

ENVIRONMENTAL REVIEW SUMMARY (ERS)

Project Name	Uruguay: Conaprole	
Region	Latin America and Caribbean	
Sector	F-AF-Dairy Products	
Project No.	11306	25 July 2002

Project Description

Uruguay's National Dairy Producers' Cooperative (Conaprole) is the leading dairy cooperative and second largest exporter in Uruguay. IFC will assist Conaprole in a project aimed at rationalization and modernization of industrial plants, logistics, and distribution. The project encompasses modernization and expansion of existing Plant No. 2 in Montevideo for milk processing and production of value-added goods and a central distribution center. This installation will replace existing, obsolete operations in Montevideo currently undertaken at Plants No. 1 and 2. The project will significantly improve Conaprole's efficiency and allow it to remain competitive in the global market place. Over the past twenty years Conaprole constructed nine operations across the country to process a continuously growing supply of milk. Limited consideration was given to optimizing operating efficiency and lowering costs. As a result, some Conaprole operations are inefficient. The project will enhance Conaprole's and the Uruguayan dairy sector's long-term viability and assist in its transformation to a modern, world class dairy company able to compete effectively in world markets.

Environmental and Social Issues

This is a category B project according to IFC's environmental review procedure because specific impacts may result that can be avoided or mitigated by adhering to generally recognized performance standards, guidelines or design criteria. The review of this project consisted of appraising technical and environmental information for the new project and existing plants submitted by the project sponsor, and IFC's industry specialist report. The following potential environmental, social, health and safety impacts of the project were analyzed.

- Environmental policy;
- environmental management;
- emissions to the environment (e.g. air and water, solid waste and hazardous materials management) in existing operations and plants;
- potable water;

- use of refrigerants;
- energy management;
- industrial hygiene, occupational safety and health, corporate environmental management, and life and fire safety;
- land acquisition, cultural property and sensitive natural habitats;
- community development;
- technical support for milk producers; and
- labor retrenchment.

The following paragraphs provide a discussion of how each of these potential impacts will be mitigated in the Company's project.

1. Environmental Policy. Conaprole has an existing Environmental Management Policy stating Conaprole's mission with respect to the environment. It obligates Conaprole to respect the environment and to carry out all its activities with due concern, protection and improvement in a continuous improvement process. Conaprole will obtain senior management public endorsement of the policy, modify employee job descriptions to incorporate environmental responsibilities, and undertake an education campaign to communicate the objectives and requirements of the program to all employees and to members of the supplier network.
2. Environmental management. Environmental management at Conaprole is evolving. An environmental management committee, with the participation of human resources, operates under the aegis of Industrial Management. It is responsible for implementation of a management system, planning and construction of wastewater treatment plants, and liaison with national agencies such as the Dirección Nacional de Medio Ambiente (DINAMA). Not all satellite plants have an environmental coordinator but several coordinators have been nominated and taken professional courses dictated by the Uruguayan Standards Institute's (UNIT) program for Environmental Management Specialists to fill this role in the most important plants (1, 7 and 9). As part of this investment, Conaprole will establish a standalone Environmental Management Department, complete placement of environmental managers at each of the plants, and undertake activities required to implement the Conaprole environmental policy at all levels of operations.
3. Emissions to the environment (e.g. air and water emissions to the environment, hazardous materials handling, solid wastes) in existing operations and plants. Conaprole's principal industrial operations are situated throughout the country. Several of these principal operations have up to four (4) satellite operations. The principals include: Montevideo (Plant 1 and 2) to be replaced by a significantly upgraded and modernized operation at Plant No. 2; ; Florida (plant 7); Villa Rodriguez, San Jose (plant 8); San Ramon, Canelones (plant 9); San Carlos,

Maldonado (plant 10); Rincon del Pino, San Jose (plant 11); Rivera (plant 14); and Mercedes, Soriano (plant 16).

