DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BRAZIL

AEGEA CORPORATE LOAN

(BR-L1425)

ENVIRONMENTAL AND SOCIAL MANAGEMENT REPORT (ESMR)

May 2015

Table of Contents

ACRONYMS

AEGEA	AEGEA Saneamento e Participações S.A.
BOD	Biochemical_Oxygen_Demand
DD	Due Diligence
EQUIPAV	Equipav Group
EMS	Environmental Management System
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Management Report
ESG	Environmental Safeguards Group
GIC	Government of Singapore Investment Corporation
GIF	Global Infrastructure Fund
IBA	Important Bird Area
IBGE	Instituto Brasileiro de Geografía e Estadística
ICEAS	Intermittent Cycle Extended Aeration System
IDB	Interamerican Development Bank
IFC	International Finance Corporation
ISO	International Organization for Standardization
MS	State of Mato Grosso do Sul
MT	State of Mato Grosso
NSIS	Brazilian National Sanitation Information System
OHS	Occupational Health and Safety
OHSAS	Occupational Health and Safety Assessment Series
PA	State of Pará
PPP	Private Public Partnership
QMS	Quality Management System
RJ	State of Rio de Janeiro
RWTP	Reusable Water Treatment Plant
SBR	Sequencing Batch Reactor
SC	State of Santa Catarina
SCF	Structured and Corporate Finance Department
SP	State of Sao Paulo
UASB	Upflow Anaerobic Sludge Blanket
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

AEGEA Corporate Loan

Brazil

BR-L1425

Environmental and Social Management Report – ESMR

I. INTRODUCTION

A. Summary Table

Project Name:	AEGEA Corporate Loan
Project Number:	BR-L1425
Country:	Brazil
Sector:	Water and Sanitation – Private Sector
Borrower:	Aegea Saneamento e Participações S.A.
Transaction Type:	Corporate Loan
Total Project Cost:	Approx. US$ 443 million
IDB A Loan:	Up to US$ 75 million
Resp. Department:	Structured and Corporate Finance Department (SCF)
Environmental Category:	B

B. Background

1.1. Aegea Saneamento e Participações S.A. (AEGEA) is seeking a corporate loan from the IDB to fund the Company's capital expenditure program in several of its water and sanitation concessions. IDB's tenor is expected to be up to 12 years, including a grace period of three 3 years. The objective of the Bank is to help expand the Company's impact through the increase of service coverage and loss reduction in its concessions and at the same time strengthen the Company's corporate financial sustainability.

II. PROJECT AND CORPORATE DESCRIPTION

2.1. AEGEA is a Brazilian holding founded in 2010, it is 81.65% owned by the Brazilian Equipav Group, 12.82% by the Government of Singapore Investment Corporation (GIC), 3.21% by the International Finance Corporation (IFC) and 2.32% by the Global Infrastructure Fund – GIF, managed by IFC's Asset Management Company. GIC has a board member and IFC has a representative in the AEGEA Board as an observer. The Company manages public concessions, handling the processes related to the life cycle of water, including production, storage, collection and wastewater treatment. AEGEA currently covers 16% of the private sanitation market in 38 Brazilian municipalities within 8 states through its concessionaires, Private Public Partnerships (PPPs) and service companies.

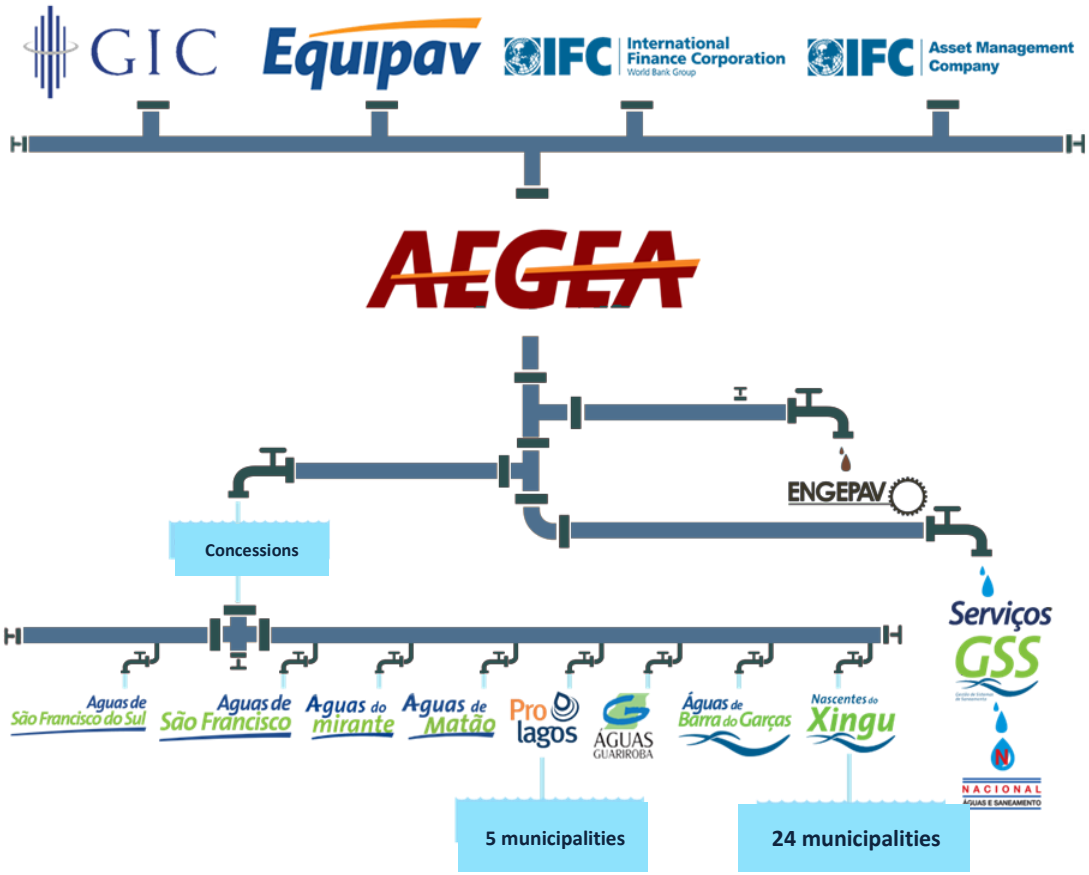

FIG. 1: AEGEA CORPORATE STRUCTURE

A. Key Infrastructure Components and Schedule

2.2. AEGEA directly operates 15 concessionaries (through Nascentes do Xingu, it indirectly operates additional 24) that, according to the terms in their concession contracts, need to increase their service coverage periodically in order to reach 100% of coverage in their respective areas; to do so new investments are required every year. Capital expenditures for the existing operations segment in the next five years will be of approximately US$443 million.

