# Social and Environmental Screening Template (2021 SESP Template, Version 1)

*The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document at the design stage. Note: this template will be converted into an online tool. The online version will guide users through the process and will embed relevant guidance.*

**Project Information**

|  |  |
| --- | --- |
| ***Project Information***  |  |
| 1. Project Title
 | Enabling Zero Carbon Energy in Rural Towns and Villages in China (EZCERTV) Project |
| 1. Project Number (i.e. Atlas project ID, PIMS+)
 | PIMS 6431 |
| 1. Location (Global/Region/Country)
 | China, People’s Republic |
| 1. Project stage (Design or Implementation)
 | Design |
| 1. Date
 | 10 June 2022 |

**Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability**

|  |
| --- |
| **QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?** |
| ***Briefly describe in the space below how the project mainstreams the human rights-based approach*** |
| *As in other UNDP-GEF projects, the EZCERTV Project is designed considering a human-rights based approach to programming. This project will particularly and for most part focus on the local communities in the rural areas of China**. It is envisaged that like in the initial discussions with potential provincial governments partners, during the project design, consultations have been carried out with the local communities in selected rural towns and villages where the demonstrations that have been preliminarily designed to showcase the applications of RE and EE technologies to bring about zero carbon rural development will be implemented. The project design involved the conduct of additional, in-depth focus consultations. Such consultations will be a continuous process even during project implementation to ensure that the project activities, particularly the demonstrations (e.g., zero carbon village demos), constantly consider the will and requirements of indigenous peoples and all other residents of the communities. The project development team (PDT) met and discussed with communities any potential RE-based energy generation and EE technology applications that will be developed and implemented in their villages and assessed their interest in such initiatives and the potential productive applications in the use of RE resources. The preliminary design of each demo that will showcase the devised low/zero carbon energy technology applications is based on site inspections, as well as data gathering, and analyses conducted by the PDT during the design stage. This due diligence allowed the PDT to determine the technical specs, the investment costs and the environmental and financial benefits of the demos and pre-assess their feasibility. This work has been integrated with site specific environmental and social (“E/S”) assessments of each demos on RE-based energy generation and EE system retrofit for implementation under the project. Based on the agreement expressed by the communities in full community hearings/meetings that were conducted during the project design period, additional in-depth social and environmental assessments will be carried out during project implementation. Such consultations will include households and where possible, separate men’s and women’s groups consultations within each partner town/village. The project design also underscored human rights by designing the project activities (e.g., village demos) in such a way to also promote livelihood improvement/ income generation via use of the new RE-based energy generation facilities that will be established under the demos as part of the initiative towards achieving zero carbon development. As part of the demos, activities for stimulating productive use of RE in specific towns/villages were also included in the project. These activities were also designed to specifically include women and children. To support this, the demos were*  designed *so that their implementation will also provide villagers (where the demos will be implemented) access to a grievance redress mechanism. Such mechanism also emphasizes and ensures that access to opportunities for involvement in productive use initiatives and work opportunities are equitable.* |
| ***Briefly describe in the space below how the project is likely to improve gender equality and women’s empowerment*** |
| *The design of the proposed project has been guided by principles of gender equality and women’s empowerment. The project has been designed with the intention to actively enable and involve qualified and capable men and women working in both management and technical departments of the CHINA Government agencies/institutions as well as those in the rural communities hosting the project demos. These are the entities who can play important roles in the design, development and implementation of the project. Since the focus is on RE and EE technology applications, the project activities have been designed to facilitate benefits from RE and EE to be enjoyed by both women and men. The design of the project activities considered the opportunity for the country to further enhance the role of women in deployment of low carbon technologies and climate change mitigation options. The project component addressing policy barriers has been designed to also come up with gender-sensitive policies