4. Air Emissions. Conaprole's industrial plant air emissions emanate from the production of steam and heat needed for industrial operations. Data submitted for all operations demonstrates compliance with World Bank Group guideline limits for SO₂ and for NO₂. Data on particulate emissions were not incorporated into the assessment report. These data will be collected on a regular basis and incorporated into monitoring reports for all installations.
5. Wastewater management. Plants 1 and 2 in Montevideo, which will be replaced by the upgraded, modernized facility at Plant No. 2's existing location currently discharge untreated wastewater to city sewerage. The faculty of engineering of the Universidad de La República will assist Conaprole to ensure design of wastewater pre treatment facilities for Plant No. 2 that will comply with Uruguayan Standards and with the City of Montevideo's discharge regulations and avoid nuisances in the adjacent neighborhoods. Operations at Plant No. 1 and current discharges of untreated wastewater will be eliminated with the completion of Plant No. 2 modifications. A new wastewater treatment plant at Plant 7 is in the start-up phase and should be in stable operation within several months; effluent will be used for land treatment or surface water discharge if the quality is adequate for such purposes. Similarly, construction of a new wastewater treatment works at Plant 9 is nearly complete. Treated effluents from plants 8 and 10 are used for land treatment. Although treated, wastewater from plant 14 exceeds WBG guideline limits for surface water discharge. Conaprole will undertake required corrective actions to improve effluent quality at all plants including, as needed, effluent disinfection systems for all discharges to surface water to ensure compliance with Uruguayan and WBG guideline limits.
6. Environmental conditions of existing facilities including asbestos in existing structures. Conaprole will commission an asbestos survey of existing structures and facilities in Plants No. 1 and 2 to identify any asbestos containing materials. Based upon the results of these studies, Conaprole will develop, if needed, remedial action plans for safe removal and disposal of such materials. Conaprole will implement any needed remedial measures with the assistance of a specialized, licensed contractor prior to or in conjunction with modernization of Plant No. 2 and decommissioning/demolition of existing structures at Plant No. 1
7. Quality and hazardous materials management. The mission of Conaprole's quality management unit is to participate in design, provide technical support for and to audit all raw materials utilization, instruments and procedures that are employed in the cooperative to assure the quality of products, processes and services. Quality documentation (Quality Control Manual, procedures and instructions) is based upon HACCP and ISO standards. Conaprole's goal is to obtain ISO 9000-2000 certification for the majority of industrial operations.

8. Solid waste management. Uruguay does not have pervasive national-level regulations governing the management of solid waste. However, Conaprole has several ongoing management programs. Conaprole recycles 60% of polyethylene waste, Kraft paper, various plastics, and paper and nylon bags in each of its plants. Whey is converted to powder for sale, used as an animal food supplement or disposed on land. Other solids such as chocolate and sugar bags, small cans with cleaning products, 200 liter concentrated juice drums (>5000/year), and broken wooden pallets are segregated from solid waste containers and sold as by products. At the new, modernized Plant No. 2, Conaprole will establish a Waste Management Unit in production, storage and transport to classify, dismantle and recover salable byproducts, and reduce the volume and cost for items destined for landfill disposal.
9. Potable water supply. Conaprole's Montevideo plants (1 and 2) use water from the public utility, OSE. The rural plants use well water exclusively. Chemical and microbiological data evaluated for appraisal demonstrate that the microbiological quality of raw water supplies at selected installations, which is subsequently disinfected, exceeds IFC guidelines and World Health Organization (WHO) limits. Microbiological data were not submitted for all plants. Engineering improvements are required. Supplemental data for all plants and modifications to raw water supply systems will be carried out on an urgent basis in accordance with the attached corrective action plan (CAP).
10. Use of refrigerants. Conaprole's long-standing policy is to eliminate purchase of CFCs. Ammonia is the predominant material used for refrigeration although several small plants continue to use CFC-12 for cold storage rooms (plant 13 and 14). The cold storage room at plant 13 will be closed and purchases of CFCs refrigeration at plant 14 will be terminated. Selected ammonia installations will be reviewed and modified to ensure protection from heat and ignition sources. As part of Conaprole's occupational safety and health program each plant has emergency response plans for ammonia, and appropriate protective equipment and respirators. Operation and maintenance of ammonia refrigeration systems are under the exclusive control of technical staff.
11. Energy management. Conaprole is active in energy conservation. AF-Energikonsult AB provided energy conservation training and conducted an energy audit; and several Conaprole engineers attended an Energy Conservation Seminar in the USA in 1998. Accumulated knowledge is applied actively to the design and installation of plant equipment (e.g. heat recovery). Conaprole commissioned energy reduction studies for equipment, services and lights, and continuously monitors other potential heat and energy losses (e.g. pipe insulation and steam traps). Exhaust temperatures, CO₂ and CO percentages are carefully monitored to ensure maximum boiler efficiencies. Industrial water treatment is oriented to the avoidance of scaling and corrosion. A recent energy review