2.3. The Company has developed a five year plan (2015-2019) to ultimately reach the goal of tripling its current customer base while focusing on cost reduction and a more efficient use of natural resources, both of water and electricity. As part of its growth strategy, AEGEA has defined two operating segments, one for the existing operations and the other for new businesses. The focus of IDB financing will be on the former segment. The Company's investment plan basically includes the construction and operation of new water and wastewater treatment plants, water and sewage main pipelines, as well as

technological upgrades to existing operations and new equipment and software, such as pressure regulators and automation systems.

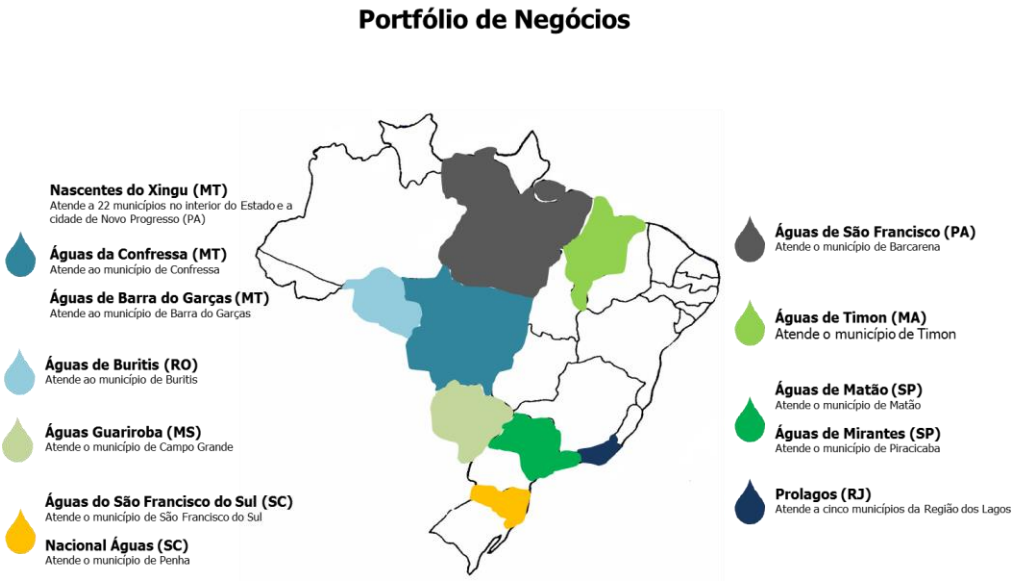

FIG. 2: AEGEA CONCESSIONS

2.4. ***Aguas de Guariroba.*** One of the main AEGEA concessions is Aguas de Guariroba, which supplies water and sanitation services to the City of Campo Grande, the capital and largest city of the Brazilian state of *Mato Grosso do Sul* in the Center-West region of the country. It has a population of 843,120, according to a 2014 IBGE (*Instituto Brasileiro de Geografía e Estadística)* estimate. The water supply system is comprised by two surface catchments areas that provide 1,837 l/s of water, completed with 139 underground catchments. The water supply system is comprised by 3,634 km of water network, 106 storage tanks and two Water Treatment Plants (WTP Guariroba and Lageado). Around 6.5 million m^3 of treated water per month is distributed to the population. In 2011, AEGEA has reached a water supply coverage of 99% in Campo Grande.

2.5. In 2005, the population with access to sewage collection and treatment, in Campo Grande, was 29%. In 2006 the Program *Sanear Morena* was launched, including the construction of 853 km of sewage network (main sewers); 79 km of interceptor sewers, 13 pump stations, two Waste Water Treatment Plants (WWTP Los Angeles and Imbirussu), with total capacity of 840 l/s. The sewage service coverage in 2014 was 75% and the Company's goal is to reach 98% in 2025.

2.6. ***Prolagos.*** This concession is responsible for the provision of water and sanitation services in the cities of Cabo Frio, Armação dos Búzios, Iguaba Grande and São Pedro da Aldeia, as well as for the water supply of Arraial do Cabo, all of them located in the *Região dos Lagos* (Region of the Lakes), in the southern-center part of the Atlantic Coast of the Rio de Janeiro State, 135 km east from the City of Rio de Janeiro.

2.7. Prolagos's water supply system is comprised of 2,460 km of water network; 14 storage tanks, two Water Treatment Plants (WTPs Juturnaíba and Tamoios). A total production of 1,535 l/sec guarantees 93% water service coverage. Around 3.5 million m^3 of treated water is distributed to the population per month. Prolagos operates a Water Quality Monitoring Laboratory.

2.8. The sewage system is comprised of 55 pumping station, 147 km of sewage pipeline and 5 Wastewater Treatment Plants) that treat more than 70 million liters of sewage per day. For wastewater, Prolagos applies activated sludge aerobic treatment followed by ultraviolet disinfection or chlorination, depending on the specific WWTP. The utility company developed its own technology in partnership with a specialized company for processing and disposal of sludge from water treatment process. One of the achievements of the sewage treatment efforts was the recovery of the Araruama Lagoon, the world's largest hypersaline lake, whose ecosystem plays a crucial role in the region's environment and activities. AEGEA's goal is to reach 98% water and 90% sewage coverage in this concession by 2023 (93% and 76%, respectively, in 2013).

