

# Environmental and Social Review Summary (ESRS) Bosques Solares Los Llanos - Colombia

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# 1. General Information of the Project and Scope of IDB Invest's Environmental and Social Review

The Bosques Solares Los Llanos project (the "Project" or "BSL") of Matrix Renewables Colombia S.A.S. (the "Company" or "Matrix") is located in the municipality of Puerto Gaitan in the province of Meta, Colombia. The Project involves the construction and operation of: (i) three contiguous solar generation projects (BSL1, BSL2, and BSL3) with a total aggregate installed capacity of 81.7 Mega Watt peak (MWp), (ii) a 2,711-meter long, 34.5 kilovolts (kV) transmission line (TL), with 1,714 meters of underground wiring and 996 meters of overhead wiring, and (iii) the retrofitting of Altillanura electrical substation from Electrificadora del Meta S.A. (EMSA).

The three BSLs were recently acquired by the Company from Trina Solar, a photovoltaic module manufacturing and installation company, which was also in charge of the construction of the three solar farms. The Project is in a leadership transition stage and, as of March 2021, it registers BSL1 and BSL2 in the operational phase under Trina Solar's guidelines, while BSL3 is in the technical testing phase before entering its operational phase.

The scope of IDB Invest's environmental and social review included: (i) an analysis of the Company's information and documents; (ii) a site visit to the Project facilities on March 15 and 16, 2021 by consultants hired for that purpose; (iii) field interviews with key stakeholders in the community; iv) interviews with environmental and health and safety ("HSE") leaders of the Company and Trina Solar in its role as the engineering, procurement and construction ("EPC") company; and v) a flyover of the areas designated for forest offsets, the Altillanura medium voltage line and substation, the gallery forest near BSL 1, and the Muco River.

# 2. Environmental and Social Categorization and Rationale

The Project has been classified as a Category B operation under IDB Invest's Environmental and Social Sustainability Policy given that: (i) most impacts are localized and restricted to the project site, (ii) construction did not generate physical or economic displacement or intersect any protected natural areas, (iii) no air emissions will be generated during operation, (iii) dumping and waste generation are minimal and will be disposed of through specialized companies holding the respective permits for it, iv) health and safety risks during the operational phase are minimal and are reduced by management plans, and v) the TL has no land use restrictions for the economic activity being carried out (extensive cattle ranching) and most of it is underground.

The Performance Standards (PS) triggered by the Project are: i) PS1: Assessment and Management of Environmental and Social Risks and Impacts; ii) PS2: Labor and Working Conditions; iii) PS3:



Resource Efficiency and Pollution Prevention; iv) PS4: Community Health, Safety, and Security; and v) PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

# 3. Environmental and Social Context

# 3.1 General characteristics of the Project's site

The Project consists of three solar parks located contiguously on the same property, called Hacienda Los Esteros-Villanueva, in the Vereda Alto Neblinas of Puerto Gaitan, Department of Meta, Colombia. Prior to the construction of the Project, the land was used for hydrocarbon-related livestock and industrial activities. The location has undergone transformation through pasture improvement for extensive cattle ranching and is surrounded to the northeast and east by a forest gallery. There are no bodies of water within the direct area of influence of the Project. The nearest body of water is the Muco River, whose course surrounds the east and northeast part of the solar farm site area.

The entrance to the project site is via an unpaved road, which is constantly used by tanker trucks and tractor-trailers transporting gasoline, agro-industrial products (oil palm and rubber) and hydrocarbon derivatives. The three BSLs are surrounded by a 2-meter-high fence, which is monitored by a closed-circuit television ("CCTV") system. In addition to this external fence, each park has its own enclosure and is separated from the other projects. The Project did not contemplate land acquisition instead it has been developed in a privately owned area under a 30year lease agreement.

The TL is located in the La Merced and La Fortuna properties, which belong to the Alto Manacacías district. 1,714 meters of the medium voltage line are underground, and 996 m are overhead, using 14-meter-high poles. The activities associated with the operation of the BSLs basically include preventive maintenance activities (grass mowing and panel cleaning).

# 3.2 Contextual risks

According to the Ombudsman's Office, <sup>1</sup> armed groups spawning from demobilized self-defense and dissident guerrilla groups have been reported in the area. These armed groups, which operate outside the law, carry out isolated and selective violent actions such as forced displacement, threats, harassment and extortion of merchants and cattle ranchers. According to the same report of the Ombudsman's Office, since 2018, the rate of violent acts in the villages within the Project's Direct Area of Influence("DAI") have decreased, due to the presence of Special Energy and Road Battalion No. 15 of the Colombian National Army, which is located on the road, 11 km from the Project.