performed with the assistance of McKinsey established a goal of 20% reduction and several programs are underway to achieve the goal. As an extension of existing monitoring programs, and to promote energy awareness, use reduction and reduce production costs, each plant will prepare and implement an energy plan to define the energy policy for the facility. The degree of detail in each energy plan and the approach to be taken will depend on the size of the facility, its energy use and the pre-existing systems in place. The energy plan will facilitate employee participation and demonstrate each facility's commitment to continuous improvement in use of energy to meet the targets set by and for the facility.

12. Industrial hygiene, general occupational safety and health, corporate environmental management and life and fire safety. Conaprole's corporate safety policy is oriented to achievement of zero accidents. The occupational health department employs an Occupational Health Physician, an Industrial Hygienist, an Accident Prevention Technician and a safety coordinator in each plant. Accident frequencies and severities are monitored closely and training is adjusted to reflect the findings of collected statistics and to thereby strengthen education and accident prevention programs.
13. Land acquisition, cultural property and sensitive natural habitats. Conaprole developed its rural facilities over the past twenty years in response to expansion needs. The property for these operations was purchased from owners in a willing buyer-willing-seller relationship. A seventy-five hectare property slated for future expansion was similarly acquired in 1990. A *Pre Feasibility Property Assessment* consistent with the requirements of the City of Montevideo's regulations will be prepared for the proposed modifications and new construction at Plant No. 2 and submitted to the municipal government of Montevideo for review and approval. A comprehensive mitigation and monitoring program for development of Plant No. 2 will be prepared and submitted to the City for approval. Upon approval of the plan, Conaprole will implement and manage the required mitigation programs before, during and after the construction phase.
14. Community development. Conaprole supports schools, families and other educational institutions to promote Campana de Reciclaje de la Bolsa de Leche in which post consumer polyethylene milk containers are collected. Conaprole converts the containers into bags for solid waste collection and distributes them to schools and towns. At the national level in conjunction with the National Primary Education Administration, Conaprole supports an arts and creativity program for children aged 5-12. It supports a variety of foundations such as the Fundación Niños con Alas that supports needy children by paying all required school costs during primary education. And, periodically, Conaprole supports public school systems with donations of powdered milk and other products. For cooperative employees there are education and training grants for staff and children, housing

support for relocated families and a variety of contributions to recreational and cultural activities.

15. Technical support for milk producers. Conaprole lends financial and technical support to some 2400 milk producers. Technical advice includes animal health, reproduction management, feed, milking equipment, farm management, veterinary clinics, and artificial insemination to name a few. Conaprole's *tambOletín* (Dairymen's Bulletin) contains timely technical information and is distributed to all producers. Conaprole and the Uruguayan government are proactively implementing dairy waste treatment programs throughout the country. Additionally, a variety of training programs is available to producers including: various thematic courses (e.g. animal feed, milk quality, dairy management) and the Young Producers Program. Conaprole established agreements with several financial institutions to lend money to cooperative members thus allowing them to opportunity to purchase new technology and to repay with cash flow from milk production. Several national programs in cooperation with Conaprole provide technical support, assistance with civil works (e.g. well construction and waste management) and financial services for the small producers not reached by other programs. Conaprole is promoting a *Safe Dairies Program* that incorporates food quality goals required to ensure the safety of milk from the dairies to the industrial plants. Conaprole intends to have all producing dairies become signatories to the program. The program clearly defines the standards to which each dairy should organize its resources and materials and to systematize its distinct activities to consistently assure a product that is innocuous, healthy and safe. Tuberculosis was eliminated in Uruguay some time ago. Brucellosis is well controlled and a program of eradication certification is well underway. Although eliminated some time ago, small pockets of hoof and mouth disease were identified last year but were quickly controlled with vaccinations and the country is once again free of the disease.
16. Labor retrenchment. In past industrial plant adjustments Conaprole addressed the needs of its supernumerary employees through a panoply of adjustments including arranging for transport to different operations, retraining for new positions elsewhere, early retirement, and other forms of compensation. During the past four years Conaprole has made significant staff reductions with specific agreements and without conflict. Upgrading and modernization at Plant No. 2 will necessitate retrenchment of approximately 200 employees. Conaprole's adjustment program for these and other affected employees will be audited quarterly to ensure that compensation payments are made according to plan.
17. Based on its review of available information regarding potential environmental and social impacts and specific mitigation measures (addressed in the attached corrective action plan), IFC concludes that the proposed project is being designed to meet Uruguayan government regulatory requirements, as well as World Bank policies, environmental, social, health and safety guidelines.