2.9. ***Nascentes do Xingu.*** This concessions supplies water and sanitation services for 24 small and medium municipalities of the State of Mato Grosso, located in the central part of Brazil. The area in which the cities are located has a population of 508,000 and is known for its high agribusiness productivity, high per capita GDP and demographic growth rates above the national average. In order to manage the area in accordance with its management model's standards and objectives, AEGEA created the Nascentes do Xingu holding company. It has its administrative head office in Cuiabá, the capital of the State of Mato Grosso (MT), and two regional offices in the cities of Sorriso and Primavera do Leste. The concession contract stipulates provision of services to 116.5 thousand households; AEGEA is currently serving 85 thousand households and 339 thousand people through the operation of 10 surface catchments, able to remove 951 m^3 of water per hour and 98 underground catchments, able to produce 3,881 m^3 of water per hour. The average current sewage coverage is 70% and the Company's coverage goals vary according to each concession.

2.10. ***Aguas do Mirante.*** AEGEA obtained the PPP to supply sanitation and hydrometry management services to the City of Piracicaba, in the State of Sao Paulo, in 2012 for a period of 30 years. Piracicaba is a municipality located 150 km from the Sao Paulo metropolitan area, with a population of around 388,000 inhabitants. The city has a high Human Development Index (HDI) and a mature and dynamic economy. When the PPP was first assumed by AEGEA in 2012, the sewage treatment rate was 36%. Subsequently, incorporation of the Wastewater Treatment Plant (WWTP) Ponte do Caixão in June 2013 resulted in the rate climbing to 70%, and with partial operation of WWTP Bela Vista, the rate reached 100% at the end of the year.

2.11. ***Águas de Matão***. AEGEA obtained through a public bidding process the water supply and sanitary sewage services concession for the city of Matão (SP). The city has a population of 81 thousand and is located in the Northeast part of the State, and with this concession, Aegea now serves approximately 469 thousand people in Sao Paulo.

2.12. ***Nacional Águas e Saneamento.*** AEGEA entered into a contract to acquire 50% of the company Nacional Águas e Saneamento, responsible for operation, maintenance and management of the water supply system in the urban area of the city of Penha, Santa Catarina. Located on Santa Catarina's coast, Penha's coastal city has 29 thousand residents, but can have as many as 120 thousand people during peak vacation periods, with tourism as the main economic activity.

2.13. Águas de São Francisco do Sul Ltda. was incorporated on September 10th, 2014, under a 35 years concession agreement, offering public services of supply of drinking water and sanitation and complementary services in São Francisco do Sul, state of Santa Catarina.

2.14. Águas de Buritis S.A. was incorporated on January 27th, 2015, with headquarters in the city of Buritis, State of Rondônia, in order to operte, by concession, the public service of water supply and sanitation, including the preparation of projects in the urban area of the municipality of Buritis/RO within 30 years.

2.15. Águas de Timon Saneamento Ltda. was incorporated on January 8th, 2015, with headquarters in the city of Timon, State of Maranhão, in order to operte, by concession, the public service of water supply and sanitation, including the preparation of projects in the urban area of the municipality of Timon/MA within 30 years.

2.16. ***Budget, schedule and workforce.*** The total cost of the five years investment plan is US$443 million. IDB's proposed financing will be for US$75 million. Currently, AEGEA's operations in 38 municipalities in 8 states have a total of 2,258 direct employees (75 percent of which are male and 25 percent female).

B. Environmental and Social Setting

2.17. AEGEA manages water and sanitation services in 38 municipalities (approx. 2.7 million inhabitants) across eight Brazilian states. These are: Para, Mato Grosso, Mato Grosso do Sul, Sao Paulo, Santa Catarina, Rio de Janeiro, Rondônia and Maranhão. In general terms, these are mid-size municipalities and can be characterized as populated, developed urban areas both inland and coastal, across all socio-economic populations. For example, in Mato Grosso do Sul, AEGEA is responsible for sanitation services in Campo Grande, a city with a population of around 840,000. The company is also responsible for providing services in Piracicaba in the state of Sao Paulo, which has a population of 388,000.

2.18. ***Aguas de Guariroba.*** Most of the City of Campo Grande active labor is absorbed by the tertiary sector (commerce and services). In spite of that, the primary and secondary sectors, especially agribusiness, still play an important role in the local economy. Campo

Grande is located in the *Cerrado*, a vast tropical savanna ecoregion of Brazil. The climate of Campo Grande is semi-humid and hot, with two well defined seasons: summer from October to March and a winter season between May and August. The average annual rainfall is 1,500 mm. The city is located on the basins dividing of the Parana and Paraguay rivers and over the Guarani Aquifer.

2.19. ***Prolagos.*** This concession is located in an important tourism region, which attract a large number of visitors during the summer, especially due to its beaches. The attended cities have approximately 384,000 permanent inhabitants, but during high season (December through February) the floating population can reach up to 2 million people coming from Brazil and other parts of the world. One of the main environmental features of this region is the Araruama Lagoon (*Lagoa de Araruama*), a hypersaline coastal lagoon formed as a result of semi-arid climate conditions, a small drainage basin and a choked entrance channel. The performance of Prolagos wastewater collection and treatment system contributed to reverse the environmental damage that threatened the Araruama Lagoon in the past decades.

2.20. ***Nascentes do Xingu.*** The area in which the concession cities are located has a population of 512,000 and is known for its high agribusiness productivity, high per capita GDP and demographic growth rates above the national average. The cities served by this concession are located inside the boundaries of 6 Brazilian ecoregions: *Cerrado, Mato Grosso Dry Forests, Chiquitano Dry Forests, Pantanal, Interfluve between the Madeira and Tapajós Rivers* and *Interfluve between the Tapajós and Xingu Rivers.* The state has a wide range of climates: the super humid tropical monsoon, with high annual average temperature exceeding 24º C and high rainfall (2,000 mm/year); and tropical, with summer rains and dry winter, characterized by average 23° C in the highlands with an average of 1,500 mm/year of rainfall.