<sup>&</sup>lt;sup>1</sup> Risk Report, Ombudsman's Office <u>http://www.indepaz.org.co/wp-content/uploads/2020/02/IR-N%C2%B0-019-16A.I.-MET-Puerto-</u> L%C3%B3pez-y-Puerto-Gait%C3%A1n.pdf



## 4. Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures

4.1 Assessment and Management of Environmental and Social Risks

## 4.1.a E&S Assessment and Management System

During the construction phase, the Environmental and Social Management System ("ESMS") was managed by Trina Solar. This system included a Health, Safety and Environment Manual ("HSE Manual") that defines the guiding principles to be followed by contractors in their ESMS throughout the Project's development. The manual contains provisions related to hiring and working conditions, occupational health and safety, operational monitoring, and environmental management.

For the current stage of operation, the Company continues to implement the Trina Solar HSE Manual. In parallel, Matrix is preparing an "Environmental and Social Guidelines Manual ("E&S Guidelines Manual") that outlines environmental and social management corporate requirements for renewable energy and storage projects, based on international industry best practices. The manual includes the key ESMS elements such as: i) Identification, assessment and management of environmental and social risks and impacts; ii) Emergency preparedness and response; iii) Stakeholder engagement; iv) Community grievance mechanism; and v) Monitoring and reporting.

## 4.1.b Policy

The Trina Solar HSE manual implemented during the construction phase defined the relevant aspects for contractors to incorporate into their policies. However, no corporate or project-specific policy has yet been identified for the operation phase to provide guidelines for the management of environmental and social issues. The Company's E&S Guidelines Manual does not require its projects to establish a policy defining environmental and social objectives and principles, even though the manual includes policies on anti-corruption, travel and expenses, acceptable use of information technology, communications, and third-party due diligence.

- 4.1.c Identification of Risks and Impacts
- 4.1.c.i Direct and indirect impacts and risks

Each of the BSLs has its respective Environmental Impact Study ("EIS") that identifies potential impacts on the biotic, abiotic, and socioeconomic environment for each of the Project's activities. However, this analysis does not include the identification and evaluation of the impacts caused by the TL.

During the Project's construction, the Trina Solar HSE Manual established the obligation for all its contractors to identify the risks and impacts inherent to their activities, and to keep this analysis up to date based on the results of auditing processes, changes in legislation or the execution of unforeseen activities, and to reflect them in the Project's Environmental Management Plan.

Although the Company's E&S Guidelines Manual includes guidelines on how to identify, assess and manage environmental and social risks and impacts during the operation phase, this instrument has



yet to be finalized. Until it is ready, the Company will continue to use the guidelines of the HSE Manual for the operation stage.

## 4.1.c.ii Analysis of alternatives

Following CORMACARENA's instructions,<sup>2</sup> the Project did not require the preparation of an Environmental Diagnosis of Alternatives ("EDA")<sup>3</sup> because the photovoltaic plants were connected to the existing Regional Transmission System (Altillanura Substation, located in Puerto Gaitan). However, the previous Project developer's consultant conducted an analysis of the environmental and social conditions of the site during the BSL site selection and identified parts of the Project that overlapped with protective and productive forest areas. To prevent this, the Project reduced its original area.

## 4.1.c.iii Cumulative impact analysis

The EISs for the three BSLs included the identification and rating of pre-existing impacts in the area where the solar farms were developed. However, they did not include a cumulative impact analysis (CIA) to evaluate the impact of the three parks as a whole or the impacts that could be generated in their area of influence by other projects in operation or to be built in the future.

## 4.1.c.iv Gender risks

National legislation in Colombia guarantees non-discrimination and provides provisions that address gender equality. At a contextual level, secondary information generated by the United Nations Development Program ("UNDP") was identified, which states that one of the inherent problems in the department of Meta is domestic violence. Due to the characteristics of the Project, a more indepth analysis of differentiated impacts on women was not necessary. The Project is now in its operation stage, with a minimum workforce and no camps, so the focus of the Project will be to internalize gender equality management in its processes as part of its working conditions.

# 4.1.c.v Climate change exposure

In July 2018, the Project conducted a hydrological study to identify solar farm areas that could be affected by floods within 10- and 100-year return periods. This analysis for the Muco River sub-basin showed that, for a 100-year return period, flooding could occur in the sector between sections 3 and 4 neighboring the BSL3 solar farm due to the small difference in land level between the river and the area where the farm is located at this site. Consequently, the study recommended a 1.5m high and 100m long protection structure. This recommendation, however, was dismissed in 2020 based on a drainage analysis for 10-year return periods, concluding that BSL3 will not sustain

<sup>&</sup>lt;sup>2</sup> The Corporación para el Desarrollo Sostenible del Área de Manejo Especial La Macarena (Corporation for the Sustainable Development of the La Macarena Special Management Area, CORMACARENA) is the environmental authority in charge of the administration and protection of the environment and its natural resources.

<sup>&</sup>lt;sup>3</sup> The purpose of the Environmental Diagnosis of Alternatives is to provide information to evaluate and compare the different options presented by the petitioner, under which it is possible to develop a project, work, or activity. The competent environmental authority must be consulted on whether to submit the EDA before submitting the application for the environmental license.



damage from the flow of the stream that feeds the Muco River; consequently, the containment work recommended in the 2018 study would no longer be necessary. Matrix will confirm whether this recommendation is applicable considering a longer return period and whether the work is or not required.

