

MENDUBIM PV SOLAR PV POWER PROJECT – 13473-01
Environmental and Social Action Plan (ESAP) – March 2022

| No. | Aspect | Action | Deliverable | Delivery date |
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| PS 1: Assessment and Management of Environmental and Social Risks and Impacts | | | | |
| 1.1 | Environmental and Social Management System | 1. Implement a project-specific Environmental and Social Management System (ESMS) following IFC Performance Standard 1 requirements. | 1. Project-specific ESMS. | 1. Before works commencement. |
| | | 2. Include all the Environmental and Social Management Programs as part of the ESMS. | 2. Project-specific ESMS with all Programs inserted. | 2. Before works commencement. |
| | | 3. Revise the Training, Hiring and Demobilization of Local Labor Program to: i) ensure that dismissed personnel will be registered in SINE; ii) offer guidance and inscription on the unemployed insurance funds provided by the Brazilian Government; iii) provide recommendation letters to all dismissed employees; iv) provide training to dismissed employees on financial and budget management; and v) consider offering jobs to best performers on the PV Solar Plant or other viable opportunities. | 3. Revised Training, Hiring and Demobilization of Local Labor Program. | 3. Before works commencement. |
| | | 4. Revise the Environmental Control Plan to include a Noise Monitoring Procedure. | 4. Revised Environmental Control Plan. | 4. Before works commencement. |
| | | 5. Revise the Wildlife Monitoring Program to: i) include a map and a table with the locations and grid coordinates of the sampling places; ii) revise methods for mammal sampling including additional camera traps, monitor droppings and footprints and interviews with local residents; iii) increase the sampling effort in all groups (amphibian, reptiles, birds and mammals); iv) include a quarterly monitoring frequency during the works and biannual campaign frequency during the first two years of operation; and v) include bird collisions with panels monitoring during operations. | 5. Revised Wildlife Monitoring Program. | 5. Before works commencement. |
| | | 6. Revise the Environmental Education and Social Communication Program to include guidelines and provisions against Gender-Based Violence, focused on prevention against i) sexual exploitation of children and adolescents; ii) gender violence at home, and iii) sexually transmitted diseases (STDs) | 6. Revised Environmental Education and Social Communication Program. | 6. Before works commencement. |
| | | 7. Prepare a Traffic Management Plan that includes: i) measures to control traffic accident risks; ii) measures to repair damaged roads, when needed, and iii) assessment of routes to the Project site to minimize disturbance to neighboring communities. | 7. Traffic Management Plan. | 7. Before works commencement |
| | | 8. Provide quarterly updates of the Project's environmental and social impact matrix during construction, semiannual updates during the first two years of operation and annual updates from then onwards. | 8. Project's Environmental and Social Impact Matrix. | 8. Periodically, as part of the Environmental and Social Compliance Report (ESCR). |
| | | 9. Provide quarterly reporting on the implementation of the ESMS and all associated environmental and social management plans during construction, semiannual updates during the first two years of operation and annual updates from then onwards. | 9. ESMS Progress Report. | 9. Periodically, as part of the ESCR. |
| 1.2 | Organizational Capacity and Competency | 1. Ensure that the EPC Contractor has a technical team sufficient to perform the environmental and social management programs under their responsibility. | 1. List of environmental and social professionals responsible for the implementation and/or oversight of the environmental management programs. | 1. Before works commencement |