2.21. ***Aguas do Mirante.*** Piracicaba is located in the *Paraná/Paranaíba Interior Forests* ecoregion, also known as Alto Parana Atlantic forests. In the Piracicaba district, the only existing protected area is the Ibicatu Ecological Station, a small patch of Atlantic forest with an area of 76.40 hectares, whose goal is the protection of the natural environment, conducting basic and applied research and the development of conservation education programs. This area is not impacted by AEGEA operations. In 2009 Piracicaba had a population of approximately 388,000 inhabitants. Piracicaba's climate is tropical of altitude with a decrease of rainfall in winter and annual average temperature of 24° C, dry and mild winters and rainy summers with moderately high temperatures. The annual average rainfall is 1,273 mm.

2.22. ***Águas de Matão***. Located next to the state's major agro-industrial hubs, including Araraquara, Bauru and Ribeirão Preto, Matão's economy has significant industrial activity, representing 69% of the city's economic output, followed by the service sector with 29% and agriculture with 2%. The municipality is located within the boundaries of two ecoregions: *Cerrado* and *Paraná/Paranaíba Interior Forests.* The climate is mostly tropical, with hot and rainy summers and cold and dry winters. In 2014 the city had a population of 80,990 inhabitants.

2.23. ***Nacional Águas e Saneamento.*** The City of Penha is located within the *Serra do Mar Coastal Forests* ecoregion, which cover a 100km wide strip along the Atlantic Coast of Southeast and South Brazil. In 2011, Penha had a population of 28,700, although during the summer can reach 120,000 inhabitants due to the high touristic activity of the city.

C. Alternative Analysis

2.24. Due to the nature of the proposed investment plan - expansion of existing water and sanitation systems, technological upgrades to existing operations, new equipment and software, such as pressure regulators and automation systems- alternative locations have not been considered.

III. COMPLIANCE STATUS AND PROJECT STANDARDS

A. Appraisal process and local requirements

3.1 The environmental assessment of projects is conducted at the state or municipality level under Brazilian federal environmental licensing rules which define a process requiring, in some cases, the preparation of detailed environmental and social impact assessments of the aspects and impacts, both negative and positive, in the project's zone of influence. The stepwise environmental licensing process applicable to most industrial and infrastructure activities, including water and sanitation projects, entails the preparation of feasibility studies in order to obtain preliminary licenses. This is normally followed by more detailed environmental and social impact assessments (ESIAs) required to obtain first, a construction license (based on the state regulator's review of project impacts and mitigation measures), followed by an operating license that is issued after regulatory inspection of the fully constructed project, just before initiation of operations. Federal and State environmental licensing rules also allow state regulators to apply a streamlined licensing process for small and medium-sized sanitation projects defined as those servicing population centers of up to 30,000 and 250,000 inhabitants respectively which are representative of AEGEA's typical concession areas. The streamlined process allows project sponsors to prepare more simplified ESIAs focusing on potential impacts to socio-economic aspects and to the water quality of the receiving environment.

3.2 The Brazilian environmental licensing system is quite complex: some works require municipal licensing, other are processed at the State level; the environmental licenses are issued for specific parts of the water and sanitation systems (e.g., water treatment plants, wastewater treatment plants, pumping stations, main pipelines, etc.). As an example, just for the concession Aguas de Guariroba 197 licenses are required for the entire water and sanitation system. This requires a significant and permanent effort from AEGEA, which has an environmental management unit to follow up on this issue.

B. IDB Safeguard Policies

3.3 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), the Involuntary Resettlement Policy (OP-710) and the Policy on Gender Equality (OP-270). According to the findings of the DD, no impacts on indigenous people are expected, therefore, the OP-765 (Indigenous People) policy does not apply.

3.4 The Project complies with the EIA requirements of Directive B.5 (see paragraphs 3.1 through 3.3 above) and the consultation requirements of Directive B.6. 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 (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.

Policy / Directive	**Applicable Aspect**	**Compliance Rationale**
OP-703 Environmental and Safeguards Compliance Policy		
B.1 Bank Policies	Compliance with applicable IDB policies	The project currently complies with applicable IDB policies. The implementation of the ESAP will ensure the Project remains in compliance during the life of the loan.
B.2 Country laws	Compliance with country laws and regulations	The project is currently in compliance with all Brazilian laws and regulations. Environmental licensing of specific works is an ongoing and permanent process which is followed up by a dedicated AEGEA environmental management team.
B.3 Screening and Classification	Application of appropriate classification	The Project has been screened for its potential environmental and social impacts and has been classified as a Category B operation, 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
B.4 Other Risk Factors	Borrower's capacity	Some of the latest AEGEA concessions (e.g., Nascentes do Xingu) have a lower environmental and social management capacity than the previous ones (e.g., Aguas de Guariroba). Nevertheless, the Company is currently implementing a program to strengthen all of its concessions and the ESAP includes some milestones that will allow a monitoring of these actions.
B.5 EA Requirements	Application of adequate assessment process	In accordance with Brazilian regulations, all AEGEA facilities are subject of the applicable environmental and social impact assessments. According to IDB policies, an environmental and social analysis of the project was performed during due diligence based on available information, site visits and IFC previous assessments.