in the energy sector and the energy end-use sectors of the country. This is in recognition of the potential contributions of women in the management and implementation of climate change mitigation measures. The contributions, impacts and benefits of productive applications from community based EE and RE technology applications, including for women, men, youth, and children were considered in the design and preparation of the project. The capacity building and training activities of the project are also designed to make possible high rates of participation from women. The activities on productive applications of RE have been designed to target at least half of the benefits to flow to women-led and women-operated businesses. Lastly, as in the project design, qualified and capable women consultants/experts will be targeted to work in the implementation of the designed project.* |
| ***Briefly describe in the space below how the project mainstreams sustainability and resilience*** |
| *Sustainable zero carbon rural development in China is the main context within which the proposed project is being developed. The zero-carbon development is mainly in line with the energy supply and utilization in the Chinese rural towns and villages, and the project is intended to facilitate the transformation of the rural sector to this growth pattern. This is based on the improved development and utilization of renewable energy resources in rural areas, adopting energy storage technology and integrated energy management and energy efficiency technologies/techniques to meet the increasing energy demand in rural areas, accelerate the rural energy transformation, and lead to the development of zero carbon towns and villages in rural China. Moreover, such transformation is expected to contribute to the achievement of China’s Nationally Determined Contributions (NDC). Hence, a consequence of the achievement of the NDC targets will be, among others, the enabling of the enhanced sustainable development of the rural areas of the country. It is envisaged that this will not only bring about local benefits, mainly through contributions to the improvement of the living conditions of the rural people and in turn to the national economy but will also contribute to the protection of the natural environment. In terms of indigenous RE resources, this project focuses on the enhanced sustainable utilization of solar energy, as well as the abundant biomass waste resources that can be used as energy resource in the rural agricultural areas of the country as cost-effective substitutes to coal and coal-generated electricity. The global environmental benefits from the project will mainly come from GHG emission reductions from fossil fuel displacement by RE resources in electricity generation and for thermal energy uses, and in the improvement of the specific energy consumption of the energy end use sectors in the rural areas through improved energy utilization efficiency. These will be facilitated by the barrier removal approach that this project has been designed to employ. The synergistic aspect of the integrated way the key stakeholders work together, and the higher chances of scaling-up/replication of the low carbon development techniques/practices will be introduced, demonstrated, and promoted under this project contributing to the achievement of environmental sustainability. The RE-based energy generation demos under this project have been designed to showcase the adoption, and application of best practices in carrying out limited, site specific environmental/social assessments as a part of the demo project feasibility studies, prior to any construction or installation work. Where required by law and UNDP’s SES (whichever standard is higher), site-specific environmental and social assessments will also be carried out prior to implementation of the EE retrofit demos.* |
| ***Briefly describe in the space below how the project strengthens accountability to stakeholders*** |
| *The proposed project has been designed based on several site studies, allowing for full participation of the local community in decision-making. Provision of timely, accessible and functional information regarding supported activities, including on potential environmental and social risks and impacts and management measures (SESP, ESMF) will be disclosed on UNDP China websites to ensure transparency of programming interventions. The Project Management Office (PMO) shall establish a project-level Grievance Redress Mechanism (GRM) during project inception. The full details of the GRM will be agreed upon during the project’s inception phase. The Mechanism (GRM) will ensure that individuals and communities affected by the project’s activities have access to appropriate grievance resolution procedures for hearing and jointly addressing complaints and disputes related to the social and/or environmental impacts of the proposed interventions. Interested stakeholders may raise a grievance at any time to the PMO, the Executing Agency, the Implementing Agency (UNDP), or the GEF. A monitoring and evaluation procedure is also designed to ensure effective monitoring—and where appropriate, participatory monitoring with stakeholders—and reporting on implementation of social and environmental risk management measures.* |

