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SOYBEAN INDUSTRIALIZATION AND CREATION OF-VALUE-ADDED FOR EXPORTS IN PARAGUAY

COMPLEJO AGROINDUSTRIAL ANGOSTURA S.A. - CAIASA

PR-L1071

ENVIRONMENTAL AND SOCIAL MANAGEMENT REPORT (ESMR)

March 2013

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ACRONYMS

CAIASA	Complejo Agroindustrial Angostura S.A.
DD	Due Diligence
EIA	Environmental Impact Assessment
ESMR	Environmental and Social Management Report
IFC	International Finance Corporation
IDB	Interamerican Development Bank
LDCP	Louis Dreyfus Commodities Paraguay S.A.
MOPC	Ministry of Public Works and Communications
NFPA	US National Fire Protection Association
RIMA	Relatorio de Impacto Ambiental
RTRS	Round Table on Responsible Soy Association
SEAM	Secretary of the Environment
ZED	Zero Effluent Discharge

COMPLEJO AGROINDUSTRIAL ANGOSTURA S.A. - CAIASA

Paraguay

PR-L1071

Environmental and Social Management Report – ESMR

I. INTRODUCTION

Project Name:	Complejo Agroindustrial Angostura S.A. - CAIASA
Country:	Paraguay
Borrower:	Complejo Agro-Industrial Angostura S.A (the "Company" or the "Borrower")
Sponsors:	Bunge Paraguay S.A., LDC Paraguay S.A. and Losur Overseas S.L
Project Cost:	US$ 230 million
IDB A-Loan:	Up to US$92 million
Co-Lenders:	TBD
Resp. Department:	Structured and Corporate Finance Department (SCF)
Environmental Category:	B

II. PROJECT DESCRIPTION

2.1. IDB financing is proposed for the design, development, construction and operations of a new soybean crushing plant, and related facilities, including a port and 325 kMT storage capacity (the "Project"). The new plant will have a crushing capacity of 4,000 tons/day. The Borrower is Complejo Agro-Industrial Angostura S.A ('CAIASA"), and the Project Sponsors are LDC Paraguay S.A. ("Dreyfus" or "LDCP"), Bunge Paraguay S.A. ("Bunge" or "BP"), and Losur Overseas SL ("Losur"), all of which have a long experience in South American agribusiness and have existing raw soybean export operations in Paraguay.

2.2. The plant will be located near the city of Villeta, 40 km southeast from Asuncion, on the Paraguay River.

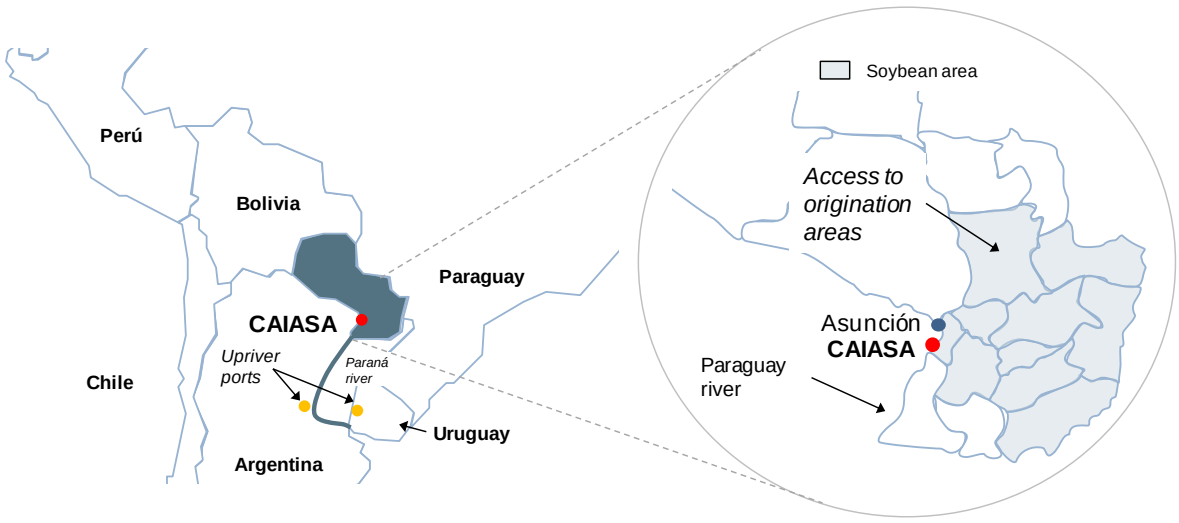


FIG. 1: PROJECT LOCATION

A. Key Project Infrastructure Components and Schedule

2.3. The project's main components are:

- **Soybean Crushing Plant**: The plant will include a weigh scale and quality laboratory, truck receiving/unloading area, raw soybean storage buildings (including bean cleaning and drying facilities), a crushing plant (including conditioning, cracking and rolling facilities), oil extraction equipment (rectangular loop extractor, with associated desolventizer, toaster, condenser and evaporator), hexane storage tanks, oil storage tanks, and meal storage facilities.

- **Barge terminals:** An existing port facility, currently utilized by LDCP, will continue to be used for the transfer of meal to barges for subsequent transport on the Paraguay River. A second port facility, currently unused and owned by another company, will be used for the transfer of finished oil from the crushing plant to custom barges for subsequent transport on the Paraguay River. Current ongoing activities at the port facility being used by LDCP are scheduled to end in late November 2012. At that time, the barge terminals will be reconfigured in order to meet the demands of the new plant.

2.4. ***Soybean Crushing Plant.*** The CAIASA soybean crushing plant ("crushing plant") is located on an approximately 141 hectare (ha) site, located 40 km southeast of Asunción in the municipality of Villeta. The industrial plant will occupy around 40 ha, developed with a variety of administrative, processing and storage buildings and ancillary equipment. The plant site is owned by CAIASA. A portion of the plant site, currently developed with grain handling and port facilities, had not at the time of the due diligence[1] been transferred to CAIASA and was owned by a third party. Work on this portion of the property, which includes the future oil handling and loading facilities, will

[1] The E&S due diligence was performed in September 2012, with the support of the consulting firm Golder

not begin until ownership is transferred in December 2012. The majority of the workers currently employed by LDCP will retain their jobs in the new working scenario.

2.5. The raw material will be transported by road from growers primarily in the east of Paraguay, and truck traffic will reach the site along existing paved roads that pass through the border of this community and in front of the project's site. All shipment of finished product will be by barge transportation on the Paraguay River, by way of two (2) port facilities located on the south-west (meal) and north-west (oil) portions of the site. Soybean origination, delivering to the Project as well as transportation of Project output will be responsibility of the Sponsors.

2.6. The design of the plant was determined by a committee, made up of representatives from each of the three partnering companies. All three companies are significant players in the South American agribusiness, and all have existing soybean processing facilities and experience in the design, construction and operation of such plants. CAIASA is the overall project manager for the design and construction of the plant, and prepared the tender specifications for the plant, including the extraction plant. According to the findings of the due diligence, the extraction plant design was completed in accordance with the National Fire Protection Association (NFPA) Standard 36 for Solvent Extraction Plants by Crown Iron Works Company, with construction being undertaken by its Brazilian partner Intechnial S.A. Copies of CAIASA's contracts with Crown and Intechnical were reviewed to confirm that the relevant NFPA design standards were referenced. Construction is being overseen by experienced CAIASA staff, and plant commissioning will reportedly be completed in April 2013[2] by CAIASA, Crown and Intechnial.