B.6 Consultations	Project has undergone appropriate public consultation	The Company conducts public consultation with the local communities pursuant to Brazilian legislation. AEGEA plans to continue engaging the local communities to identify social programs in need of assistance.
B.7 Supervision and Compliance	Internal supervision and reporting	The Project's ESAP contains provisions for monitoring and supervision on a semi-annual or annual basis. Additionally, Government entities and watershed agencies monitor the AEGEA concessions during construction and operation. The Company will regularly submit to the Bank reports during the life of the loan.
B.8 Transboundary Impacts	N/A	The Project does not impact neighboring countries.
B.9 Natural Habitats and Cultural Sites	Conversion of natural habitat	The project does not lie within any protected area and no critical natural habitats exist within or in its surroundings. The Company's new works will occupy previously disturbed lands and will not present a significant conversion or degradation of critical natural habitat.
B.10 Hazardous Materials	Waste management	AEGEA is currently implementing a waste management program, including the sludge generated in the wastewater treatment plants. The Company's Contingency Plan describes mechanisms to control spills or other incidents.
B.11 Pollution Prevention	Pollution control and CO_2 emissions	The project's PGA provides measures to control pollution such as project waste material, cement, and sediment run-off. The project's Contingency Plan also describes mechanisms to control spills or other incidents.
B.12 Projects Under Construction	Ongoing works in current concessions	As part of its investment plan, AEGEA is currently implementing several works in its concessions, which comply with applicable Brazilian regulations and IFC standards.
B.13 Non-Investment and Flexible Lending Instruments	N/A	N/A
B.14 Multiple Phase Loans	N/A	N/A
B.15 Co-Financing Operations	Potential presence of other lenders	Besides the IDB A-loan, the Project will be financed through other potential B-lenders. The Project's ESAP complies with other international standards and will assist the Project to maintain a high level of compliance.
B.16 In-Country Systems	N/A	N/A
B.17 Procurement	N/A	N/A
OP-710 Involuntary Resettlement	N/A	In case of land acquisition or need for resettlement, OP-710 will be applied.
OP-765 Indigenous Peoples	N/A	No indigenous communities or peoples will be negatively affected by the Project; and no indigenous groups have been identified in surrounding areas. If necessary, OP-765 will be applied.
OP-704 Disaster Risk Management Policy	Risk of droughts	The AEGEA concessions' areas of influence are not known to be prone to natural disaster events. Nevertheless, some Brazilian states –including Sao Paulo State- were subject of severe droughts.
OP-270 Gender Equality	Avoiding gender discrimination within the Project or as a result of the Project. Providing	Women are already being incorporated into the AEGEA labor force where feasible; no gender discrimination will occur due the project. The Project is currently attempting to identify social programs to benefit women and children

	opportunities for women.	in the local communities.
OP-102 Access to Information Policy	Project information disclosure	As a corporate policy, the Company adequately disseminates information in the local communities.

C. Project requirements and standards

3.5 Being IFC an AEGEA shareholder, the Company's activities comply with all applicable IFC standards and policies. Pursuant to Brazilian legislation, the Company prepares an Environmental and Social Impact Assessment and/or a Environmental and Social Management Plan (ESMP) for each new work or project. The ESMPs outline the Borrower's environmental and social responsibilities including waste management, traffic management, health, safety and labor, monitoring and auditing. The ESMPs also address specific project location related issues such as erosion control, spill management, and road safety and describes any detailed measures required to mitigate any potential issues. The Company also implements as a usual practice a Contingency Plan to outline the actions to be taken in the event of a spill, accident, emergency, or other incident.

IV. KEY ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

A. Summary of key impacts and risks

4.1 Due to the nature of the project —an investment to a corporate entity to support operations of water and wastewater utilities — the key environmental and social, health and safety (ESHS) and labor potential impacts and risks are associated with the following aspects: (i) appropriate assessment and management of environmental and social risks and impacts related to the operation of water and wastewater facilities; (ii) labor and working conditions; (iii) occupational health and safety; (iv) solid waste management; (v) wastewater management; (vi) water availability, quality and efficiency; and (vii) energy efficiency.

B. Environmental and social impacts and risks

4.2 **E&S management capacity.** As part of its expansion plans, AEGEA has acquired or has become shareholder of several water and sanitation public or private companies in recent years. Therefore, the environmental and social management capacity is not homogeneous throughout all the Company's concessions, being Aguas de Guariroba the one with the strongest capacity. AEGEA is currently implementing a plan to achieve the same level of management capacity in all its concessions in the next five years. An action plan, including budget and time schedule, for the implementation of the environmental and social management system in all concessions will be required prior to first disbursement.

4.3 **Solid waste management:** The main waste generated by AEGEA activities are wastewater and sludge from WTPs and WWTPs. This could have negative environmental impacts on the environment if incorrectly classified and disposed. According to the due diligence findings, the Company tests wastewater and sludge in accordance with

Brazilian regulations, and disposes the sludge from operating facilities in permitted sanitary landfills, previously treated in drying basins..

4.4 **Wastewater management**: A proper management of wastewater (collection, treatment and disposal) is critical both in terms of the negative impacts on the local environment and risk to public health. However, on site observations revealed that AEGEA meets the standards specified by Brazilian State, Federal and Municipal environmental authorities. Brazilian wastewater discharge standards are consistent with IFCs Performance Standards.

4.5 **Hazardous materials:** Facilities using and storing hazardous chemicals, particularly gaseous chlorine (AEGEA will replace it by hypochlorite generator) at drinking water treatment plants, pose risks associated with accidental releases. The measures that the Company employs (emergency prevention and control plans, provision of response equipment and materials, and procedures to minimize harm of any potential accident) are in place and are consistent with best international hazardous material management practices.

4.6 **Occupational and community health and safety:** There is a risk of accidental events that could result in injuries to workers during construction works and operation of the system. Risks include those related to exposures to noise and dust, excavations, elevated temperature, chemical agents and physical hazards. To prevent workplace accidents and promote the health of its employees, AEGEA implements Brazilian regulatory norms applicable to its operations through a Workplace Environmental Risk Prevention Program that includes, among other issues, use of personal protective equipment, emergency preparedness, procedures and response, and medical surveillance. Safety committees conduct preventative OHS (occupational health and safety) inspections, reporting on health and safety issues encountered during work, investigating and analyzing occupational accidents, incidents, and health issues and helping ensure that the OHS training activities are completed.