## 4.1.d Management Programs

The Project has developed a set of environmental and social impact and risk management programs (mainly preventive) that have been incorporated into its Environmental Management Plan (EMP). It also has a Biodiversity Loss Compensation Plan (BLCP). Both the EMP and the BLCP include goals, compliance indicators, implementation schedules, responsibilities, and associated resources.

The HSE Manual establishes the contractors' obligation to execute and comply with the EMP and to prepare monthly reports on its compliance status. The Project also has an Environmental Management Plan in place for the three BSLs, which establishes the guidelines for compliance with the EMP and their monitoring and control. Thus, for the construction phase, the contractors adopted procedures for wildlife management, common and hazardous waste management, handling and storage of hazardous chemicals, fuel supply, tree felling, noise emission control, air emission control, natural resource control, and emergency planning and response (including for environmental issues).

For the Operation Stage, the Company has incorporated into its E&S Guidelines Manual guidelines for: i) emergency response; ii) incident reporting and investigation; iii) monitoring and reporting; and iv) pollution prevention and resource efficiency; all of which are focused on continuous improvement in environmental and social performance, ensuring stakeholder identification and engagement, and compliance with the PS.

# 4.1.e Organizational Capacity and Competency

During the construction stage, the Project had an HSE team composed of nine (9) people, four of which were responsible for supervising the ESMS and contractors on HSE issues. In addition, a social consultant oversaw the design and implementation of the Stakeholder Identification and Communications Plan, the grievance mechanism, the local labor contracting guide, and goods and services.

While the Company completes the transition process between the construction and operation phases, the Trina Solar team will continue to carry out the operation and maintenance activities. To this end, it has an operations and maintenance crew formed by three people from Transmontaña contractor, under the supervision of the Trina Solar team.

Trina Solar's current team consists of six professionals: a Site Manager, an electromechanical supervisor, an HSE coordinator, an HSE supervisor, and a quality coordinator. This team is considered adequate to implement the ESMS and supervise the HSE aspects of the Project in its operation phase. However, the Company has yet to establish the team that will oversee the implementation of the corporate E&S Guidelines Manual or define an organizational chart with the roles and responsibilities of each professional involved.



## 4.1.f Emergency Preparedness and Response

Trina Solar's HSE manual contains specifications for defining the Emergency Preparedness and Response Plan for contractors, such as: identification of work-related threats, assessment of the vulnerability of actions to threats, responsibilities, evacuation plans, procedures for action in case of emergencies, telephone call tree and transportation scheme for evacuating patients in case of emergencies, among others.

The HSE manual's provisions were clearly included in the plans submitted and implemented by the contractors, establishing: i) conditions and procedures to prevent emergency situations, ii) training for personnel to act and protect themselves in the event of disasters or collective threats that could endanger their integrity (drills, practices, brigade members), and iii) a Mutual Aid Plan, which seeks to establish cooperation agreements with other contractors of BSL projects and companies located near the work site.

As part of the transition process to the operation phase, the Company will continue to use the emergency preparedness and response plans and their respective components from the construction phase of the Project.

## 4.1.g Monitoring and Review

During the construction phase, the monitoring and evaluation of the Project were implemented as required by the HSE Manual. This included the preparation of monthly environmental management compliance reports by contractors. In addition, the Environmental Management Plan of the three BSLs establishes management monitoring and measurement, also defining an Environmental Inspection Program (EIP) as a mechanism to regulate activities and operations related to significant environmental aspects, objectives and goals of the Project or related to any applicable environmental requirement. Finally, the Company's E&S Guidelines Manual includes Monitoring and Reporting guidelines that focus on monitoring and measuring the environmental and social performance throughout the Project's life cycle, identifying the effectiveness of the system, legal and contractual compliance, impact and risk management, and identifying improvement actions.

The Environmental and Social Due Diligence ("ESDD") Process demonstrated compliance with the Follow-up and Monitoring Programs and the EMPs, through the implementation of the "Templates" defined in the EIS, the reports in the Monthly Environmental Management Report and the Environmental Compliance Reports ("ECR") for the construction of the BSLs and the TL.

Occupational Health and Safety ("OHS") management programs were monitored by Trina Solar, both in terms of documents (monthly reports to its contractors) and through constant field monitoring and daily on-site inspections, as well as follow-up on the activities of the Coexistence Committee and the Joint Occupational Health and Safety Committee ("JOHSC").



## 4.1.h Stakeholder Engagement

The Information and Consultation Program contained in the EIS contains a series of socialization and disclosure activities to be carried out during the life cycle of the Project (construction, operation, and post-operational stages). Likewise, the Stakeholder Identification and Communications Plan includes a detailed list of the stakeholders that may be involved in the Project and strategies for relating with each one of them.

At the beginning of the construction phase, the Project held several outreach meetings with the community. However, this process did not include all the communities in its Direct Area of Influence (DAI), such as the Alto Neblinas community. This community is important because it submitted a request for information that has yet to be answered, even though it is part of the Project's DAI.