2.7. The soybean crushing plant consists of equipment and infrastructure for the storage, conditioning, cracking and crushing (flaking) of beans, extraction of oil by way of hexane washing, the cooking and drying of the solid by-product and the storage and offering for transport of finished oil and meal. The plant will have a processing capacity of 4,000 tons of soybean/day and a total storage capacity of about 325,000 MT, including approximately 200,000 MT of seeds, 200,000 MT of vegetable oil and 100,000 MT of oleaginous by-products.

2.8. More specifically, the plant design and process flow can be summarized as follows:

- Beans are received by truck, weighed and inspected. A sample of beans from each truck is collected and tested in an on-site laboratory for oil content. On release, the trucks dump the beans to an in-ground pit from which the beans are conveyed to a cleaning tower consisting of a vibrating screen, aspirator and magnetic separator to remove contaminants. Beans pass through a propane-fired dryer to reduce moisture content, and are then transferred by elevated conveyor at a rate of 660 MT/hour to one of two (2) large storage buildings where they are dropped onto storage piles. The receiving and transfer areas will be equipped with dust collectors, which are interlocked with the conveyors.

[2] To be confirmed by the Independent Engineer (SGS)

- Prior to transfer to the extraction plant, the beans are further cleaned to remove hulls and other contaminants and conditioned through steam injection in a vertical seed conditioner. The seeds are rolled and cracked, in preparation for oil extraction, and hulls are transferred to storage for subsequent use as fuel in the steam boiler.

- Process steam for bean conditioning, desolventizing and toasting, evaporating and stripping will be generated by way of a proposed 60 MW biomass-fired boiler located on the south portion of the plant site. The boiler was under construction at the time of the due diligence. Seed hulls will be used as a fuel source, and will satisfy approximately 50-60% of the total demand. The balance of the fuel will consist of wood chips, the source of which will be suppliers certified by the SEAM (Secretary of the Environment).

- The extraction plant is based around a rectangular loop extractor design, where oil-bearing flakes are exposed to hexane solvent to remove the oil. The extraction plant will be located in one single building, physically separated from the rest of the processing plant, and built on a concrete pad. This oil/solvent solution drains to a 30,000 L full miscella tank, containing a solution of 70/30 oil/solvent, which will be located inside the extraction plant. Solvent-saturated flakes are directed to a Desolventizer-Toaster ("DT"), which serves to strip the solvent from the flakes using steam and also dry, or "toast" the flakes, to remove the majority of the remaining hexane. Toasted flakes are dried, cooled and sent to storage for shipment as meal. Hot, solvent-laden vapor that is stripped from the flakes is directed to a shell/tube condenser, where the water/solvent mixture condenses. The condenser will be fed by water from the Paraguay River (the estimated volume to be used for this purpose is 12,000 lts/hr = 0,0033 m^3/s, being the mean annual discharge of the Paraguay River in Asuncion 3,200 m^3/s and the minimum discharge 1,800 m^3/s). This non-contact cooling water will be returned to the river in an open loop (evaporative cooling) system. The water/solvent mixture is directed to a gravity separator, from which the water is returned to the boiler to generate steam, and the solvent returns to a storage tank for re-use in the extractor. The recovered water from the separator will satisfy approximately 80% of the total plant water demand. The balance of the make-up water will be obtained from the Paraguay River. CAIASA asserts a "zero effluent discharge" design, whereby no industrial wastewater will be discharged, since all process steam (direct and indirect) that is not incorporated into the product will be returned as condensate to the boilers. The plant's sanitation system will be directed to a wastewater treatment plant and discharge following IFC's standards.

- As noted, the solid by-product of the oil extracting process (meal) is dried, cooled and transferred by conveyor to a large storage facility on the south portion of the property. The 70/30 oil/solvent mixture (full miscella) is directed to an evaporator where steam is injected. Due to its low boiling point, the hexane boils off quickly and the solvent vapor is directed to the shell/tube condenser noted

above. The resulting oil is further processed using steam stripping (to drive off any remaining hexane), centrifuging to remove gum and drying, before being transferred to storage. At the time of the due diligence, construction of the oil transfer and storage facilities had not started. The facility will consist of four 5,000,000 L and one 500,000 L shop-fabricated, seamless steel aboveground storage tanks built by CST Industries. The four primary storage tanks and one smaller surge tank will be inter-connected, and provided with 110% secondary containment.

- The design specification indicates a total solvent loss of 0.8 L per metric tonne of soybean processed, well below the thresholds defined by NFPA 36. Based on the expected processing volumes, this will result in a loss of approximately 3,200 L of hexane per day. Most of that loss will be in meal and oil, however some of the loss will be to the air environment. Hexane will be received at the plant by truck, with an estimate of one truck per week being required. Hexane will be stored in three inter-connected 100,000 L capacity storage tanks, located on the north side of the extraction plant.

- While not in place at the time of the due diligence, the extraction plant is designed with process safety in mind, including health and safety procedures and worker's training. With minor exceptions, NFPA-recommended separation distances appear to have been respected. Procedures for the off-loading and transfer of hexane are being developed. Visual / audible alarms report to the central control room, with as many as eleven sensors and monitoring devices interlocked with the plant and set to report on any potentially explosive concentrations of solvent. The floor of the extraction plant has been designed with an 86,400 L capacity sump for spill containment. CAIASA noted that the primary operating parameters / metrics include: tank levels, temperature, line pressures, flow, steam pressure and vapor stream concentrations.

2.9. ***Barge terminals.*** The Project Site is currently developed with a barge terminal referred to as "Puerto Privado Embarcadero de Granos[3]". The terminal operates independently of CAIASA, and belongs to LDC Paraguay S.A. At the time of the due diligence, this facility was operating for the reception and off-loading of grain to be delivered to destinations out of country. This facility will be used for the future handling and loading of meal. A second port facility, currently unused and owned by UniPort[4], will be used for the transfer of finished oil to custom barges for subsequent transport on the Paraguay River. Current ongoing activities are scheduled to end in late December 2012. At that time, the barge terminals will be reconfigured in order to meet the demands of the new plant and the related impacts will be addressed in the ESHS Action Plan.

2.10. As noted previously, the Project does not include the shipment and transportation of finished goods on the Paraguay River. The Sponsors are individually responsible for the

[3] Asset to be transferred to CAIASA in December 2012

[4] Idem

sale, marketing and transportation of raw and finished product. . The barges will meet international standards and be certified and registered by both the Marina Mercante and the Paraguayan Coastguard.