18. IFC will monitor compliance with Uruguayan regulations and World Bank policies and guidelines and with the attached corrective action plan during the life of the project. Conaprole will submit annual environmental monitoring reports. IFC will evaluate these monitoring reports and Conaprole's proposed remedial measures as needed to maintain compliance. Additionally, IFC will conduct periodic site reviews during project supervision.

CONAPROLE CORRECTIVE ACTION PLAN		
Environmental, Health and Safety Action Item		Required Completion Date
1. Conaprole Environmental Policy approval, promulgation and institutionalization. Conaprole will obtain senior management public endorsement of the policy, modify employee job descriptions to incorporate environmental responsibilities, and undertake an education campaign to communicate the objectives and requirements of the program to all employees and to members of the supplier network.		August 2002
2. Establish a standalone Environmental Management Department. Establish the department, responsible directly to senior Conaprole management. As part of this program Conaprole will train and install environmental managers at each of the plants, ensure close coordination with safety coordinators in each operation, and undertake all activities required to implement the Conaprole environmental policy at all levels of operations, and ensure compliance with Uruguayan environmental regulatory and World Bank Group guideline limits.		To be completed as a condition of loan disbursement
3. Wastewater management. Modify all treatment works that discharge treated effluent to surface waters to include disinfection as needed to comply with WBG guideline limits. Revise wastewater treatment works or treated effluent discharge systems to produce effluents at all plants that comply with WBG guideline limits for surface water discharge. Provide data for all plants and a quarterly report on progress to meet the requirement.		August 2003
4. Wastewater management at Plant No. 2. Design and construct wastewater pretreatment facilities for Plant No. 2. Pretreated effluent shall comply with City of Montevideo discharge standards and with Uruguayan environmental regulations and treatment works shall be designed and operated to minimize noise and odors potentially affecting adjacent neighborhoods.		June 2004

CONAPROLE CORRECTIVE ACTION PLAN		
Environmental, Health and Safety Action Item		Required Completion Date
5. Quality control and hazardous materials management. Obtain ISO 9000-2000 certification for all Conaprole Industrial Operations.		December 2003
6. Asbestos survey. Complete a survey of existing structures and appurtenances in Plants 1 and 2 to identify any asbestos containing materials. Develop, if needed, remedial action plans for safe removal and disposal of such materials.		December 2002
7. Asbestos Remediation. Implement needed remedial measures prior to or in conjunction with decommissioning/demolition of existing structures associated with Plant No.2 modernization and demolition of Plant No.1.		June 2004
8. Solid waste management. Establish a modernized Plant N° 2 Waste Management Unit for all production, storage and transport operations to classify, dismantle and recover salable byproducts, and reduce the volume and cost for items destined for landfill disposal.		June 2004
9. Water supply improvement program.		Complete all Tasks by December 2003
Implement weekly raw water sampling campaign for all Conaprole ground water wells: - Prepare all water collection sample bottles in accordance with <i>Standard Methods for the Examination of Water and Wastewater</i>; - Analyze collected samples for total and fecal coliform, total plate count, and fecal streptococcus bacteria; - Prepare a summary status report for all water wells and update monthly with collected data. Evaluate findings and prioritize well water treatment and/or well abandonment to ensure high quality water supply for each industrial plant.		To be completed as a condition of loan disbursement; continue indefinitely