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| 1.3 | Stakeholder Engagement | 1. Review the Stakeholder Engagement Plan to include stakeholder map | 1. Revised Stakeholder Engagement Plan. | 1. Before works commencement. |
| | | 2. Present periodic results of the implementation of the Stakeholder Engagement Plan, with updates of the stakeholder map. | 2. Stakeholder Engagement Plan Progress Reports | 2. Periodically, as part of the ESCR. |
| | | 3. Implement a formal external grievance mechanism to capture and process claims and suggestions. | 3. Reports on the grievance mechanism. | 3. As part of the ESCR. |
| 1.4 | Emergency Preparedness and Response | 1. Prepare a project-specific Emergency Preparedness and Response Plan. | 1. Emergency Preparedness and Response Plan. | 1. Before works commencement. |
| | | 2. Perform emergency's training and simulation. | 2. Report on emergency's, training and simulations. | 2. Periodically, as part of the ESCR. |
| PS 2: Labor and Working Conditions | | | | |
| 2.1 | Internal Grievance Channel | 1. Prepare a project-specific grievance channel to receive, treat and respond to internal grievances from employees, contractors, and third-parties. | 1. Project-specific Internal Grievance Channel. 2. | 1. Three months after works commencement. |
| | | 2. Present the results of the internal grievance channel, including number of complaints, complaint classification, treatment and responses given. | 3. Internal Grievance Channel Report. | 2. Periodically, as part of the ESCR. |
| 2.2 | Human Resources Policy | 1. Present a project-specific Human Resources Policy compliant with the requirements of IFC Performance Standard 2. | 1. Project-specific Human Resources Policy. | 1. Three months after works commencement. |
| 2.3 | Health and Safety | 1. Present a project-specific Health and Safety Management Plan. | 1. Project-specific Health and Safety Management Plan. | 1. Before works commencement. |
| | | 2. Assess the Project's Periodic health and safety performance using key performance indicators (KPIs) and including statistics on accidents, incidents, emergencies, training of personnel, emergency simulations and other relevant information. | 2. Health and Safety Management Report. | 2. Periodically, as Part of the ESCR. |
| 2.4 | Supply Chain/Forced Labor | 1. Present a comparative risk assessment about forced labor exposure in the solar panel supply chain including all solar panel providers under procurement consideration and provide the rationale for the selection of the preferred provider. | 1. Comparative risk assessment of solar panel providers and rationale for the selection and procurement of a provider. | 1. Before acquisition of solar panels. |
| PS 3: Resource Efficiency and Pollution Prevention | | | | |
| 3.1 | Resource Efficiency | 1. Revise the Water Resources Management Plan including a map of the water sources to be used to supply the Project. | 1. Revised Water Resources Management Plan. | 1. Three months after works commencement. |
| | | 2. Implement the Water Resources Management Plan. | 2. Water Resources Management Plan Implementation Report. | 2. Periodically, as part of the ESCR. |
| 3.2 | Waste and Effluent Management | 1. Present periodic reports on the implementation of the Project's Solid Waste and Effluent Management Program. | 1. Solid Waste and Effluent Management Reports. | 1. Periodically as part of the ESCR. |
| | | 2. Prepare an assessment report on the performance of the effluent treatment facility. | 2. Effluent treatment facility assessment. | 2. Three months after works commencement. |
| 3.3 | Pesticide Use and Management | 1. Prepare a procedure for safe handling of pesticides, including training of workers and appropriate waste disposal methods. | 1. Pesticide safe handling procedure. | 1. Three months after works commencement. |

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| | | 2. If pesticides are used, implement the procedure for safe handling of pesticides, ensuring that usage is compliant with applicable E&S standards. Report results of pesticide use and management, if needed. | 2. Pesticide Use and Management Report. | 2. Periodically, as part of the ESCR. |
| 3.4 | Climate change | 1. Present a protocol to monitor Scope 1 and 2 project GHG emissions during construction and operation. | 1. GHG Monitoring Protocol | 1. Three months after work commencement. |
| | | 2. Monitor GHG emissions. | 2. GHG Monitoring Reports. | 2. Periodically, as part of the ESCR. |
| | | 3. Prepare a Wood Management Plan that includes an alternative analysis for the destination of wood resulting from PV's site vegetation clearing, the selection of an environmentally acceptable disposal alternative as well as wood destination records. | 3. Wood Management Plan. | 3. Three months after deforestation. |
| | | 4. Ensure adequate destination of wood as per the alternatives analysis. | 4. Reports on wood destination. | 4. Periodically, as part of the ESCR. |
| PS 4: Community Health, Safety, and Security | | | | |
| 4.1 | Community Health and Safety | 1. Carry out quarterly noise monitoring campaigns at Project's sensitive receptors during construction. | 1. Noise Monitoring Reports. | 1. Periodically as part of the ESCR. |
| | | 2. Monitor air quality (dust abatement and vehicle gas emission). | 1. Air quality reports | 2. Periodically, as part of the ESCR |
| | | 3. Implement the Traffic Management Plan. | 2. Traffic Management Report. | 3. Periodically, as part of the ESCR |
| 4.2 | Community Exposure to Diseases | 1. Prepare a COVID-19 Prevention Protocol. | 1. COVID-19 Prevention Protocol. | 1. Before works commencement. |
| | | 2. Implement the COVID-19 Prevention Protocol. | 2. Report on the implementation of the COVID-19 Prevention Protocol. | 2. Periodically, as part of the ESCR. |
| | | 3. Prepare social communication materials to prevent sexual exploitation of children and women, inform the workforce about sexually transmitted diseases and prevent gender-based violence. | 3. Social communication materials. | 3. Before works commencement. |
| | | 4. Implement regular awareness campaigns involving workers and neighboring communities about sexual exploitation of children and women, sexually transmitted diseases and their consequences and the prevention of gender-based violence. | 4. Awareness Campaign Reports. | 4. Periodically, as part of the ESCR. |
| 4.3 | Security Personnel | 1. Prepare a Security Management Plan. | 5. Security Management Plan. | 5. Three months after works commencement. |
| PS 5: Land Acquisition and Involuntary Resettlement | | | | |
| 5.1 | Physical Displacement | 1. Prepare a Resettlement and Livelihood Restoration Plan. | 1. Resettlement and Livelihood Restoration Plan. | 1. Before works commencement. |
| | | 2. Create a specific grievance channel to receive, capture and process complaints, suggestions, and comments from the affected families. | 2. Resettlement Grievance Channel. | 2. Before works commencement. |
| | | 3. Engage with the affected families to discuss and obtain their agreement with the Resettlement Action and the Livelihood Restoration plans. | 3. Families' agreement with the Resettlement Action and the Livelihood Restoration Plans. | 3. Before works commencement. |
| | | 4. Carry out the Resettlement Action Plan. | 4. Resettlement Action Plan Reports. | 4. Before works commencement. |