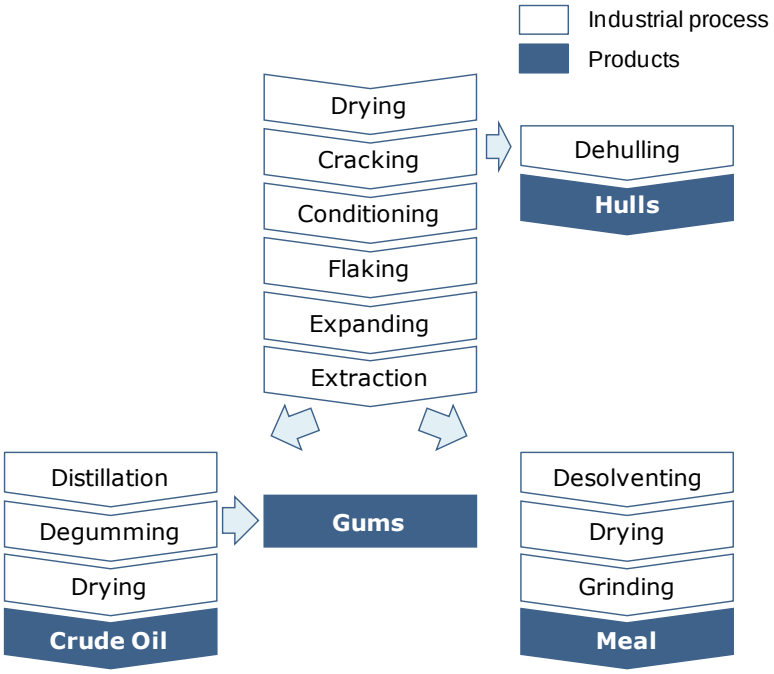


Fig. 2: The production process

2.11. ***Port facilities.*** The port facilities that will handle crude oil are currently under the control of a third company named Uniport, with transfer of title and operations to CAIASA expected in December 2012. At that time, CAIASA will apply for an operating license. During the assessment, the due diligence team met with Marina Mercante, the agency that regulates and issues licenses to private port facilities. The agency indicated that an application, which must consist of detailed design drawings and proof of title, will take several weeks to process. At the time of the due diligence, details on the scope and scale of proposed construction/renovation of the port facility were not available. With the view to a proposed commissioning date of April 2013[5], and among other requirements related to the port's environmental management, CAIASA will be required to confirm its ability to: i) complete the purchase and sale; ii) obtain the Marina Mercante permit. In the event that commissioning will not be complete, CAIASA should confirm its contingency plan.

2.12. ***Budget and schedule.*** The total investment for the Project is expected to be US$230 Million. The estimated construction time for the Project is of approximately twenty-four (24) months. Construction at the CAIASA site has been taking place since February, 2012, and at the time of the due diligence, construction activities were reportedly at around week 28 – 29 and focused on the erection of buildings and the installation of

[5] To be confirmed by the Independent Engineer (SGS)

process equipment. Key contractors include: Tecnoedil S.A., the prime contractor with overall responsibility for civil work; Crown Iron Works Company, with responsibility for the design and commissioning of the extraction plant; and Intechnial S.A., a Brazilian contractor and partner to Crown, responsible for the construction of the extraction plant. An administration building, medical building and training building had been erected and were occupied. Most site's grading and servicing had been completed. Construction was ongoing for the soybean receiving areas, soybean storage buildings, finished meal storage building, boiler/steam plant, and extraction plant. Construction of the oil storage facilities had not been initiated at the time of the due diligence. It was reported that construction activities on the port facilities will begin in December, 2012.

2.13. ***Workforce.*** An average of approximately 800 people will be employed during the construction phase of the Project, with a total of over 1,000 employed during the peak construction period of the plant. During operations, approximately 100 workers will be employed full-time at the crushing plant. In addition, up to 50 people will be employed at any given time, through third parties, to provide various contracting and support services. It is estimated that the vast majority of these workers will come from Asunción (40 Km) or the nearby city of Villeta.

2.14. ***Soybean growing areas.*** The project does not include any soybean growing areas, transportation to the plant, or transportation of finished goods on the Paraguay River. Each of the three partnering companies is individually responsible for the sourcing, sale, marketing and transportation of raw and finished product. The Project includes only the operations and activities associated with the physical handling and processing of beans and finished products on the Villeta property, as well as the loading of these products into barges at the plant's port facilities.

B. Environmental and Social Setting

Environmental setting:

2.15. ***Land use.*** The Project is located on the Paraguay River, in a property owned by the Company, with a total of 141 ha. At the site currently operates a grain reception facility and a barges' loading pier. The plant is surrounded by a rapidly developing industrial area to the south of the community of Villeta. There are other ports in the area, which are engaged in the same activity. According to the findings of the EIA and the due diligence, the area was degraded prior to the start of construction and no sensitive or critical natural habitat exists in the area of the plant site.

2.16. ***Water source.*** The main water resource in the area is the Paraguay River (mean discharge: 3,200 m^3/s). There is also a small creek running through the project site. The water use in the plant will be of approximately 12,000 lts/hr (3,33 lts/sec), which will come from the Paraguay River. Water from the Paraguay River will be the primary source of water for dust suppression, firewater, boiler make-up water and for process cooling. This is considered to have a minimal impact, even during dry seasons, given

that the mean monthly minimum discharge of the Paraguay River is 2,663 m3/s[6]. Potable water to be used by employees during the operations phase of the Project will be obtained from an on-site artesian well.

2.17. ***Energy.*** The site will rely on electricity purchased from the local utility. The supply of electricity in Paraguay is plentiful, stable and cheap, due to the abundance of hydro-electricity generating capacity. However, the plant site design does incorporate diesel fired generators for back-up power, besides a 60 MW biomass-fired boiler that will generate steam for the bean processing at the plant site.

2.18. ***Water and sediment quality.*** All surface water drainage from the outdoor material storage and process areas will be directed to a wastewater treatment plant that will be constructed and operated by CAIASA following IFC standards, which at the time of the due diligence had not been designed. The Project could potentially interact with the environment through treated stormwater discharge to the Rio Paraguay via the wastewater treatment plant, while there will be no industrial wastewater to be discharged. The potential effects of water abstraction for Project activities should be properly assessed through a combination of field testing and modeling techniques, accounting for seasonal variability and projected changes in demand in the Project area. Impacts to sediment through oil transfer activities over the life of the Project require an understanding of baseline conditions. The baseline conditions have not been characterized for the area of potential influence. The Company, prior to first disbursement, should establish the baseline of water quality in the surroundings of the port facilities, through a representative set of surface water and sediment samples.

2.19. **Air quality.** At the time of the due diligence, CAIASA has not developed a baseline of air quality at the site. The plant will be a source of air contaminants including respirable dust, volatile organic compounds from the storage, handling and processing of hexane, and particulate matter from the combustion of biomass in the steam boiler and the storage and handling of soy beans and meal. Other sources of emissions include products of diesel combustion from delivery trucks and barges. Despite the lack of proximal residential communities, a baseline of air quality must be developed such that the environmental impact of future operations can be quantified. Prior to first disbursement, CAIASA should establish a baseline air quality monitoring program from downwind locations for contaminants of concern, primarily dust (PM 2.5, PM10 and Total PM) through dustfall monitoring and volatile organic compounds. Monitoring stations should be established in areas of the highest potential impact. The sampling program should be designed to be representative of seasonal variability in wind direction, speed and other ambient factors

2.20. ***Biodiversity.*** Although not pristine, part of the area is covered with vegetation in state of secondary succession, since it has been subject to modification by the productive activities that were carried out previously. There are trees, shrubs and bushes in the property and the surroundings. According to the due diligence findings, there are no endemic or endangered species found on the construction site and in the surroundings.

[6] "Programa de Desarrollo de la Franja Costera de Asuncion". ABT Associates Inc., 2004

The plant site, located in the periurban area of Villeta, is highly disturbed and does not exhibit a great deal of biodiversity.