CONAPROLE CORRECTIVE ACTION PLAN

Environmental, Health and Safety Action Item	Required Completion Date
If feasible, immediately terminate use of water from ground water supply wells that exhibit raw water contamination. If not feasible to close contaminated wells, implement breakpoint disinfection or sterilization for all raw water from affected wells. Addition of disinfectant shall take place prior to water storage. Contact time for water and disinfectant in storage vessels shall be a minimum of 60 minutes and preferably 120 minutes. pH shall be adjusted to neutral or slightly basic as needed. Disinfection shall be achieved by an appropriate method. Potential alternatives that will be evaluated include the following. a) Chlorine gas or on-site generated sodium hypochlorite and mixed oxidants to breakpoint¹ chlorination to be confirmed by weekly laboratory analyses; or b) Ozone (ozone treatment) sterilization to be followed by addition of a disinfectant such as chlorine to impart a residual disinfectant to the treated water; or c) Ultraviolet sterilization followed by addition of a disinfectant such as chlorine to impart a residual disinfectant to the treated water.	To be completed as a condition of loan disbursement
Engage the services of a hydrogeologist to: a. Review all ground water well locations, local geology and hydrogeology, well construction details including sanitary seals, and ground surface facilities; b. Conduct a sanitary survey of the ground water recharge areas for all ground water supply aquifers used by Conaprole plants; c. Prepare detailed recommendations for Conaprole and IFC detailing which wells have been constructed to connect one aquifer to another others and are to be closed, elimination of contamination in recharge areas, and preferred locations and well construction details for replacement wells.	To be completed as a condition of loan disbursement

¹ The processes of shocking the water with significant quantities of chlorine to oxidize all contaminants and organic wastes and leave all remaining chlorine as free chlorine.

CONAPROLE CORRECTIVE ACTION PLAN		
Environmental, Health and Safety Action Item		Required Completion Date
Complete an abandonment program for all contaminated wells and/or ground water wells that interconnect aquifers: a) Properly abandon all wells that interconnect aquifers by drilling out all casing and seals; b) Seal boreholes with a swelling grout mixture; tremie swelling grout to the bottom of all boreholes and completely seal to the ground surface.		September 2003
Complete replacement program for ground water wells as needed. c) Construction specifications must prohibit interconnection of aquifers; d) Sanitary seals must be provided in accordance with good practice (IFC can provide upon request);		January 2003
10 . Phase out of CFCs. Close cold storage room at plant 13. Utilize refrigerants for cold storage at plant 14. Terminate future purchase of CFCs		June 2004
11. Ammonia management. Reconfigure all ammonia storage and use facilities to ensure adequate protection from sources of heat and ignition.		June 2003
12. Energy Plans - Prepare Energy Plans for all operations using the IFC model as a guideline. Establish corporate responsibility, individual plant responsibilities, committees and goals in each plant. Report to IFC annually on the principal energy indicators, quantities used during the year, reductions from previous years, activities undertaken to reduce energy use, and ways and means of motivating employees and stimulating ideas for reduction of energy use in all plants.		To be completed as a condition of loan disbursement; continue indefinitely
13. Implement comprehensive mitigation and monitoring program for Plant No. 2 site development. Submit plans describing activities that will be taken to mitigate adverse environmental impacts associated with redevelopment of Plant No.2 and associated facilities. Provide quarterly reports until the end of		Commencement by September 2003 Continuation of reporting until

CONAPROLE CORRECTIVE ACTION PLAN		
	Environmental, Health and Safety Action Item	Required Completion Date
	with redevelopment of Plant No.2 and associated facilities. Provide quarterly reports until the end of construction.	completion of construction June 2004
	14. Retrenchment monitoring. Design and implement an auditable payment system for ensuring full and timely payment of laid-off employees. Provide quarterly reports to IFC.	To be completed as a condition of loan disbursement; Continue until completion of retrenchment program.
	15. Safe Dairies Program. Obtain signed agreement from at least 50% of all producers with an annual average production of 2000 liter/day to comply with specifications of the program.	January 2004

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Rosario de Oliveira, 11 de julio 2002