

Environmental and Labor Issues

Environmental Classification and Issues: This is a category III project according to the IIC's environmental and labor review procedure because it could produce certain effects that may be avoided or mitigated by following generally recognized performance standards, guidelines, or design criteria. During project evaluation the following potential environmental and labor effects were analyzed: liquid effluents, air emissions, solid waste, hazardous chemicals and waste, integrated pest management, natural resources management, occupational safety and hygiene, and other labor and social issues.

Pantaleon has developed plans to address environmental and social issues, mitigate impacts and comply with local environmental and labor laws and regulations, as well as IIC's environmental requirements. An Environmental and Social Impact Assessment (ESIA) has been prepared for the expansion of the distillery in Guatemala. In addition, an ESIA is currently under way for the mill and sugar cane plantations in Honduras. Pantaleon has also been proactive in obtaining international certifications. For instance three mills (Pantaleon, Concepción, and Monte Rosa) are ISO 90001 certified in quality control systems, as well as HACCP (Hazard Analysis and Critical Control Point). Pantaleon also received ISO 22000 certification in Food Safety Management Systems for its Monte Rosa sugar mill. Pantaleon plans to obtain ISO 14001 certification in Environmental Management Systems and OHSAS 18001 in Occupational Health and Safety Management Systems by June 2011 for its operations in Guatemala and Nicaragua, and ISO 14001 for its Honduran sugar mill in 2015. In addition, the company has agreed to develop a plan for achieving certification of sustainable forest management for its eucalyptus plantation.

Liquid effluents: Pantaleon has improved its management of liquid effluent and has studied the corrective actions needed to ensure compliance with local regulations, as well as international best practices (i.e., International Finance Corporation Performance Standards). The effluent from these mills and the ethanol plant consists primarily of the following: (i) process wastewater from sugar/alcohol production, (ii) wastewater from cane washing, (iii) wet scrubber blow down from stack gas scrubbing, and (iv) stormwater. Effluent from the Pantaleon and Monte Rosa mills is used for irrigating their fields, subsequent to receiving primary treatment; a groundwater monitoring program is being developed in order to assess the potential impacts of irrigation with wastewater. Domestic sewage from the Concepción mill is discharged to a municipal system, and sewage from the Pantaleon and Monte Rosa mills is discharged to septic tanks. Recommendations for wastewater management improvements at the facilities, particularly at the Concepción mill, will be carried out within an agreed timeline once the necessary studies are finalized. In addition, Pantaleon has implemented measures to reduce the amount of water used in the process, thereby reducing the amount of effluent that will require treatment. For instance, both the Monte Rosa and La Grecia mills started using a dry system for cleaning and preparing the cane before the crushing process.

Air emissions: The main air emissions from sugar processing and refining result primarily from the combustion of bagasse (the fiber residue of sugar cane). Fly ash present in the flue gases from the combustion of bagasse are emitted by the boiler stacks. The stack emissions at the Pantaleon and Concepción mills are in compliance with international best practices (i.e., IFC guidelines). The company is currently obtaining monitoring data for the new mill in Honduras, which utilizes a coal-fired boiler. Pantaleon will take the necessary actions to ensure compliance with local standards, as well as the IFC Environmental, Health and Safety guidelines for power plants. Pantaleon is also developing an annual stack monitoring program for quantification of greenhouse gas (GHG) emissions for all its facilities, and will implement the necessary carbon offsets. If Pantaleon's facilities produce 100,000 tons or more of CO₂ equivalent per year of aggregate emission, the company will evaluate technically and financially feasible and cost-effective options to reduce or offset project-related GHG emissions during the design and operation of the project. These options

may include carbon financing, energy efficiency improvements, the use of renewable energy sources, alterations of project design, emissions offsets, among others. Pantaleon is working towards improving energy efficiency at all of its facilities through the review of energy consumption in the process.