**Part B. Identifying and Managing Social and Environmental Risks**

|  |  |  |
| --- | --- | --- |
| **QUESTION 2: What are the Potential Social and Environmental Risks?** *Note: Complete SESP Attachment 1 before responding to Question 2.* | **QUESTION 3: What is the level of significance of the potential social and environmental risks?***Note: Respond to Questions 4 and 5below before proceeding to Question 5* | **QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High**  |
| ***Risk Description******(broken down by event, cause, impact)*** | ***Impact and Likelihood (1-5)*** | ***Significance*** ***(Low, Moderate Substantial, High)*** | ***Comments (optional)*** | ***Description of assessment and management measures for risks rated as Moderate, Substantial or High***  |
| 1. Without adequate consultation, awareness raising and engagement with local communities, the Project could lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social, or cultural) of the affected population in the rural areas where the on-the-ground project activities will be carried out. Inadequate consultation and engagement on policy formulation (i.e. under Component 1 of the project) could also lead to adverse impacts on the enjoyment of human rights.

 *Human Rights: P.3, P.4* *Accountability: P.13, P.14* *Standard 6, 6.4* | I=4L=2 | Moderate | The human rights of people in the project areas are protected under the “Law on the Promotion of Rural Revitalization” (Article 4, Section 2). The requirements for continued consultation have been factored into subsequent SES assessment tools that shall be applied to the project during implementation (and as specified in the ESMF).  | The designed demos are based on ongoing and planned rural revitalization projects of the national and provincial governments. The design of the project is consistent with the strategic requirements of the country’s rural revitalization program, and the implementation of the project activities will be carried out to ensure compliance with the requirements of the country’s Law on the Promotion of Rural Revitalization. The project has been designed with extensive consultation with local people as well as the involvement of the relevant national and provincial government agency responsible for the formulation of relevant legislation on the installation of decentralized RE-based power generation system or community mini-grids.A comprehensive Stakeholder Engagement Plan has been prepared during the PPG stage, with site-specific Plans being required or each selected demo site. In addition, as prescribed in the ESMF, for upstream/policy formulation and support activities (under Component 1), the project will utilize a SESA approach that shall include robust stakeholder engagement and consultation.  |
| 1. Potential occurrence of discrimination against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits.

 *Gender Equality and Women’s Empowerment: P.9, P.10* | I=4L=2 | Moderate | * The Chinese government attaches great importance to gender equality. During the PPG stage, about 40% women staff were involved in the project design.

The project could potentially offer a wide range of opportunities, for individuals and groups for support in the RE & EE technology applications demos and in the demo replications, participate and get trained in capacity development program activities, to be hired as a consultant or contractor for the project implementation.  | Special measures to ensure that any potential discrimination against women in the implementation of the project is countered have been identified and included in the project design, and as part of the gender assessment conducted for the gender action plan.. The results of such measures will be observed during project implementation, and if any corrective action is necessary, this will be addressed. Beyond that, the PDT will make special efforts to explore and facilitate the inclusion of interventions to enhance the role of women. Special activities have been designed to involve women, e.g., in the productive use of RE activities, to have strong representation of women in training courses and seminar-workshops, and to ensure a significant proportion of project consultants are women.The special measures are incorporated in the Gender Analysis and Action Plan that has been prepared for the EZCERTV Project. As per UNDP SES requirements, gender issues will be assessed during the conduct of all SES studies during project inception/implementation, including: SESA, site specific ESIA’s, Labour Assessment and management Plan and continued SESP screening.  |
| 1. Given the fact that the project will operate in rural areas of China, potential adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services may arise in some of the demonstration sites. Upstream policy interventions under Component 1 may also lead to unintended negative changes to ecosystems and the use of ecosystem services/natural resources.

 *Standard 1: 1.1, 1.2, 1.3, 1.7, 1.11, 1.14* | I=4L=2 | Moderate | Demos in Shanxi and Yunnan are close to the riverside, and these could have potential impacts to the riverine habitats.The potential environmental impacts during the installation and operation of the demo RE-based power generation, distribution, and storage RE/EE/EC systems depend on the state or condition of the selected sites. The potential environmental impacts during operation are mostly continuous, while those associated with construction activities are expected to be temporary and mostly reversible. | Prior to the construction/implementation of activities relating to the demo sites (i.e. Outputs 2.1 and 2.2), site specific environmental and social impact assessments will be required. Once a demo site has been chosen and, and the plans for it designed in full, the demo site and its associated activities will be screened against the UNDP SES. This will include assessment of impacts to habitatsIn line with UNDP SES 1 requirements. In addition, Chinese government regulations prohibit the establishment of manufacturing and large scale infrastructure in or around ecosystem function zones. The selection criteria of demo sites will consider to avoid the impact to habitats. The detailed feasibility studies (inclusive of SES screening) to be carried out during full project implementation will clearly articulate mitigation measures for any alterations of the general topographical and environmental nature of the demo sites. Following world class engineering and construction design, specific mitigation measures that are regarded as best practice with respect to environmental management of the systems that will be installed, ensuring compliance with the requirements of the applicable environmental regulations/legislation. Any other potential impacts and risks including mitigation measures will be elaborated in the specific environmental and social assessments o be conducted during project implementation for each demo in selected towns and villages and to be completed prior to any physical work beginning on the installation of the required hardware. |
| 1. The associated construction, operation, or decommissioning of the demo installations may have potential health and safety risks to local communities due to the transport, storage, and use and/or disposal of any hazardous or dangerous materials (e.g. explosives, fuel, and other chemicals) that may be used during construction and operation.