Social setting:

2.21. The project's location is characterized as rural to periurban, located 7 km from the route linking Villeta with a highway access to Asuncion. Its main entrance is located on the route which connects Villeta with the city of Alberdi in the south. In the surroundings, it is observed the presence of livestock establishments, farms, poultry farming, small farms, and small fisheries. The closest neighbors (a couple of houses) are located at a distance of 1,800 meters from the plant, and the closes industrial facility (a poultry farm) at 3,000 meters.

2.22. Around 20 large factories operate in Villeta, which industrial activities include cement, iron, cotton, electrical cords, agrochemical, among others. It has a functional port on the Paraguay River and from where a great variety of products is shipped through the Paraguay-Parana waterway. Most of the 36,000 inhabitants of Villeta works in one of the industrial plants or activities named above.

C. Alternative Analysis

2.23. An analysis of Project alternatives was presented in the EIA (Section I). The evaluation was focused on alternative locations for the crushing plant, given that the barge terminal for finished material loading is the primary criterion for determining potential sites for a new crushing plant. A "no project" scenario was not contemplated. The following summarizes the rationale for the selection of the crushing plant location:

- The proponent considered this location for the crushing plant due to strategic location which favors the development of the industrial activity and commercial proposal. The location is close to the required transportation routes.
- The location in close proximity to Asunción (i.e., Villeta) was chosen based on various advantages including proximity to the major raw material suppliers, location in an existing industrial area, availability of electrical power, favorable conditions for accessibility, economic viability and human resources availability.
- The land has adequate dimensions, geographic, topographic and runoff conditions, extension, existing facilities which facilitate the development of the activities related to this type of agroindustrial project.
- The project area is located at low population density, which is considered an area with no conflicts regarding the land use.
- The proximity to Asunción (40 km) facilitating the management of the plant's business (CAIASA's head office is located in Asunción).

III. LICENSING AND APPRAISAL PROCESS AND COMPLIANCE REQUIREMENTS

A. Environmental and social licensing and appraisal

3.1 The environmental licensing process in Paraguay is ruled by Law Nr. 294/93. Its enforcement authority is the Secretary of the Environment (*Secretaría del Ambiente*, SEAM). The legal framework does not establish a categorization of projects and, therefore, all projects go through the same procedure, which begins with the submission of a basic environmental form (*Cuestionario Ambiental Básico*, CAB) by the proponent of a project to the SEAM, who determines whether or not to conduct an environmental impact assessment (EIA). In case of a project requiring an EIA, it must be carried out by individual consultants or consulting firms registered in the SEAM, based on terms of reference issued by this. Once the EIA report is approved by SEAM, a summary thereof (*Relatorio de Impacto Ambiental*, RIMA) must be made available to the public. In some cases, public hearings must be held for presenting the project to the stakeholders. The environmental license issued by the SEAM as the final result of the process has to be renewed every two years.

3.2 An EIA was carried out by a local firm, in accordance with the terms of reference delivered by SEAM, who approved the study and issued the environmental license in the second semester of 2011. According to the due diligence's findings, the EIA needed to be complemented with additional studies and a baseline of water and air quality, part of which was carried out during the due diligence process by a consulting firm retained by IDB (Golder) and the rest will be included as loan conditions prior to first disbursement.

3.3 ***Port permit.*** The Ministry of Public Works and Communications (MOPC) is responsible for the implementation of Law No. 419/94, the creation of the Department of Ports and Division of the Directorate of the Merchant Marine. Law No. 419/94 *Enabling Regulation and Operation of Private Ports* creates the legal regime for the construction and operation of private ports. At the time of the due diligence, CAIASA had not received yet an operating permit for the port facility. The port facilities that will handle crude oil are currently under the control of Uniport, with transfer of title and operations to CAIASA is expected in December 2012. At that time, CAIASA will apply for an operating license.

3.4 The Parana and Paraguay rivers (known as the *Hidrovia Paraguay-Parana*) have been used for many years to transport goods and raw materials using barges. This activity is highly regulated and the legal framework in Paraguay is defined by Law Nr. 269/93, approving the Agreement for Water Transportation through the Paraguay–Parana Waterway.

3.5 ***Public consultation.*** According to the Paraguayan regulations, the EIA was made available to the public, after its approval by SEAM. The EIA, as well as the E&S due diligence report prepared by Golder, were also made available to the public in the Bank's website (http://www.iadb.org/projectDocument.cfm?id=37087466). No public consultation events were held during the project's preparation. CAIASA will

complement its public consultation process according to the IDB Policy OP-102 "Access to Information" prior to the Board approval of the loan agreement.

B. Compliance with other IDB Directives and Policies

3.6 The Project was classified as Category B by the project team according to Directive B.3 of the Environmental Safeguards Policy (OP-703), given that is likely to cause mostly local and short-term negative environmental and associated social impacts and for which effective mitigation measures are readily available. The environmental and social Due Diligence (DD) determined that the Project is compliant with the applicable policy directives of OP-703 and with the relevant provisions of other policies, specifically the Access to Information Policy (OP-102), the Disaster Risk Management Policy (OP-704) and the Policy on Gender Equality (OP-270). According to the findings of the DD, no impacts on indigenous people or the need for resettlement of population are expected, in which case the OP-710 (Involuntary Resettlement) and OP-765 (Indigenous People) policies would apply.

3.7 The Project complies with the EIA requirements of Directive B.5 (see paragraphs 3.1 and 3.2 above), and the consultation requirements of Directive B.6 will be met prior to Board approval through the implementation of public consultation events (see paragraph 3.5). The Project also adheres to all applicable national laws according to Directive B.2 (see Section III.A above). The Project includes provisions for Bank monitoring of compliance with all policy requirements (see Section V.B) according to Directive B.7. The Project does not significantly convert or degrade critical natural sites, affect protected areas or damage cultural sites as prescribed by Directive B.9. Project waste management procedures and standards, and pollution and emissions limits are in compliance with Directives B.10 and B.11, since they are designed to meet IFC standards for wastewater discharge and air emissions (see Section IV.B). The project also complies with Directive B.12, given that compliance of the project's construction process with the relevant provisions of IDB policies was confirmed during due diligence.

C. Future requirements and standards

3.8 The Project will be required to comply with all applicable IDB policies and safeguards, as well as the IFC's Environmental, Health and Safety Guidelines for Vegetable Oil Processing (April 30, 2007), the IFC's EHS Guidelines for Ports, Harbors and Terminals (April 30, 2007), the National Fire Protection Association (NFPA) Standard 36 for Solvent Extraction Plants (2009 Edition) and the Principles and Criteria for Responsible Soy[7] of the Round Table on Responsible Soy Association (RTRS). For this purpose, an Environmental, Social, Health and Safety Action Plan (ESHSAP), whose minimum content is listed in Annex I, will be a loan condition prior to first disbursement.

[7] RTRS Standard for Responsible Soy Production, Version 1.0 – June 2010

IV. KEY ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS AND MITIGATION

A. Key impacts and risks and ESDD findings

4.1 According to the ESDD findings, the key E&S impacts of the project are:

i) Risks associated with the management of hexane, a highly flammable liquid;
ii) The risk of fire hazards, which are common in grain handling operations, being grain dust the main source of fuel for explosions;
iii) Air emissions, such as particulate matter from soy bean receiving/handling, volatile organic compound associated with oil extraction and particulate matter from the biomass boiler;
iv) Workers and community health and safety associated with the operation of vegetable oil facilities and induced traffic.