4.7 **Labor:** There could be labor risks associated with the 2,258 direct employees, as well as contractors and sub-contractors. During due diligence it was confirmed that AEGEA complies with Brazilian national labor regulations and applicable sector specific collective bargaining agreements. Furthermore, the Company communicates employee rights and responsibilities through human resource policies, employment contracts, employee handbooks and collective agreements, each developed at the local concession level. All workers have a formal contract and are given a copy of the workers labor book provided by the Brazilian Ministry of Labor. The Company provides worker benefits (including medical, insurance, childcare, meal and transportation vouchers). AEGEA has also implemented a Code of Ethics.

4.8 **GHG emissions.** According to the *AEGEA - IFC: Annual Report – Environmental and Social Sustainability 2014***"**, the GHG emissions of the main AEGEA units for 2014 were the following:

4.9

UNIT	CO_{2e} EMISSIONS (Ton)
Aguas do Mirante	1.875,8
Aguas Guariroba	33.466,1
Nascentes do Xingu	2.659,0
Prolagos	6.107,7
Barra do Garças	724,4
São Francisco	398,4
Matão	1.510,1
Total	46,741.50

4.10 **Water availability.** Recently, some of the Brazilian states where AEGEA has water and/or sanitation concessions were subject of a drought event, especially the State of Sao Paulo. One of the most threatened by this situation is the Company's concession Aguas do Mirante, which serves the city of Piracicaba in the State of Sao Paulo, although the Piracicaba River basin was still not affected by the referred drought event and this concession is only in charge of the sewage system of the city (not water supply). Furthermore, according to the opinion of Brazilian water resource specialists, the current water availability crisis in the State of Sao Paulo appears to be rather a water resources management issue than climate related, although the situation was exacerbated by a severe drought in the region.

C. Cumulative impacts

4.11 Given that the water and sanitation supply in Brazil is a monopoly of the Municipalities, which in the case of AEGEA grant to the Company the concession for the provision of the service, there is no risk of direct cumulative impacts related to the water and sanitation systems by themselves. Nevertheless, the risk of cumulative impacts exists regarding the use and availability of water, especially in regions with potential water scarcity, like the above referred drought event currently in place in the State of Sao Paulo. However, this scenario does not represent a significant risk for the Company's operations since the use of water for domestic use is declared a priority by Governments at the national, state and municipal levels.

D. Positive impacts

4.12 The AEGEA Investment Program will increase access to water and sanitation services as well as improve quality of service, including in low-income areas, with approximately 1.3 million expected new customers. The loss reduction and increase sewerage investments to be supported by the Bank will have strong environmental and health benefits. In addition, the Company's investments include support to continue efforts in water reuse which further contributes to positive environmental impact considering that less than 0.1% of the water produced in Brazil is reused. The Investment Program will also contribute to technology transfers, market and infrastructure expansion.

E. IDB Additionality

4.13 Through its involvement in the project, IDB provided guidance and support to ensure compliance with IDB Policies and Safeguards, IFC Environmental, Health and Safety Guidelines and other international standards. As a result of this, the Company agreed to design and implement an Action Plan for the implementation of a Environmental, Social, Health and Safety management system and a Solid Waste Management program in all its concessions.

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

5.1 According to the conclusions of the E&S due diligence (as well as the IFC assessment of the Group), AEGEA is presently demonstrating the ability to effectively manage potential environmental and social risks from its business activities through the application of internationally accepted practices to protect soil, water and air resources. The Company has hired a team composed by qualified professionals who are responsible for developing and overseeing the implementation of a corporate ESHS policy and management program, consistent with local regulatory requirements and IFC Performance Standards

A. Management Systems and Plans

5.2 ***Sustainable Management and Operational System***. Besides the effort to increase water and sewage coverage, a set of measures toward better organization is being implemented by AEGEA. In 2012 it started implementing its Sustainable Management and Operational System comprising the design and implementation of 3 stages, based on international standards (ISO 9001, ISO 14001, OHSAS 18001, ISO 26000 e ISO 50001). The first stage, implemented in 2012 consisted mainly of the definition and dissemination of its Corporate Policy and Guidelines for Sustainability. In 2013, the second stage, comprised of the description of the processes (management model, processes life cycle, identification of risks and impacts). The system, in its totality will be implemented by 2016. In August 2013, the Company received ISO 9001:2000 certification for its Quality Management System for the production and distribution of drinking water and collection and treatment of sewage for Campo Grande's population. As a condition prior to first disbursement, an Action Plan for the implementation of the environmental and social management system in all concessions will be required, including budget and time schedule.

5.3 ***Water Loss Reduction Program.*** The AEGEA Water Loss Reduction Program has already demonstrated positive effects and is planned to be fully implemented in all concessionaires. In 2013, AEGEA established a strategic partnership with the Israeli company TaKaDu to monitor and analyze the efficiency of the water distribution process. TaKaDu's solution comprises software that monitors and manages water distribution. The continuous flow of data, stored on a cloud, is processed by sophisticated statistical algorithms. This allows for the early detection of anomalies and insights into the possible causes of these inefficiencies and the analyses can be converted into managerial reports.

The Company has already signed contracts with TaKaDu for working with Aguas Guariroba and Prolagos, and is planning to extend it to Nascentes do Xingu in 2015.

5.4 ***Energy Efficiency Program.*** This Program aims at better efficiency in the use of energy. Presently the costs of energy consumption represent 20 % of the Company total costs. However, in relation to saving electricity costs, AEGEA Energy Efficiency Ratio demonstrated an improvement of R$ 0.09 between 2012 and 2013[1]. Of the total, the two more mature concessionaires (Aguas Guariroba and Prolagos) are responsible for approximately 75% of electricity costs on a consolidated basis.

5.5 The Energy Efficiency Program is implemented in all concessionaires, the projects are being conducted and progressively implemented. Nascentes do Xingu recorded a decrease of 0.66% in the kWh/m³ ratio in 2013 due to the installation of new pumps in ETP Sorriso, as well as switchboards including Programmable Logic Controllers (PLC) and inverters. Timers, hour meters and capacitor banks were installed at the other units to monitor and reduce consumption.