Solid Waste: The solid waste generated in the industrial areas consists primarily of the following: (i) empty plastic containers that are sold to licensed companies specializing in recycling; (ii) bagasse from sugar cane that is used as fuel in the boilers for generating electricity at the mills; all bagasse generated from milling the cane is used as fuel in the boilers to generate steam; and (iii) ash, sand, and lime sludge from cane wash water treatment facilities, which is disposed of on its land in designated areas. Solid waste management at Pantaleon and Concepción mills complies with local regulations and international industry practices. However, Monte Rosa mill is assessing methods to improve its waste management, which consists of using a nearby site as a landfill, given that there are no municipal landfills in the area.

Hazardous Waste: Hazardous waste management at the company is adequate and complies with local regulations. For instance, fuel and oil are stored in tanks with secondary containment walls. Empty hazardous material containers (used for agricultural chemicals, such as herbicides and fertilizers) are collected by authorized recyclers. In addition, agrochemicals are stored in designated areas with restricted access.

Integrated Pest Management: The company uses integrated pest management at all of its plantations, using primarily biological controls, which enhance natural predator populations, thereby minimizing the use of chemical pesticides. In addition, the company will implement and obtain certification for Integrated Farm Quality Assurance Good Agricultural Practices (GAP) Management System within the next three years.

Natural Resource Management: The project does not involve the conversion of critical habitats and no known endangered species are affected by the project's operations. There are also no legally protected conservation areas impacted by the project. Pantaleon's use of eucalyptus chips in its boilers will allow it to minimize the use of bunker fuel. The lands reforested with eucalyptus plantations are primarily sugar cane fields with low productivity that are no longer used. The conversion of these low productivity lands to plantations is beneficial in that it increases biodiversity and reduces water and wind erosion. Pantaleon will develop a plan to obtain FSC (Forest Stewardship Council) certification for sustainable forest management for its eucalyptus plantations.

Labor and Social Issues: Pantaleon is in compliance with national labor laws, and the company ensures that no child labor or forced labor is used at its operations. Workers are also free to join a union; however, no employees have formed or joined unions in the company. Pantaleon is also an equal opportunity employer that has developed several important initiatives, such as capacity building of women in driving heavy machinery in their operations in Guatemala, and a program for migrant workers from the Guatemalan highland, who are of Mayan descent. The program geared for these sugar cane cutters involves hiring them directly rather than through middlemen, working directly with local leaders in the highlands to organize work crews, providing them with nutritious and re-hydrating food, adequate housing and learning opportunities. In addition, the company has a formal employee's grievance mechanism in place and different channels for workers to express their concerns, including an ethics committee. Overall, Pantaleon's worker's wages are approximately 10% higher than the minimum wage in the three countries.

Occupational Health and Safety: Pantaleon has implemented a health and safety management system and its facilities are audited monthly by an internal team. Workers at the mills and plantations are provided with the appropriate personal protective equipment. The facilities are

equipped with fire safety equipment and signage is adequate. Pantaleon and Concepción have an Emergency Preparedness and Response Plan in place. The Company monitors and reports accident statistics for its mills and plantations in Guatemala and Nicaragua and will add Honduras. In addition, Pantaleon has a hydration monitoring program for sugar cane harvesters. Pantaleon has also been active in understanding and finding ways to prevent Chronic Renal Insufficiency (CRI), an illness that is generalized in rural workers in Nicaragua, but not particular to the sugar industry or sugar cane regions in other countries. CRI mitigation techniques will be developed for all Pantaleon operations; these techniques include providing better hydration and nutrition, regular checkups for higher CRI risks, and introducing an acclimatization period (working only 2 hours the first day and increasing up to 6 hours in the fields).

Monitoring: The company will implement an Environmental and Social Action Plan acceptable to the IIC. Throughout the project, the IIC will monitor the implementation of the agreed Environmental and Social Action Plan, reviewing the monitoring reports that the company submits regularly, and making field visits as part of the project supervision process.