B. Environmental impacts and risks

4.2 ***Operation's phase hexane process safety.*** Hexane is a highly flammable liquid that, if not managed properly, can result in fire or explosion, and environmental impact. CAIASA has retained well established and competent third parties for the design and construction of the extraction plant. The associated terms of reference and contracts with the designers (Crown) and the builders (Intechnial S.A.) reference appropriate National Fire Protection Association (NFPA) standards for the design and operation of solvent extraction plants. At the time of the due diligence, critical control and monitoring equipment had not been installed yet. Both Crown and Intecnical will spend a month with CAIASA at the site when the plant is being commissioned, to ensure that it is operating as designed and achieves key performance specifications. CAIASA will be in charge of plant operations. The competence of plant personnel was demonstrated during interviews. However, at the time of the due diligence, CAIASA had not initiated the development of an operations manual for the extraction plant, the content of which must describe procedures and responsibilities for critical tasks associated with the operation and maintenance of the plant. It will be establish as a loan condition that the operation of the plant must be in compliance with NFPA 36, that the designer and the CAIASA team develop a Process Safety Review for the evaluation of operational controls (using HAZOP or similar methodology), and it will be required the development, implementation and regular auditing of key standard operating procedures that govern all critical process control, maintenance and monitoring activities during start-up, shut-down and operations. Prior to commissioning, CAIASA must undertake a detailed process hazard analysis of the solvent extraction plant. The outcome of the risk assessment process should be a series of prioritized credible release scenarios, which serve as the basis for subsequent emergency planning. If deemed appropriate, vapor dispersion modeling may be undertaken for each release scenario to define an area where immediate short-term impacts may occur as a result of an accidental release of solvent vapor. The results from that analysis should be used to develop an Emergency Planning Zone (EPZ) for the facility, in a manner satisfying the risk management and emergency planning requirements associated with the relevant elements of US Code of Federal Regulations 40

CFR Part 68 and 29 CFR Part 1910. Additional guidance is provided by Part 8 of the Canadian Environmental Protection Act, 1999.

4.3 ***Risk of fire.*** Explosion and fire hazards are common in grain handling operations. Grain dust is the main source of fuel for explosions, is highly combustible and can burn or explode if enough becomes airborne or accumulates on a surface and finds an ignition source such as hot bearing, overheated motor, misaligned conveyor belt, welding, cutting and brazing. CAIASA has developed an Emergency Management Plan, which describes the Company's proposed emergency response plan and procedures. The Fire Department located in the City of Villeta, located approximately 10 km to the north of the CAIASA project site, has capacity only to attend residential scale fires, and has no capacity to attend industrial fires. The Project has an emergency fire brigade comprised of five CAIASA staff and approximately twenty safety supervisors belonging to the subcontractors. Several of these staff is trained fire fighters. CAIASA's EHS staff most recently conducted an emergency drill. A post-drill evaluation was completed and corrective actions were implemented, including the purchase of emergency equipment and tools. The CAIASA site is equipped with a first aid department, which is coordinated by a paramedic professional. There is an ambulance available during the shifts. Likely sufficient to manage most medical emergencies during the construction phase of the project, the emergency resources that exist and are planned are deemed inadequate to respond to a significant fire or medical emergency at the site. Further response planning, training and resource needs assessment should be conducted prior to commissioning.

4.4 CAIASA is expected to establish procedures in order to prevent dust explosion and fire during the plant operation. Countermeasures should include but not be limited to: development and implementation of a written housekeeping program with instructions to reduce dust accumulations on ledges, floors, equipment and other exposed surfaces; minimize dust accumulations on exposed surfaces since dust is the fuel for a fire or explosion; implement a preventive maintenance program with regularly scheduled inspections for mechanical and safety control equipment, which may include heat producing equipment such as motors, bearings, belts etc., since preventive maintenance is critical to controlling ignition sources; minimize ignition sources through controlling hot work such as electric or gas welding, brazing or similar flame producing operations; install wiring and electrical equipment suitable for hazardous locations; designing and properly locating dust collection systems to minimize explosion hazards; installing an effective means of removing ferrous material from grain streams so that such material does not enter cracking/rolling equipment.

4.5 ***Air emissions.*** There will be 3 significant sources of air emissions associated with the CAIASA project: i) particulate matter from soy bean receiving/handling; ii) volatile organic compound associated with oil extraction; and iii) particulate matter from the biomass boiler. CAIASA was able to demonstrate predicted air emissions associated with the latter 2 sources –solvent extraction and the biomass boiler. The Company was unable to quantify predicted emissions from soy bean receiving/handling areas. However, receiving and storage facilities will be equipped with cyclone dust collectors. The

manufacturer of the biomass boiler (Equipalcool) has warranted particulate matter emissions of below 250 mg/m3. Crown/Intecnial has warranted solvent losses from the extraction process of approximately 0.8 kg/ton of soy bean processed. At this time, Paraguay does not have any discharge criteria for air emissions, only a general law prohibiting impacts on public health. During interviews, SEAM reported that a law with specific discharge limits is being drafted and will be binding starting in 2013. SEAM indicated that these limits would likely follow those published by the World Health Organization. CAIASA must work with SEAM to confirm the new limits/air emission standards and understand the implications of these new limits, if any, on site operations and controls.

4.6 ***Operations water and effluent treatment.*** CAIASA's design for the soy plant will rely on the taking of water from an on-site well for steam generation, cleaning, potable water supply and fire suppression. Potable water will be supplied from the public water supply system. No industrial wastewater will be discharged to the Rio Paraguay or the creek that crosses the property, which is described as a "*zero effluent discharge*" (ZED) process whereby all process steam (direct and indirect) that is not incorporated into the product will be returned as condensate to the boilers. Any water that evaporates through process cooling or is otherwise consumed in the product will be made up with treated water from the well. The only discharges from the site to the Rio Paraguay will be stormwater, which is collected in the extraction plant sump and will be directed to a treatment plant. During the initial phase of operations, domestic sewage will initially be collected in an on-site septic tank and removed from the site for off-site disposal by a licensed hauler. The site will not be paved and it is anticipated that much of the stormwater intercepted will infiltrate and drain away. CAIASA will specify terms of reference for the design of the wastewater treatment plant, respecting the final discharge criteria specified by the IDB and IFC.

4.7 ***Health and safety.*** During due diligence, potential occupational exposure concerns were noted with respect to respirable particulate matter. Truck traffic was observed to generate significant airborne dust, and dust suppression activities (watering) were largely ineffective. In addition, the potential for occupational noise exposure has not been assessed and some activities appeared to generate excessive noise. An occupational hazards assessment has not been conducted by CAIASA, and occupational health practices are not mentioned in CAIASA's EHS Management Plan. It is noteworthy that baseline medical examinations have been completed for the workers at the construction site.

4.8 ***Oil storage and transfer***. Depending on location, a spill or release of crude vegetable oil may result in substantial environmental impact. During due diligence, detailed design drawings were available for the oil storage facility, which will consist of 5 field-erected aboveground tanks, physically inter-connected, and enclosed within a bermed containment area of concrete construction. For inventory control, tanks will be provided with radar levelometers and product levels remotely monitored. Based on information provided, it would appear that 10-6 cm/s permeability and 110% containment will be achieved. Further information on the design of the oil transfer and off-loading facilities is

required, including detailed design drawings showing the primary spill prevention, control and countermeasures that will be employed by the port operator (CAIASA). The operator should provide a conceptual design report, which describes in general terms the physical infrastructure associated with the proposed bulk oil off-loading facilities. Copies of detailed design drawings and specifications showing emergency stops, communication systems, barge security, interlocks, flow control devices, emergency containment systems, etc. should be provided for review.