5.6 Águas do Mirante invested in automation to improve the energy efficiency of its operations, optimizing the use of suction wells and supporting preventive/corrective maintenance through monitoring of the equipment. The replacement of equipment and better rationalization of energy use were among the measures adopted to reduce consumption, with significant reductions achieved in some of the ETPs: Ponte do Caixão: 18; Piracicamirim: 14%; Dois Córregos: 5%; Bela Vista: 2%; Campestre I: 2%.

5.7 Actions designed to rationalize electricity use helped Águas de Guariroba reduce electricity consumption by 14.94% in Campo Grande's water supply system. Investments in the entire system were required to achieve this result, including the exchange of outdated equipment for more modern equipment, installation of capacitor banks, prioritizing of the more efficient units, reactivation of deactivated units, suspension of units' activities during peak hours, rate migrations and readjustment of the contracted demand, among others**.**

5.8 Prolagos has an energy efficiency team that manages usage and develops initiatives to optimize consumption. In 2013, energy consumption remained unchanged, however, the number of active households increased by 10%, so despite the increased demand for water, energy spending was unchanged compared to 2012. This was made possible by improvements in the distribution system, automation, system controls and improvements in the system for controlling losses. From 2007 to 2012, the billed volume of water increased from 18,510 millionm3/month to 21, 516 million m3/month while the electrical energy consumption lowered from 252 kWh/month to 179 kWh/month.

5.9 ***Water Reuse Program.*** AEGEA began reusing the water used to wash treatment plant filters in its Water Treatment Plants. This measure, in addition to reducing water consumption, saves energy and avoids the waste of chemical products used in the treatment process. The project has been implemented in the Águas de Guariroba unit and

[1] Electricity Efficiency Ratio (R$/m3) = Amount Paid for Electricity During the Period (R$) / Water Vol. Production (m3) + Sewage Vol. Treated (m3).

includes the installation of storage tanks to hold the water used in washing the filters, which had previously been disposed of, and also allows for the capture and use of rain water. In addition to reducing impacts to the environment, the water that would have been disposed of helps supply the city. Águas Guariroba takes advantage of reusable water to clean the filters in WTP Guariroba and Lageado. In 2013, total volume recovered was estimated at 65,000 m^3.

5.10 Prolagos has implemented two initiatives focused on the reuse of water: the Aguas Novas Project, executed in the Juturnaíba Water Treatment Plant, that promotes the treatment and reuse of the water used to clean the filters , and the Búzios Project: the WWTP of Búzios also operates a Reusable Water Treatment Plant (RWTP) which transforms the effluent of the WWTP in reusable water. The process is performed by spiral membrane ultrafiltration followed by reverse osmosis. The RWTP has a production capacity of 2 million liters, being currently used 40, 000 liters/month for irrigation purposes at the Golf Club of Búzios.

5.11 In Águas do Mirante, reusable water is utilized in the units through a simple sand filtration process, subsequently disinfected with sodium hypochlorite. The process works as follows: effluent is collected in tanks and pumped through sand filters, which removes solids contained in the effluent. After filtration, the effluent is biologically disinfected with a dose of sodium hypochlorite, turning it into reusable water. The project has four Effluent Treatment Plants (ETP) - Piracicamirim, Ponte do Caixão, Tupi and Capim Fino - which together can reuse a volume of 74,780 m^3 per year.

5.12 ***Employees Training Program.*** According to the AEGEA's Annual Sustainability Report 2013, the Company had at that moment around 1,800 employees and estimates that will hire 430 new employees per year, over the next three years, whose distribution will depend on the new concessions to be obtained. The Company provides training at different levels that include Post-graduation/MBA, undergraduate, a trainee program, development for employees with high school education and behavioral training for teams with direct contact with the service users. Some of the training programs are: 1) Incentive Program Development and Training: aimed to enhance capacity building, improvement and employee development to meet the skills necessary for the proper performance of the function and generate quality improvement and greater efficiency, it's a training course, intended for employees who are studying technical studies, senior, graduate and MBA; 2) English Program: its goal is to develop the strategic team communication in the official language –English- increasing productivity, interaction and providing a better overall representation of Brazilian branch abroad, talent retention and motivational element for the company's investment in development, a partnership with school Go Getter languages - General Corporate Inglês, includes 35 managers; 3) Aegea Academy: a new training concept with the goal of consolidate or improve skills and strengthen attitudes; the Aegea Academy aims to ensure the application of the values and the competitive advantages of Aegea Saneamento in all stages of maturity of concessions by all the employees involved.

5.13 ***Odor management.*** In the WWTPs, the following actions are carried out for the reduction of odor: vegetation curtains to avoid the dispersion of gases to the neighborhood; gas suction line, to burn methane gas; the entire treatment is performed in

a closed cycle avoiding excessive leaks of gases; use of a sprinkler system of micro particles (eucalyptus essences) that has the function of encapsulating the gases preventing and neutralizing their dispersion; chemical physical treatment inside the reactor using ferric chloride that neutralizes the hydrogen sulfide gas before his generation avoiding odor.

5.14 ***Solid waste management.*** The sludge generated in the WWTPs is mostly already dehydrated, being stored in buckets. As for the destination, the generated and treated sludge is used as soil enriching material or sent to licensed landfills. Despite not having a formal waste management plan, each Unit adopts practical actions that seek primarily to avoiding solid waste generation, reduction of quantity of waste produced. In addition, the entire waste disposal procedure carried out by the units is in accordance with the relevant local legislation.

5.15 ***Grievance mechanism.*** All AEGEA units have in place a grievance mechanism, which includes 24/7 phone access, offices for attention to the public and an ombudsman. The ombudsman office deployed in the units processes customer complaints that have already resorted to the proper channels of the company but did not feel satisfied with the service provided or the given solution.

5.16 ***Other environmental plans in place.*** All AEGEA units implement an Environmental Risks Prevention Program, a Medical Control and Occupational Health Program, Contingency and Emergency Plans, Hazardous Materials Management Plan, etc.