# 4.1.i External Communication and Grievance Mechanisms

The three BSLs have a Grievance, Claims, and Dispute Resolution Mechanism that was developed by Zabala Innovation Consulting, a firm specializing in social issues that oversaw the social management of the Project during construction. Both the mechanism and the supporting information provided to stakeholders show the existence of physical points for receiving grievances and a response system and timeframe. However, none of these were deployed in the community of Alto Neblinas, whose territory is in the Project's DAI according to the EIS and which has a history of information requests and complaints.

The mechanism, however, does not detail the roles and responsibilities of Company officers in handling complaints or requests for information. Its registration, follow-up, and resolution system are not fully aligned with the deadlines defined in Colombian regulations (Article 14 of Law 1755 of 2015). The information provided did not show how the mechanism handled the complaints filed by stakeholders or the corresponding solutions.

For the operation stage, the E&S Guidelines Manual contains a "Grievance Mechanism" that describes the scope, objectives and principles, and the procedure to be followed for the reception, registration, processing, and resolution of complaints, along with the time required for each case and the roles and responsibilities of the Company's officers when handling them.

# 4.1.i.i Ongoing Reporting to Affected Communities

The social management plans linked to the EISs of the three BSLs and the Communications Plan designed during the construction stage identify actions for dissemination to identified stakeholders on an annual basis. However, the ESDD was unable to show the documents that support the execution of these activities.



# 4.2 Labor and Working Conditions

- 4.2.a Working Conditions and Management of Worker Relationships
- 4.2.a.i Human Resources Policies and Procedures

During the construction phase, Trina Solar had a Human Rights Policy in place that established the Company's commitment to respect the human rights of its employees, customers, and suppliers. The policy contains principles of conduct that prohibit discriminatory practices; forced, compulsory, and child labor; harassment; intimidation; and exploitation, while promoting a culture of respect for human rights and freedom of thought and expression.

For the operation stage, the Company's E&S Guidelines Manual includes a chapter dedicated to human resources management. In this regard, although the BSLs are still in the process of being developed, the development of human resources policies and procedures is a requirement for all of the Company's projects. The manual also requires all Matrix projects to provide their workers with contracts with terms and conditions that provide for the following topics: i) wages, benefits and deductions; ii) working hours, breaks and rest days; iii) overtime and compensation arrangements; iv) social security payment arrangements (health, pension and other insurance); v) management of paid annual leave and paid and unpaid leaves of absence; and vi) special considerations for migrant workers, if applicable. This is complemented by commitments to disseminate rights and duties to all workers, and monitoring through internal audits.

# 4.2.a.ii Working Conditions and Terms of Employment

The construction of the three BSLs required hiring 357 people, of which 29 were women (8% of the working population), while in the construction of the TL and the refurbishment of the Altillanuras substation, 149 people were hired, of which 12 were women (8% of the workers). Current operation activities are carried out by a three-person operation and maintenance crew employed by the contractor Transmontaña and a supervisory team of six professionals from Trina Solar.

For the Project's construction phase, Trina Solar had the support of two contractors: ALDESA, which oversaw the construction of the wind farms; and J.E. Jaimes, which oversaw the construction of the TL and the retrofitting of the substation. Consequently, most of the personnel required in this phase were hired by these companies which also monitored the working conditions. This was done in accordance with Trina Solar's HSE Manual for contractors, which establishes mandatory compliance with national labor regulations.<sup>4</sup>

The ESDD confirmed the existence of sanitary facilities, hydration points for workers, as well as workplace inspections, cleaning days, and the provision of Personal Protective Equipment (PPE) to workers.

<sup>&</sup>lt;sup>4</sup> 48-hour work week, defined type of contract, agreed compensation, payment of workers' social security and occupational health and safety, among others.



During construction, the Project hired mostly local workers, who learned about the employment opportunities through the regional platforms of the *Caja de Compensación Familiar del Meta* (Meta Family Compensation Fund, "COFREM" for its acronym in Spanish) and the *Servicio Nacional de Aprendizaje* (National Training Service, "SENA" for its acronym in Spanish), electronic sites that publish vacancies in the municipality and verify that those who apply for such vacancies have a residence certificate from Puerto Gaitán.

Since the current team for the three BSLs does not exceed 10 people, the obligation to have an Internal Labor Regulation ("ILR") as required by the Colombian Substantive Labor Code<sup>5</sup> does not apply.

## 4.2.a.iii Workers' Organizations

Although the HSE Manual recognizes the fundamental right of workers to freedom of association, during the construction phase of the Project no union or labor organization was identified within the Company or in the contractor companies. However, Labor Coexistence Committees<sup>6</sup> ("COCOLA", for its acronym in Spanish) were formed in both contractor companies and their subcontractors.

## 4.2.a.iv Non-discrimination and Equal Opportunity

For the construction phase, Trina Solar carried out activities based on its Human Rights Policy, which highlights the promotion of a culture of respect for human rights, fair treatment, and the prohibition of any type of harassment, intimidation or exploitation. Although the policy does not cover the issue of equal opportunities or gender equality, the ESDD was able to demonstrate that the different calls for proposals made by the contractors were not biased in any way and were open to the general public through the SENA and COFREN platforms.