4.9 ***Operation of the port facilities.*** The operation of the port facilities implies mainly the risk of spills of crude oil and fuel to the water and the risk of accidents involving workers. A significant spill to the river could result in significant oxygen depletion and fish/aquatic mortality. In addition, depending on the level of hexane contained, soy oil may be classified as a combustible liquid that if not managed properly can fuel a fire. CAIASA will be requested to provide a copy of the oil loading protocol, which describes the work instructions/procedures that will be followed for oil loading, which should include: pre-transfer inspection protocols, connections, gauging, shutdown, barge venting, level control/overfill protection, etc. The transfer protocol should be prepared to address the relevant elements of US Code of Federal Regulations Chapter 33 CFR Part 155.750. To prevent a spill or accident release of hazardous material and contamination of the water all heavy equipment and tools must be fuelled on land. When in proper position and secured for work a floating platform must be surrounded by floating absorbent socks attached to the vessel in the event of an accidental releases/spill. Additional socks and absorbent pads and waste containment disposal bags must be available on site.

4.10 Works over and around water presents dangers. Precautions specifically developed for such works must be developed and implemented before they begin. Warning signs shall be posted on the project to warn public and workers of the hazards around water. All workers must be alert and aware of their fellow workers at all times. Workers in proximity to a water hazard who may drown should be protected by a flotation device. This device must provide buoyancy adequate to keep a worker's head above water, face up without effort by the worker. Before starting work each day a designated worker must make sure that, the rescue equipment is as close to the work area as possible. Rescue equipment such as boats must be stored on or near the project ready for use. All workers working at this location must be required to attend a safety orientation and safety meeting on the use of lifejackets, PPE. At least two workers must be appointed and trained for rescue procedure. The names should be posted in the workplace.

4.11 ***Risk of flooding.*** The seasonal variability in the level of the Paraguay River, and associated risk of flooding, has not been contemplated in the EIA. At the time of the due diligence visit in September 2012, the River level was observed to be low. There has been very little fill importation to the site, and a majority of the infrastructure has been erected at or close to natural grade. CAIASA should undertake a screening level, and if necessary a site-specific flood risk assessment (FRA) based on local topography, meteorology and historical flooding, etc. in order to determine the site's vulnerability. The FRA should consider the risk and impact of flooding on the site, and take into

consideration how the development may affect flooding in the local area. It should also provide recommendations as to how the risk of flooding to the site can be mitigated.

4.12 ***Risk of land conversion.*** The soybean will be sourced from existing farms in Paraguay. However, CAIASA will have no ownership of and therefore no direct control over the sourcing of the raw material. CAIASA will be responsible only for the processing of the beans, and will be compensated by each of the three partnering companies based only on the volume of material that passes through the plant for processing. In order to mitigate the risk of inducing additional conversion of natural habitats into soybean fields, CAIASA will be required to incorporate in the operation of the project –when applicable- the Principles and Criteria for Responsible Soy[8] of the Round Table on Responsible Soy Association (RTRS).

4.13 ***Impacts and risks during construction.*** The loan proposal is expected to be approved by the IDB Board of Directors in the first quarter of 2013, coincidentally with the end of the construction phase of the project. During due diligence, the construction process was reviewed with the support of the consulting firm, and no significant non-compliance with relevant safeguards directives of OP-703 and other IDB policies were identified.

C. Social impacts and risks

4.14 ***Workers and community health and safety.*** Operators in vegetable oil facilities may be exposed to hazardous substances including inhalation of hexane or other solvents used for extraction; inhalation of toxic chemicals; eye or skin exposure to acids or bases; inhalation of dust from transfer of raw materials; inhalation of dust from meal treatment and shipment; inhalation of dust from bleaching earth, filter aid, and nickel catalyst; and inhalation of aflatoxins present in raw materials. CAIASA will be committed to having an emergency plan in place for each workplace to assist workers and the public to respond to any emergency situation, including but not limited to: a method for reporting the emergency; a list of workers responsible in emergency situations and how to contact them; a plan for incident investigation and correction of hazard; a list of phone numbers for emergency and support services; a method for sounding the alarm; a description of potential emergencies; a map of the work place that shows evacuation routes and head-count location, as well as the location of emergency equipment, first aid station, fire sprinklers, alarm pulls, and extinguishers; manager's routine for shutdown of the job; responding to an emergency that may require rescue evacuation by trained personnel; an evacuation, head-count and rescue plan. All managers are required to ensure an emergency plan is current, in place and relevant to the specific scope of work. The emergency plan also should include a procedure after evacuation.

4.15 CAIASA is expected to develop and implement H&S programs and Standard Operating Procedures (SOPs) for all high risk activities on-site, including but not limited to: confined space entry, hot work, chemical and fuel handling, work at heights, lifting, working alone, noise, lock-out / tag-out, electrical safety, etc. CAIASA is also expected to ensure that all tasks are assessed to identify known or potential hazards associated with

[8] RTRS Standard for Responsible Soy Production, Version 1.0 – June 2010

the work. Pre-job hazard assessment, job hazard assessment, job assessment risk reviews or other tools can be utilized to identify hazards associated with the tasks undertaken by CAIASA employees and/or contractors to identify the hazards and controls necessary to perform the work safely. Contractors must be required to provide to CAIASA with a safe work procedure and job hazard analysis for any high risk operation, or operations designated by CAIASA, and to train their workers to perform high risk jobs and hazards prevention, management and evacuation procedures.

4.16 ***Induced development.*** The CAIASA project is located in a relatively remote area to the south of the city of Villeta, on the east bank of the Paraguay River. The area is subject to increasing industrial development, which will inevitably see an influx of migrant workers for construction and operations. Associated opportunistic commercial development can occur in the area. In case that this takes place, its management is primarily responsibility of the local authorities. CAIASA will cooperate with the local municipality (Villeta) to support the management of the induced urban development.

4.17 ***Traffic.*** Roads servicing the Project location are in poor condition and narrow. With an additional 160 trucks per day servicing the CAIASA project alone, delivering soy beans, it is predictable that the roads around the site will become increasingly congested, putting residents, drivers and workers at risk. CAIASA is currently working in association with other industrial enterprises of the surroundings of the Project, the local municipality and the Ministry for Public Works on developing a maintenance and management plan for the roads.

D. Cumulative impacts

4.18 The soybean crushing plant is located at the community of Villeta, approximately 40 km southeast of the city of Asuncion. There are several receptors in the immediate vicinity of the plant site, primarily to the north where there are a number of similar industrial facilities. There will be some cumulative impacts of the Project on the local community, specifically truck traffic and potential volatile organic solvent emissions associated with operations, as well as induced urbanization. In order to monitor the cumulative impacts of the project, a baseline of water and air quality will be required prior to first disbursement.

E. Positive impacts

4.19 The project will: (i) industrialize raw soybean, currently exported for crushing purposes; (ii) increase export-value added of soybean production in Paraguay; (iii) increase the country installed crushing capacity by 30%; (iv) transfer know-how from the experience of the Sponsors around the world to the crushing plant in Paraguay; (v) act as a demonstration effect to promote the growth of industrialization of soybeans in the country; (vi) create direct and indirect jobs and (vii) through its substitution of fossil fuels for renewable energy to meet its power needs, is expected to reduce emission by approximately 96,567 tons CO_2 per year.