5.17 In the Águas de Guariroba units, water quality is monitored by the Water Quality Monitoring Laboratory. In Campo Grande, a total of 3,500 water samples are collected from more than 200 supply points each month, allowing water quality to be assessed at the systems' entry points in all of the city's regions. The Águas Guariroba laboratory performs bacteriological and physico-chemical tests, analyzing approximately 25 parameters such as odor, taste, color, turbidity, residual chlorine, pH, fluoride, thermotolerant coliforms and total coliforms. The presence of certain heavy metals is also assessed, including iron, aluminum, manganese and hexavalent chromium.

5.18 To monitor the water quality of dams and wells in natura, and assess the compatibility of treatments used, water is collected monthly and analyzed considering 32 parameters. Every six months all of the Class II parameters of Resolution 357/2005 of the National Environmental Council - Conama (an agency under the Ministry of the Environment), are analyzed.

5.19 To assess the quality of treated water, daily analyses of the distribution network and treatment outlets are performed, considering the following parameters: free chlorine residual, pH, color, turbidity, fluoride, odor, taste, total coliforms, Escherichia coli and heterotrophic bacteria, and the Potability Indicator calculated at each month-end.

5.20 To guarantee the quality of chemical products used in treating water, every product is analyzed when each batch is received. To monitor services related to complaints and water analysis requests, an on-time indicator for Service Requests sent to the Water

Analysis Laboratory is calculated each month. In addition, a Water Quality Report is prepared every year.

5.21 **Social Management Programs.** Corporate and Social Responsibility ("CSR") is integrated into the Company's operating model, currently carrying out a total of 24 programs and initiatives throughout its concessionaries. In 2014, these initiatives benefited more than 57 thousand people. According to the Company all these initiatives will remain in coming years, increasing the number of beneficiaries. New programs currently under evaluation are expected to be incorporated as well.

B. Monitoring and Supervision

5.22 The project includes different levels of supervision. The most relevant ones include (i) internal supervision, conducted by AEGEA Headquarter's environmental team and defined within the corporate policies and procedures; (ii) Bank supervision, carried out regularly by the project team with the eventual support of specialized consultants; and (iii) inspections from the entities of the Brazilian Government responsible for enforcement of compliance with environmental laws and regulations at national, state and municipal levels.

5.23 The AEGEA corporate E&S team conducts regularly internal audits and will send semi-annual or annual reports to the Bank. The Bank will conduct semi-annual supervision missions during the first year of the loan execution and annual supervision missions during the life of the loan to assess compliance with Bank policies. Brazilian E&S authorities have the right to conduct unannounced site audits of all projects to ensure all environmental conditions are met.

C. Indicators

5.24 The main project indicators are: i) average efficiency of BOD removal (goal: variable); ii) percentage of treated sewage in relation to collected (goal: 100%); iii) relationship between used energy (kWh) and treated sewage volume (m^3) (goal: < 0.20)

VI. REQUIREMENTS TO BE INCLUDED IN THE LEGAL AGREEMENTS

Throughout the life of the Loan:

6.1 IDB will require within its Loan Agreement that the 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 Brazilian 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 Involuntary Resettlement Policy (OP-710), the Disaster Risk Management Policy (OP-704), the Disclosure of Information Policy (OP-102), the Indigenous People Policy (OP-765) and the Gender and Equity in Development Policy (OP-270) and their respective guidelines.
6. Comply with all the requirements indicated in the Environmental, Health and Safety Action Plan.

Prior to First Disbursement:

6.2 The Borrower shall present to the satisfaction of the Bank i) an Action Plan for the implementation of an Environmental, Social, Health and Safety management system of all the Company's concessions, including ISO 9001 and 14001 certification; ii) an Action Plan for the implementation of a Solid Waste Management Program in all its concessions.

Prior to each disbursement:

6.3 The Sponsor/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.

During execution of the loan:

6.4 The Borrower shall send to IDB copy of an assessment of the impacts of current and future drought events in the Company's operations and a Contingency Plan for Drought Events in the affected concessions.

6.5 The Borrower shall regularly send to IDB the status of the Action Plan for the strengthening of the environmental and social management capacity of all the Company's concessions that benefit from the IDB loan, including ISO 9001 and 14001 certification.

6.6 The Borrower shall incorporate into all contractors' contracts clear regulations and penalties for non- compliance with policies, plans and programs (including mitigation measures) adopted by the Company. This will include clear procedures and timing for reporting environmental, health and safety related incidents/accidents and a specific monitoring program to assess causes of incidents/accidents and track performance of the corrective measures. The Borrower shall provide evidence of supervision and oversight of the contractors regarding environmental and social issues.

ANNEX I: ENVIRONMENTAL AND SOCIAL ACTION PLAN (ESAP)

#	Item	Action	Deadline	Status
A. ENVIRONMENTAL AND SOCIAL PERMITS				
1	***Environmental licenses***	Submit to the Bank the status of the environmental licensing processes in place for the concessions works and projects	To be included in reports to IDB	-
B. ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS & PLANS				
2	***E&S Management System***	Develop and submit to the Bank an Action Plan for the implementation of the Environmental, Social, Health and Safety management system of all the Company's concessions	Prior to first disbursement	-
3		Submit to the Bank regularly reports on the implementation of the Action Plan for the strengthening of the environmental and social management capacity	To be included in reports to IDB	-
4	***Solid waste management***	Submit to the Bank an Action Plan for the implementation of a Solid Waste Management Program in all concessions	Prior to first disbursement	-
5		Submit to the Bank regularly reports on the implementation of the Action Plan for the implementation of a Solid Waste Management Program in all its concessions	To be included in reports to IDB	-
C. MONITORING AND REPORTING				
6	***E&S reporting***	During execution of the loan, submit to the Bank annual reports on the Company's environmental and social performance[2]	Annualy	-

[2] Same as current Annual Report on Environmental and Social Sustainability presented to IFC.