For the operational phase, the Company contemplated implementing labor recruitment measures based solely on the inherent requirements of the job, in line with a policy of non-discrimination and equal opportunity. This is stipulated in its E&S Guidelines Manual. Likewise, the Company considers the implementation of corrective measures against harassment, intimidation or exploitation, especially focused on women and other vulnerable groups. In addition, Matrix ensures fair and equal treatment of migrant workers if they are part of the operating team and provides for the protection of the rights and opportunities of workers with disabilities.

#### 4.2.a.v Retrenchment

BSL1 and BSL2 completed their construction phase between November 2019 and July 2020, respectively, followed by a "Closure Dossier". This dossier includes the database of workers who participated in the construction of the projects and the social security payment records for all these employees. Trina Solar also monitored the timely payment of social security for all Project contractors and subcontractors.

<sup>&</sup>lt;sup>5</sup> The Substantive Labor Code (Decree 2663) is a compendium of rules that regulates the employee-employer relationship in Colombia since 1950.

<sup>&</sup>lt;sup>6</sup> The Labor Coexistence Committee is a group of people who work in a public agency or a private company and is responsible for receiving and processing complaints that may constitute labor harassment in accordance with the terms defined in Law 1010 of 2006.



Construction of BSL3 was completed in February 2021 and is now in the testing and commissioning stage before commencing operations. Trina Solar is currently preparing the BSL3 Closure Dossier.

For the operational phase, the Company intends to evaluate and plan alternatives to downsizing before applying multiple layoffs, if required. To this end, Matrix is considering developing a personnel reduction plan to minimize the adverse impacts that the dismissal of workers may cause, to ensure that all workers receive notice and the corresponding severance payments, and to establish objective, fair, and transparent selection criteria for the personnel to be retained.

#### 4.2.a.vi Grievance Mechanism

For the construction phase, Trina Solar had a grievance procedure that establishes the mechanisms for responding to and handling complaints, as well as the formats for recording cases internally. The contractors disseminated this procedure to their workers through the Safety, Health, Environment, and Social Management induction courses. The COCOLAs also conducted ongoing reviews of complaints and grievances identified in the construction phase and, in their monthly HSE reports, the contractors presented a breakdown of the complaints or grievances received within the month under evaluation.

For the operational phase, the Company plans to provide a mechanism for employees to raise and address work-related concerns. As defined in the E&S Guidelines Manual, this mechanism will be accessible and clear to all personnel (including direct personnel, contractors and subcontractors), will allow anonymous complaints to be registered, will provide timely information and will be made known to all Project workers.

#### 4.2.b Protecting the Workforce

During the construction phase, Trina Solar had a policy that emphasizes the prohibition of discriminatory practices, declares the rejection of the use of forced or compulsory labor and child labor, and promotes a culture of respect for human rights and freedom of thought and expression. The ESDD found that all the Project's work was carried out by workers of legal age. The monthly construction reports submitted by the contractors included the results of the COCOLA meetings and did not identify any instances of harassment or discrimination in the documentation reviewed.

For the operational phase, the E&S Guidelines Manual defines guidelines for workforce protection, avoiding the employment of children in any way that is economically exploitative, dangerous, harmful, or socially disruptive. To this end, it establishes a minimum working age in line with national legislation, as well as age verification mechanisms in direct or third-party contracting processes.

The manual states that the use of any involuntary labor or service should be avoided, recognizes the freedom of movement of workers in their work, instructs to investigate and address possible human trafficking issues of its workers hired directly or through its contractors, as well as to verify that the bank account information matches the identification of workers and not to retain the identification or travel documents of its employees.



## 4.2.c Occupational Health and Safety

The HSE Manual implemented in the construction phase established specific OHS requirements that were included in each contractor's contract. This manual provided guidelines for establishing contractors' OHS programs considering controls for: i) work at heights; ii) electrical work; iii) work in confined spaces; iv) work in hot environments; v) work involving the handling of chemical substances; vi) work involving biological hazards; vii) underground work; viii) work involving the operation of heavy machinery; and ix) work involving the use of hoisting equipment.

The HSE manual also required that: i) contractors prepare a risk identification matrix and disseminate it to workers; ii) follow up on training and delivery of PPE to workers; iii) maintain adequate signage at construction sites; and iv) follow up on statistics related to the reporting of incidents and accidents at work. In addition, contractors had to establish and implement the requirements prior to the development of each activity (review of certifications, proof of training approval, medical fitness certificates, professional registration, etc.), the definition of the structure of the Work Permits, the development of the Safe Work Analysis (SWA), the review of the life sheets of the machinery and equipment to be used, the equipment inspection program, and the rescue plans and scheduling of on-site inspections, among other aspects.

For the Operation Stage, the Company seeks to protect the health and safety of direct workers, contractors, and subcontractors by identifying labor risks and impacts; implementing programs to prevent accidents, injuries, or illnesses associated with Project activities; developing training programs for workers; monitoring health and safety performance indicators and carrying out inspections; and conducting internal audits.

