefore undermine labor standards both in Brazil and in other beef producing countries where benefits such as social security are provided. It would therefore constitute an economic disadvantage for beef producing countries that responsibly look after their labor force.

Voiceless Growth: Cattle ranching and livestock processing in the Amazon region are among the least democratic and inequitable forms of development, and undermine efforts to spread democracy. Persons employed in such activities in this region are frequently intimidated and subjected to violence; they have little or no voice in the control of their lives.³⁸

Rootless Growth: Because Amazon cattle ranches are so unsustainable, such ranches rarely last more than a few years. Viable social communities are not formed or supported by cattle ranching activities in the Amazon. In fact, any existing separate cultural identities tend to be snuffed out by ranching, which has a long and sad history of harming Amerindian societies and other vulnerable ethnic minorities.

Futureless Growth: As the World Bank’s own internal studies have shown, most degraded Amazon lands were despoiled by precisely the type of activity Bertin proposes, namely cattle ranching and associated livestock operations. While there are better and worse forms of ranching, this proposal by Bertin is unlikely to be on the better side. Even ‘better’ ranching within the Amazon region’s fragile ecosystems has the effect of exporting valuable soil nutrients, especially phosphate, sulfur and potassium. That is why slaughterhouses are often associated with fertilizer factories.

³⁸ National Geographic, January 2007, “Last of the Amazon,” pp. 41-71.

Ruthless Growth: Most of the benefits generated by these industrial-scale livestock projects flow to their already-wealthy owners and investors. At c.190 million head, Brazil has the world's largest commercial cattle population. Very few if any small-scale livestock farmers will likely benefit from Bertin's proposed project. The income earned by family farms has declined markedly between 1990 and 2003 throughout Latin America, except in Chile (according to Martine Dirven, the Economic Commission for Latin America and the Caribbean (ECLAC), at the seminar on "Proposals to Face the Present and Future of Small Scale Family Farming", UN FAO). Large-scale ranching and livestock operations tend to worsen social exclusion and militate against family farmers. In addition, the proposed Bertin project would not result in increasing the availability of food for the extreme poor, as the Millennium Development Goals advocate. On the contrary, there are indications that beef currently being consumed locally will be exported by Bertin, which would have the effects of reducing local beef supplies, increasing the price for domestic consumers, and making the clearing of additional forested areas to raise more cattle more likely.

Any proposed large-scale development project with such glaring environmental and social welfare deficiencies should not qualify for investment from the IFC.

Soy Projects in the Brazilian Amazon Region

In 2005 IFC's Compliance Advisor/Ombudsman office investigated IFC's investments in the Amaggi (Maggi Group) soy projects in the Brazilian Amazon region, and found, among other problems, the following:³⁹

- IFC did not adequately assure itself of that the Environmental and Social Management System (ESMS) for these projects would afford an appropriate level of environmental and social protection, and ensure compliance with IFC's environmental and social requirements during project appraisal.
- IFC did not undertake a sufficiently rigorous assessment of the status of implementation of Amaggi's ESMS as part of the appraisal for IFC's second investment.
- IFC did not clearly define its expectations of Amaggi regarding issues to be addressed by the assessment of proposed silo locations and related details.

It appears that many of the same mistakes found by the CAO in the Amaggi projects are likely to be repeated in the proposed Bertin project. IFC's Board of Directors should ensure that this does not happen.

³⁹ Report by CAO on Amaggi dated May 2005, 23 pp.