F. IDB Additionality

4.20 Through its involvement in the project, IDB provided guidance and support to complement the EIA with additional studies, baseline surveys and other inputs, as well as to ensure compliance with IDB Policies and Safeguards, IFC Environmental, Health and Safety Guidelines and other international standards (US National Fire Protection Association, Round Table on Responsible Soy Association, etc.).

V. MANAGEMENT AND MONITORING OF ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY AND LABOR IMPACTS AND RISKS

5.1 CAIASA has developed plans and programs to cover a range of environmental aspects, including but not limited to: air emissions of volatile organic compounds from the extraction plant and particulate from the boiler, spills, construction waste management, land clearing, management of water effluent, earth moving, unloading material management, barge terminal activities, storm water management, vehicles and equipment. CAIASA will be requested to develop a more detailed action plan, including budgets and timelines, to implement the environmental management plans provided in the EIA and others.

A. Management Systems and Plans

5.2 The Project EIA has proposed an environmental management plan, including the monitoring of significant environmental aspects of the construction and operations phases of the Project. At the time of the due diligence, construction was well underway at the plant site, with site grading largely complete, and other civil / structural work in their final stage. The Company has prepared an environmental, health and safety management program to cover the construction phase of the project ("Manual de Gestion de Seguridad, Higiene y Medio Ambiente para Contratistas"), which basically contains standards and procedures for EHS management at the construction site, the description and use of personal protection equipment, rules and procedures for work in height, the management of solid waste, etc. The implementation of this Manual was assessed during due diligence and no significant issues were identified; the Company –excluding some required improvements regarding soil erosion and construction site traffic control- was performing an acceptable job on environmental management. The Company has not at this time prepared detailed environmental monitoring actions plans with defined timelines and responsibilities for the operations phase; this will be a requirement of the loan agreement 6 months previous to the start of operation.

B. Monitoring and Supervision

5.3 The project will be monitored by IDB and an Environmental and Social Consultant according to the following schedule: i) until completion of the first year of operation of the plant, on a semiannual basis, including site visits**;** ii) starting on the second year of operation of the plant and for the life of the loan, on an annual basis, including site visits.

C. Indicators

5.4 Table 1 includes the main indicators to be monitored during the implementation of the project.

Table 1: Main project's indicators

Maximum allowable values for discharge in water bodies (IFC General EHS Guidelines)			
pH		-	6 – 9
DBO 5_d 20° C		mg/l	50
DQO		mg/l	125
Receiving body temperature increase		° C	3
Air emissions (IFC Guidelines)			
Parameter	**Period**	**Unity**	**Maximum value**
MP_{10}	Annual	$\mu g/m^3$	50
	24 Hours	$\mu g/m^3$	150

VI. REQUIREMENTS TO BE INCLUDED IN THE LEGAL AGREEMENTS

Prior to Board Approval:

6.1 CAIASA shall implement additional public consultation events in order to ensure full compliance with the OP-102 Access to Information Policy and the Directive B.06 of the OP-703.

Throughout the life of the Loan:

6.2 The IDB will require within its Loan Agreement that the Project and each Project party (Sponsors/Borrower) and other Project/Environmental parties, including any contractors and sub-contractors will, at all times during the life of the Loan Agreement, comply with the following requirements:

1. All applicable environmental, social, health and safety, and labor Paraguayan regulatory requirements.
2. All requirements associated with any environmental, social, health and safety, and labor related permits, authorizations, or licenses that apply to the Project, the Borrower or any party responsible for executing the Project or its mitigation measures.
3. All environmental, social, health and safety, and labor requirements of the Project contracts and any subsequent modifications.
4. All aspects and components of all of the Project's environmental, health and safety, social and labor documents.

5. All relevant IDB policies such as the Environment and Safeguards Compliance Policy (OP-703), the Disaster Risk Management Policy (OP-704), the Disclosure of Information Policy (OP-102) and the Gender and Equity in Development Policy (OP-270) and their respective guidelines.
6. Applicable IFC Environment, Health and Safety (EHS) Guidelines, such as the General EHS Guidelines (April 30, 2007), the EHS Guidelines for Ports, Harbors and Terminals (April 30, 2007) and the EHS Guidelines for Vegetable Oil Processing (April 30, 2007).
7. When applicable, the Principles and Criteria for Responsible Soy of the Round Table on Responsible Soy Association (RTRS Standard for Responsible Soy Production, Version 1.0 – June 2010).
8. The operation of the plant in strict compliance with the US National Fire Protection Association (NFPA) Standard 36 for *Solvent Extraction Plants*, NFPA Standard 30 *Flammable and Combustible Liquids Code* and NFPA Standard 61 *Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities.*
9. Consultation with IDB before approving or implementing any and all non-trivial changes to the Project (including its environmental and social management and mitigation plans and any other environmental, social, health and safety and labor documents) or their respective timetables that relate to environmental, social, labor, or health and safety aspects of the Project.
10. Notice of any and all noncompliance with any environmental, health and safety, social and labor requirement of the loan agreement and any significant environmental, social, labor, health and safety accident, impact, event, claim, material complaint or other known risk.
11. Ensuring that all the Borrower's contractors hired for construction and Project activities comply with the applicable environmental, labor, social and health and safety requirements of the loan agreement.
12. Implementing ongoing information disclosure and consultation activities related to environmental, labor, social, and health and safety aspects of the Project, including disclosure of Environmental and Social Compliance Reports and, as applicable, participatory monitoring.
13. Comply with all the requirements indicated in the Environmental, Health and Safety Action Plan.
14. Addressing significant Project-related environmental and social impacts, risks and complaints not adequately mitigated.
15. All Project Standards and Guidelines summarized in Attachment …… and reporting of performance in relation to the key performance indicators.
16. All risk management measures pertaining to any Associated Facilities.

<u>Prior to Financial Close</u>:

6.3 Prior to the date of Financial Close, the Borrower must Present the following documentation:

1. The Environmental, Social, Health and Safety Action Plan (ESHSAP) that sets out the pending plans and activities to implement the environmental management plans provided in the EIA and others identified during due diligence, with their associated milestones, budgets, timelines, responsibilities and status (see Annex I for minimum content).
2. The Environmental and Social Monitoring Agreement, the tripartite agreement between the Bank, E&S Consultant and the Borrower for the independent monitoring of the project.
3. The Borrower shall present a baseline air and water quality monitoring program, designed to be representative of seasonal variability.
4. The Borrower shall present the terms of reference for the design of the wastewater treatment plant, respecting the final discharge criteria specified by the IDB and IFC.

Prior to First Disbursement:

6.4 Prior to First Disbursement of the Loan, the following conditions shall be fulfilled:

1. The Borrower presented all agreed upon environmental, social, health and safety and labor management or mitigation plans not already presented or scheduled for a later date.
2. The Borrower shall certify compliance with all E&S requirements of the loan agreement.
3. The E&S consultant shall certify compliance with all E&S requirements of the loan agreement.

Prior to each disbursement:

6.5 Prior to each disbursement, the following conditions shall be fulfilled:

1. The Borrower shall certify compliance with all environmental social, health and safety and labor requirements in the loan agreement, including any Corrective Action Plans if applicable.
2. The E&S consultant shall certify compliance with all E&S requirements of the loan agreement, including any Corrective Action Plans if applicable.