#### 4.2.d Supply Chain

All the elements required for the construction phase of the Project were purchased from authorized suppliers who had the necessary permits for their commercialization. In the case of the solar modules, Trina Solar also acted as supplier. For the selection of suppliers, Trina Solar implemented a Supplier Evaluation Procedure which evaluated whether they had the capacity to provide the required processes, products, or services and whether they could ensure compliance with the required safety, quality, and environmental standards. For this purpose, a Supplier Registration and Evaluation Form was used, which considered the degree of implementation of the suppliers' ESMS.

As part of the monitoring and reevaluation of suppliers, Trina Solar conducted inspections of the products purchased, on-site monitoring of the provision of the required services, and audits and visits to the supplier's facilities. For the operation phase, the Company plans to include labor clauses in all contracts with third parties and to periodically review the labor rights management of key suppliers (focusing on issues of inadequate occupational health and safety, child labor, and forced labor). The Company will also seek to provide suppliers with training tools and management systems.

Given that there are cases of forced labor in the supply chain of solar module production in some parts of the world, Matrix will strictly implement the guidelines of its Manual and ensure the



protection of labor throughout its supply chain, minimizing exposure to potential risks of using components linked to human rights violations.

# 4.3 Resource Efficiency and Pollution Prevention

## 4.3.a Resource Efficiency

Trina Solar, as the company responsible for the construction and operation of the BSLs, includes its commitment to prevent pollution and promote the efficient and sustainable use of resources in its Environmental Policy. The HSE Manual and the Project's Environmental Management Plan establish the procedures to be followed by contractors in the event of an environmental accident, including the implementation of mitigation, recovery, and remediation activities. Its Resource Management and Efficient Use of Energy and Water Manual, which pursues the rational use of energy, water, and paper in all its processes and by all its contractors, includes: i) measurement and monitoring indicators, ii) training and inspections, iii) levels of responsibility, and iv) necessary resources. Finally, the contractors' HSE Reports report monthly the amount of each resource used in the period (water, wood, construction materials, waste, among others).

## 4.3.a.i Greenhouse Gases

The Project, being a photovoltaic venture, will not generate greenhouse gas (GHG) emissions during its operation.

The GHG generated during the construction stage corresponded to the use of vehicles and machinery during the 6 months of construction of each BSL. Emissions are estimated to be immaterial because they are below 25,000 tons of  $CO_2$  equivalent per year.

As the project is a photovoltaic facility, it can be considered a GHG sink because it prevents the production of these gases that would occur if the energy were generated by conventional sources.

#### 4.3.a.ii Water Consumption

Construction did not entail water collection from either surface or groundwater natural sources. Water was purchased from two companies authorized to provide this service and there was evidence of control over the quantities purchased and consumed in the respective monthly Environmental Management Reports. The operation does not foresee the collection of water from natural water sources either, since it will be purchased from a third party (currently, water is still being purchased from the companies used during construction).

Water consumption for cleaning the solar panels is estimated at 154.8 m<sup>3</sup> per year per BSL, resulting in a total volume of 486 m<sup>3</sup> per year for the park complex. These volumes consider only one (1) cleaning cycle per year with a duration of one (1) month per BSL.



#### 4.3.b Pollution Prevention

According to the environmental licenses of the three BSLs and the TL, the ECRs and the monthly environmental management reports and their respective annexes, the project: i) has not and will not collect water from natural sources; ii) has not and will not produce discharges into the soil or bodies of water within its area of influence; and iii) will not treat or dispose of ordinary or hazardous waste. All these activities will continue to be managed through contractors that hold the respective environmental permits and licenses to perform them.

#### 4.3.b.i Waste

The Project's Environmental Management Plan includes guidelines for the management of recyclable and non-recyclable solid waste generated by the Project. The use of ecological points, the manual internal collection of waste to temporary collection sites through tarpaulin-covered vehicles to avoid dispersion, for subsequent delivery to the authorized supplier.

Ordinary waste is collected by a transportation services and environmental solutions company with a valid environmental license. The waste is taken to and disposed of in the *Bioagrícola del Llano S.A.* landfill, which has a valid environmental license. Recyclable waste is collected and delivered for management to *Recuperadora Recimetales HR* in Puerto Gaitán, which also holds a valid environmental license. Ordinary and recyclable waste is quantified and reported in the monthly environmental management reports and ECRs, which include certification of its handling and disposal by the respective contractors.

During the construction phase, domestic wastewater from the three BSLs was removed, handled, and disposed of by authorized suppliers. During construction and the current transition stage, the quantities of wastewater delivered and the respective treatment and disposal certifications are reported in the Monthly Environmental Management Reports and ECRs.

The same sanitation managers that provided services during the construction phase will remain in place for the operation of the Project.