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| | | 5. Carry out the Livelihood Restoration Plan. | 5. Livelihood Restoration Plan Progress Reports. | 5. Periodically, as part of the ESCR. |
| | | 6. Prepare a final report on the Livelihood Restoration Plan. | 6. Livelihood Restoration Final Report. | 6. Forty months after works commencement. |
| | | 7. Carry out an audit to assess the effectiveness of both plans and propose additional measures, if needed. | 7. Resettlement and Livelihood Restoration audit report. | 7. Forty-eight months after works commencement. |
| 5.2 | Economic Displacement | 1. Calculate appropriate indemnification to compensate affected landowners regarding the imposition of the TL easement strip. | 1. Indemnification rationale and calculations. | 1. Before works commencement. |
| | | 2. Obtain the approval of affected landowners of compensation values. | 2. Approval from affected landowners. | 2. Before works commencement. |
| | | 3. Pay the agreed compensation values. | 3. Payment receipts from all affected landowners. | 3. Four months after work commencement. |
| PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources | | | | |
| 6.1 | Protection and Conservation of Biodiversity | 1. Prepare a Biodiversity Action Plan (BAP) encompassing all biodiversity management programs previously prepared, adding the following additional programs: i) Flora Rescue Program to rescue seeds and seedlings of native species for use in reforestation, and ii) Forestry Compensation Plan to promote reforestation as a compensation for the Project's deforestation. | 1. Biodiversity Action Plan | 1. Before commencement of works. |
| | | 2. As part of the Forestry Compensation Program: i) plant 10 specimens of <i>Amburana cearensis</i> , <i>Handroanthus impetiginosus</i> and <i>Spondias tuberosa</i> per specimen removed; ii) prepare and implement a project for vegetation enrichment in the Legal Reserve and Permanent Preservation Areas to promote full habitat recovery in these areas; and iii) establish a cooperation agreement with the Assu National Forest Reserve (or other protected areas) to promote vegetation recovery in degraded areas and other measures destined to enhance and consolidate the capacity of conservation units managers to achieve their unit's conservation goals . | 2. Report on the implementation of the Forestry Compensation Program. | 2. Six months after vegetation suppression and thereafter periodically, as part of the ESCR. |
| | | 3. Implement the Wildlife Monitoring Program. | 3. Wildlife Monitoring Reports. | 3. Periodically, as part of the ESCR |
| | | 4. Implement the Fauna Management Program. | 4. Fauna Management Report. | 4. Periodically, as part of the ESCR. |
| | | 5. Implement the Flora Rescue Program. | 5. Flora Rescue Program Reports. | 5. Six months after vegetation suppression. |
| | | 6. Implement the Deforestation Control Program | 6. Deforestation Control Program Reports | 6. Three months after vegetation suppression. |
| | | 7. Implement the Degraded Area Recovery Monitoring Program | 7. Degraded Area Recovery Monitoring Program | 7. Periodically, as part of the ESCR. |
| PS 8: Cultural Heritage | | | | |
| 8.1 | Chance Finds Procedure | 1. Prepare an Archaeological Chance Finds Procedure. | 1. Chance Finds Procedure. | 1. Before works commencement. |
| | | 2. Implement the Chance Finds procedure. | 2. Chance finds progress report. | 2. Periodically, as part of the ESCR. |