*Standard 3: 3.1, 3.2, 3.3, 3.5, 3.7, 3.8* | I=3L=3 | Moderate | Construction aspects and operation of demo RE-based power generation, mini-grid systems, energy storage systems and the EE retrofits can pose safety risk. For example Li-ion batteries for the demo solar PV power systems, energy storage systems can produce potentially dangerous waste products. | The preliminary design of all confirmed demos will involve initial site-specific environmental and social assessments and recommend measures to mitigate any identified health and safety risks. In the detailed design, appropriate training will be provided to the selected companies responsible for the safe and proper installation, operation, and maintenance of the demos, as well as targeted beneficiaries of the demos. This is to ensure that the installed systems will be properly and safely operated and maintained, in compliance with Government of China regulations and UNDP SES requirements in such a way that the release or handling of waste products are properly controlled and managed. This will minimize or avoid any community health risks and safety issues for the communities regarding construction work involved in the installation of the demos, and the minimization and management of waste generated from these demos (e.g., spent lead-acid batteries, spent Li-ion batteries). As specified in the ESMF, during the conduct of the site-specific ESIA’s that are to be undertaken for the demo sites, issues pertaining to community health and safety 9most notably SES 3.1, 3.2, 3.3, 3.5, 3.7, 3.8) will be assessed within the scope of such studies. Any residual impacts will be managed/mitigated through appropriate site-specific ESMPs (or relevant targeted malmanagement plans).  |
| 1. The project would potentially result in the generation of waste (both hazardous and non-hazardous). The construction and operation of the RE-based energy generation (power and non-power applications) demos will generate wastes. PV panels and batteries will require disposal at end of life. EE retrofit projects (e.g., Use of LED lamps to replace CFLs/FLs) will potentially generate hazardous waste (Hg).

*Standard 8: 8.1, 8.2*  | I=3L=4 | Moderate | The project design is in line, and its implementation will comply, with the pertinent requirements of the “Law on the Promotion of Rural Revitalization”, Article 40., and UNDP SES 8 requirements.  | All the enterprises involved in the project will operate in accordance with the relevant regulations and standards of the government as they relate to waste managemmnt (both hazardous and non-hazardous).. During the project implementation , relevant training will also be conducted for enterprises.The detailed design of the confirmed demos will consider the potential waste generation and ensure proper disposal of wastes from the construction, operation, and maintenance stages. Site-specific ESIAs 9as required and outlined in the ESMF) will serve as the entry point for the development of site-specific disposal plans (which may be a sub-element of a larger site-specific ESMP). Those plans, for example, will include a disposal plan for the PV panels and batteries, which contain hazardous wastes, once their useful life is expired. While there are environmental laws that apply to this, such will be checked further during the detailed design of the demos and replications and appropriate decisions and/or measures will be carried out. For example, compliance with the regulations concerning waste management can be among the criteria in the approval of the applications for financial support for the demo replications.  |
| 1. Some project activities / demo sites might be located in lands of ethnic minorities and might require FPIC.

*Standard 6: 6.1, 6.3, 6.4, 6.6, 6.9*  | I=4L=2 | Moderate |  | At present, the designed demonstration activities projects will be carried out on land that has been approved by the government and will not occupy the land of ethnic minorities. The detailed design of the confirmed demos will consider the potential impacts on land use in particular for ethnic minority lands. During the design of project demo sites, scoped ESIAs will be conducted. If, during the conduct of such scoped EISA’s, impacts to ethnic minority communities are foreseen, the project will undertake FPIC and develop the appropriate S6 tool (i.e. IPP). The project publicity documents need to be written in inclusive language so that minority groups can receive adequate knowledge sharing and training so that they fully understand the purpose and design logic of the project. If changes to minority land use are involved, the feasibility and cost-benefit should be carefully evaluated, and audience awareness and acceptance should be well researched. |
| 1. Some project activities/ demo sites might lead to physical displacement or forced evictions. There is also the potential that economic displacement of local communities could occur as a result of the project’s demo interventions.