#### 4.3.b.ii Hazardous Materials Management

Trina Solar's Environmental Management Plan includes guidelines for the management of hazardous waste generated at the Project. These guidelines consist of: i) following the use instructions specified by the manufacturer; ii) collecting and delivering the waste to the return mechanism specified by the manufacturer or to a company or foundation certified for the correct management of this waste; and iii) setting up a temporary waste collection point, including the corresponding signage and anti-spill kit. The hazardous waste generated is delivered to two companies authorized to store, treat, and dispose of it.

Hazardous waste is separated and stored in a separate site from other waste. Waste quantities are reported monthly by the contractors in their respective HSE reports, with evidence to support the



quantities delivered and the certifications of their treatment and final disposal by the companies contracted for this purpose. These processes will remain in effect in the operation stage.

Neither the Special and Hazardous Solid Waste Management Programs contained in the EISs of the three BSLs nor Trina Solar's Environmental Management Plan include the storage, handling, and final disposal of solar modules, transformers, and inverters when they are damaged or need to be replaced as part of their waste management.

Vegetation control in the solar farms will be done manually and without the use of chemicals or pesticides. However, the phytosanitary management of the plantations to be used in the compensation areas may require the use of pesticides. Consequently, the Company will adopt a protocol to regulate the handling of these products.

- 4.4 Community Health, Safety and Security
- 4.4.a Community Health and Safety

Neither the EISs developed for the three BSLs nor the risk or hazard matrix identify impacts by the Project on community health and safety, mainly because the property that houses the solar parks is located more than 10 kilometers from the nearest population center and that construction and operation activities are carried out directly at this site.

Considering that one of the main impacts on community safety during construction is the increase in traffic, the project includes a Road Safety Plan. Speed limits were defined both inside (10 km/h - 20 km/h) and outside the Project facilities (40 km/h on urban roads, 60 km/h on the tertiary road to Alto Neblinas and in rural areas). The Alcohol and Drug Policy was disseminated to drivers and random alcohol and drug tests were performed on Project motorists. The operations phase has a minimal risk of increased vehicular traffic, considering that operating activities are carried out by few staff members and panel or TL maintenance is done infrequently (once or twice a year).

The three BSLs are enclosed by a two-meter-high mesh with CCTV for continuous remote monitoring. This prevents any person or animal from other areas from entering the facilities and coming into contact with any element of the Project. In addition, the TL is located on agricultural land where there are no human settlements. Access to the transmission towers is very difficult, as they are surrounded by barbed wire fencing.

Eighty percent of the project's personnel during the construction phase were local workers. Given this, the risk of communicable disease transmission that could have been associated with the temporary or permanent immigration of the Project workforce was minimal. On the other hand, in order to avoid or reduce the possible transmission of COVID-19, Trina Solar implemented a Biosafety Protocol to protect both workers and their families. This protocol will continue to be implemented in the operational phase for the duration of the pandemic.



#### 4.4.b Security Personnel

For both the construction and operational phases, the Project has had security personnel provided by the company Jano Ltda. This company has a Human Talent Procedure, a Supervisory Procedure, and Internal Labor Regulations that require all workers to undergo psychological testing and an internal background check to ensure that workers have not been involved in past abuses. The guards assigned to the Project use only blank weapons (no projectiles that can cause harm). However, the ESDD could not provide evidence of training events for guards on the use of force and human rights.

# 4.5 Land Acquisition and Involuntary Resettlement

The area in which the Project and the TL are located is situated entirely on private land. Its construction did not require land acquisition processes, nor did it generate the physical or economic displacement of any populations.

For the installation of the BSLs, lease agreements were signed on the Los Esteros, Villanueva<sup>7</sup> property for a 30-year period, renewable by mutual agreement between the parties. The power transmission line runs from the Altillanura Electric Substation through three (3) privately-owned properties currently used for extensive cattle ranching. The intervention agreement for the underground and overhead installation of the TL is based on the constitution of use and right-of-way easements (2,120 m<sup>2</sup> in the Los Esteros Villanueva property; 8,957 m<sup>2</sup> in the La Merced property and 13,704 m<sup>2</sup> in the La Fortuna property).

# 4.6 Biodiversity Conservation and Natural Habitats

# 4.6.a General

The E&S Guidelines Manual, which is applicable to all the Company's projects, regardless of the technology used, the size, or the location of the projects, includes guidelines for biodiversity management based on the identification and assessment of impacts and risks on biotic systems, and the determination of natural, modified, and critical habitats in the areas of influence of the projects. In addition, Trina Solar's Environmental Management Plan establishes preventive and mitigation actions aimed at reducing the impact, mainly from the construction of the Project, on the fauna and flora of the area and its surroundings.

# 4.6.b Protection and Conservation of Biodiversity

The Project is located in the savanna ecosystem in the Eastern Plains, where the vegetation cover has been improved with barrier grasses (*Brachiara decumbes*) to optimize the extensive cattle ranching activity. This is the dominant species in the sector where the three BSLs are located and is found in combination with the native of hairy grass species (*Trachypogon vestitus*). The BSL site is

<sup>&</sup>lt;sup>7</sup> The Los Esteros, Villanueva property has a total area of 788.65 ha, of which 77.65 ha were required for BSL1; 83.53 ha for BSL2; and 73.84 ha for BSL3.



surrounded by gallery forests that extend along the course of the Muco River, which borders the intervention area in its northeastern and eastern sectors.