Reporting, monitoring and supervision:

6.6 During the life of the loan, the Borrower must prepare and submit an Environmental and Social Compliance Report, in form, content and frequency acceptable to IDB. During the first year after the Technical Completion Date, the report must be prepared semi-annually and must be submitted within forty-five (45) days after the end of each calendar semester. Thereafter, the report must be prepared annually and must be submitted within sixty (60) days after the end of each calendar year.

6.7 In addition, the Borrower may be required to submit quarterly Environmental Monitoring Reports, in form and content acceptable to IDB, of evolving social or environmental conditions which the parties agree need to be closely monitored during

operation, even if they are not specifically included in any Project environmental or social management or mitigation plan.

6.8 The Bank will monitor the Project's environmental, health and safety, social and labor aspects via direct Bank supervision (e.g., site visits, review of documentation, etc.) and will contract an external independent environmental consultant firm to perform more detailed supervision actions during construction and operation. This supervision will be conducted by the IDB with the assistance of an external independent environmental and social consultant according to the following schedule: 1) during the first 18 months of operation: semiannually; 2) from 18 months through the life of the loan: annually. All costs of supervision will be covered by the Borrower: (a) a tripartite Monitoring Agreement between the Bank, E&S consultant and Borrower will govern such related cost activity, (b) an IDB annual supervision out-of –pocket expenses are estimated at US$ 10,000 annually.

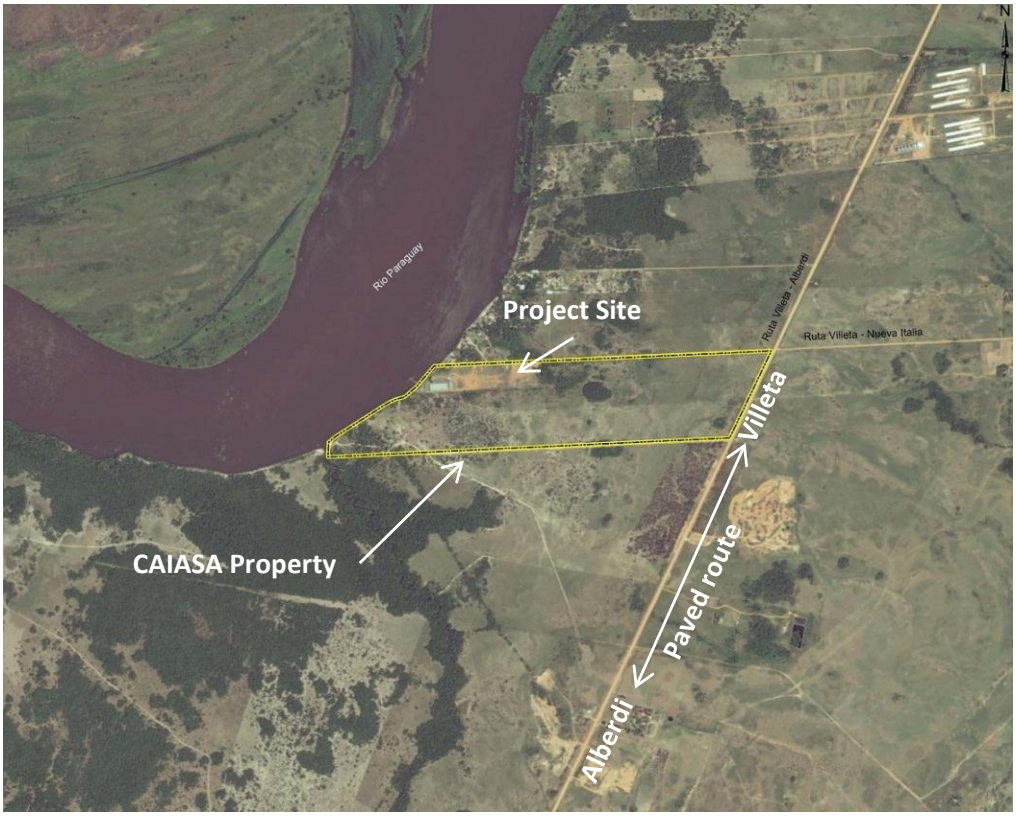
6.9 In addition, the Loan Agreement shall also provide for the Bank's right for additional inspection, supervision, and any cost associated for such additional work will have to be consulted, agreed and approved by the Borrower:

- The Bank's right to contract independent environmental and social consultant(s) to perform more detailed supervision actions as needed through the life of the loan.
- The Bank's right to contract for the performance of independent environmental, social, health and safety, and labor audit(s), or to conduct ad-hoc supervision, if the Bank deems necessary.
- The Borrower's agreement to provide access to all relevant documentation, facilities and personnel and cooperate fully with any inspection or audit by the Bank or its designated consultants.
- The Borrower's agreement to cooperate fully with the IDB's Independent Consultation and Investigation Mechanism (ICIM), provided that the ICIM covers its own costs.

ANNEXES

ANNEX I: Minimum content of the Environmental, Social, Health and Safety Action Plan (ESHSAP)

TIMEFRAME	ACTION
Prior to the first disbursement	Regarding the port facilities, CAIASA shall confirm its ability to: i) complete the purchase and sale of the property; and ii) obtain the port permit.
	The results of the design of the wastewater treatment plant respecting the final discharge criteria specified by the IFC EHS Guidelines
	An Operations Manual for the extraction plant, included a detailed process hazard analysis and fire and hexane emergency prevention and response measures.
	The design of the oil transfer and off-loading facilities, including detailed design drawings showing the primary spill prevention, control and countermeasures that will be employed by the port operator, as well as the oil loading protocol (transfer inspection protocols, connections, gauging, shutdown, barge venting, level control/overfill protection, etc.)
	Health and Safety programs and Standard Operating Procedures (SOPs) for all high risk activities to be carried out at the site, including a detailed process hazard analysis of the solvent extraction plant.
	The results of the monitoring of a representative set of surface water, groundwater and sediment samples to more fully establish the ambient conditions in the surrounding environment.
	The results of a baseline air quality monitoring program from downwind locations for contaminants of concern, primarily dust (PM 2.5, PM10 and Total PM) through dustfall monitoring and volatile organic compounds. Monitoring stations should be established in areas of the highest potential impact. The sampling program should be designed to be representative of seasonal variability in wind direction, speed and other ambient factors.
	A flood risk assessment (FRA) based on local topography, meteorology and historical flooding, etc. in order to determine the site's vulnerability to flooding events, and –if needed- an Environmental Contingency Plan for Flooding Events, containing actions to be carried out to address different levels of flooding of the Paraguay River at the plant site, from an environmental perspective.
Prior to initiation of operation	An Environmental and Social Management Plan (ESMP) for Project operation
	Evidence of the development and implementation of an Environmental and Social Management System (ESMS) which will implement the operations management plans
	An auditing program for key standard operating procedures that govern all critical process control, maintenance and monitoring activities during start-up, shut-down and operations, based on a Process Safety Review for the evaluation of operational controls (using HAZOP or similar methodology)



ANNEX II: Project Site

ANNEX III: View from the Paraguay River toward to crushing plant (Oct., 2012)

ANNEX IV: One of two raw material storage buildings under construction (Oct., 2012)

ANNEX V: View of the Extraction Plant (Oct., 2012)

ANNEX VI: View of the biomass boiler (Oct., 2012)

ANNEX VII: View to the existing port facility (Oct., 2012)