The Land Management Scheme ("LMS") of the municipality of Puerto Gaitan has declared the gallery forests located in the areas surrounding the Project as "Protected Forest Areas Intended for Conservation" and "Protected-Producing Areas Intended for Conservation with Limited Use of Natural Resources Primarily for Conservation". Therefore, the Project has not intervened them.

The Project's biodiversity baseline was based on secondary information (years 1998 to 2009) and on information generated through field studies. This process, however, was restricted to the BSL intervention area, covering the biotic Indirect Area of Influence ("IAI") based mainly on secondary information. The Company will therefore supplement this information with sampling for a representativeness analysis of the collected data.

The biological baseline reports the possible presence of the following threatened species according to the IUCN<sup>8</sup> listings and the National List of Threatened Species of Colombia (Resolution 1912 of 2017): the South American tapir (*Tapirus terrestris*), identified as a critical species (CR) in the National Listing; the White-bellied spider monkey (*Ateles belzebuth*), listed as endangered (EN) in the IUCN listing; the Giant otter (*Pteronura brasiliensis*) registered as EN in the IUCN and SinNacional listings; the Giant armadillo (*Priodontes maximus*), listed as EN in the National listing; and the O'Connell's spiny rat (*Proechimys oconnelli*), listed as endemic. Since there is no primary information available to corroborate the presence of these species, the Company will develop an inventory of flora and fauna in the protective forests adjacent to the Project to verify if these species are indeed present in the Project's IAI.

# 4.6.c Management of Ecosystem Services

The E&S Guidelines Manual includes, as part of the objectives and principles to be maintained, the benefits of ecosystem services. This manual establishes the need to consider the potential impacts of the Project on priority ecosystem services that may affect the health and safety of the communities that benefit from them. In this regard, the project is implementing activities for the recovery and rehabilitation of forest areas associated with the Muco River and surrounding the BSL, which have been declared protective or protected by the municipal LMS. These actions are part of the package included in the Compensation for Biodiversity Loss plan established in the Project's environmental licensing process.

# 4.7 Indigenous Peoples

The project will not generate impacts or risks on lands and natural resources subject to traditional ownership or customary use by ethnic communities. The three BSLs have certificates<sup>9</sup> of non-presence of indigenous communities for the referenced area of the Project. However, a certificate

<sup>&</sup>lt;sup>8</sup> International Union for Conservation of Nature

<sup>&</sup>lt;sup>9</sup> The three certificates, 0379 dated April 25, 2018; 0270 dated April 5, 2018; and 0268 dated April 5, 2018, issued by the Directorate of Prior Consultation of the Ministry of the Interior.



of non-existence of indigenous peoples issued by the Ministry of the Interior for the area of influence of the 2.7 km of the TL is still pending.

The nearest indigenous reservation is the Wakoyo people, which, according to cartographic records and consultations with the geographic information system, is located more than 16 km away in a straight line with respect to the Project intervention area. Its location, outside of the Project's DAI and IAI, was ratified by several stakeholders (administrator of the Los Esteros, Villanueva property; president of the Community Action Board of the Alto Manacacías community, and an official of the Mayor's Office of Puerto Gaitán), who also indicated that the members of the Wakoyo reservation do not use the areas of the Los Esteros, Villanueva property, neither for transit nor for cultural practices.

# 4.8 Cultural Heritage

In 2018 and 2019, the Project applied the guidelines established by the Colombian Institute of Anthropology and History (ICANH, for its acronym in Spanish) to prepare an Archaeological Management Plan. It linked a conceptual framework, the results of field work related to archaeological prospection activities in the BSL intervention area, the formulation of activities, and a Chance Finds Protocol. This preliminary work made it possible to prevent impacts and risks associated with possible damage to the archaeological and historical heritage.

Based on the information obtained from the exhaustive surface inspection and boreholes for the intervention area (168.4 ha for the photovoltaic generation infrastructure site, 1 km corresponding to the overhead interconnection line and 1,755 m of the subway line), the potential for archaeological artifacts was found to be low. However, in the Archaeological Management Plan, follow-up and ongoing monitoring activities were considered for the siting process of each infrastructure involving: i) stripping, cutting, excavation or soil removal; ii) rescue activities during monitoring in the event of a chance find; and iii) outreach and training activities for personnel and inhabitants of the sector.

The implementation of follow-up and monitoring activities did not identify cultural elements or archaeological remains that would require activating the communication procedure with ICANH for reporting chance finds. On the other hand, with respect to outreach and training activities for personnel and inhabitants of the sector, a photographic record was identified of a talk related to the protection of cultural heritage directed to personnel linked to the Project.

# 5. Local Access of Project Documentation

The documentation relating to the Project can be accessed at the following link: <u>https://matrixrenewables.com/es/proyectos-actuales/colombia/</u>