*Standard 5: 5.1, 5.2, 5.3*  | I=4L=2 | Moderate | The project design is in line and its implementation will comply, with the pertinent requirements of the “Law on the Promotion of Rural Revitalization”, (Article 14). | The project sites and the technologies to be demonstrated are yet to be fully confirmed, and preliminary design of each demo that will showcase agreed/confirmed low/zero carbon energy technology application has been done during the project development stage. The design of each demo is based on the findings of the project design team in each designated demo site. The initial demo design (please refer to Supplementary Annex on Description of Demonstrations) is based on the information from the site inspections and data gathering, processing and analyses that were done to define the demo scheme including the quantities and technical specifications of the system and equipment that have to installed. This also enable the project development team to determine the investment cost and come up with the pre-feasibility analyses. Information regarding the land requirements, social, economic, and cultural aspects of each village were collected, including topographical, geo-physical and environmental conditions.While general feasibility/contextual information has been ascertained during project preparation, the final siting and selection of exact technologies to be used has not been completed during project preparation. As such, this will need to be assessed (including SES 5 related impacts) during the conduct of site specific ESIA’s that are to be undertaken during project implementation for each of the demo sites. Moreover, after consulting again with local authorities in the demo villages, they have confirmed that there is no displacement and resettlement of residential houses. The demos such as those on connecting houses to biogas pipeline, installation of solar home systems, and renovation of house walls and windows will not require people in these houses to temporarily relocate. For demos involving the installation of biomass-based power generation units, these will be in done in the premises and properties of the partner companies (i.e. will not affect local landowners). Where confirmed demos will be designed considering the potential land demand and take the local development planning as the reference. So far, the demos have been evaluated preliminarily but did not refer to the issue of forced evictions. This will be further verified, and this issue will be used as an exclusionary criterion for the selection of the demo replications that will be supported by the local governments. |
| 1. Some project activities / demo activities may lead to changes in traditional way of life such as the customary use of energy in households.

*Standard 4: 4.3*  | I=3 L=3 | Moderate | The substitution of different household energy resources may affect the transmission of certain cultures, for example, the food prepared by traditional wood stoves may lose its original taste due to the replacement of the cooking fuel; another example is the clay bed (“KANG”) with wood stoves, which is widely used in the north, may be replaced in the process of energy substitution. | The promotion of the planned demo activities for improving energy use in households through the application of low carbon (RE/EE) technologies will take into consideration the concerns (if any) of rural households who may like to hold on to traditional or customary practices. With the combination of local traditional culture and farmers' living habits, the project will be promoted to foster a low and zero carbon lifestyle combined with the rural simple ecological culture.The project implementation will comply with the “Law on the promotion of rural vitalization”, Articles 4, 7 and 32.Local communities who may encounter SES 4-related impacts will also be engaged in upstream/policy level decisisons. With their input being included through meaningful engagement during the conduct of the SESA (as prescribed in the ESMF). Cultural inheritance is also the concept that the project adheres to. In the promotion of the demos, the potential users will be adequately appraised of the benefits of, and the potential changes in current way of life and practices due, to the applied new technologies. For some application methods involving traditional culture, the comprehensive impact of all aspects, such as environmental and health effects, needs to be comprehensively assessed, and managed, per the ESMF. |
| 1. There is a potential for workplace accidents and injuries to occur/impact project workers during construction and operation of demo facilities.

*Standard 7: 7.1, 7.6*  | I=4L=2 | Moderate | Project workers may face risks such as accidents and injuries during the construction process; Workers in biogas plants may face the risk of accidents such as gas leakage; workers in hog farms and biomass fuel production plants may face health risks caused by the working environment | The risks of workers' work during constructions that are involved in the designed demos will be further evaluated during the demo engineering design and measures will be identified and taken to avoid them. Construction companies whose services will be engaged in the engineering design and construction of the demo facilities will be required to provide adequate protection and insurance for their own workers who will be deployed.The requirements of the Standard 7 (7.1 and 7.6) are to be applied in an appropriately-scaled manner based on the nature and scale of the project, its specific activities, the project associated social and environmental risks and impacts, and the type of contractual relationships with project workers. During Year 1 of project implementation, a project-wide Labour Assessment and Management Procedure will need to be developed (with particular attention to the Standard 7 related risks associated with the demos sites as outlined in Output 2). An indicative outline for this LAMP is outlined in Annex 1 of the ESMF. The LAMP must be in place before Outputs 2.1 and 2.2 are initiated. The LAMP will be prepared by the PMO and submitted to the PSC for endorsement. The LAMP will include key information on the various aspects of labour (particularly in the sourcing, production, installation, operation and maintenance) that have to be managed and monitored, etc.The partner companies that will be responsible for the operation of the demo facilities will be assisted in making their existing operational safety, health and environmental plans to be used for the demo facilities to avoid, and where avoidance is not possible, reducing, mitigating, and managing adverse impacts, via completion of stand-alone management plans, as planned in the ESMF. |
| 1. Risk of increased labor input by women (e.g., projects such as biomass fuels, biogas, etc., will increase women's labor input for household energy access)

*Gender Equality and Women’s Empowerment: P.9, P.10* | I=3L=2 | Moderate | Some forms of energy substitution may require more labor input, but not in this case since the supply of RE resources (biogas) will be conveniently done through biogas piping. Biomass waste collection and use will be done on a commercial and centralized scale. Work in these facilities may limit the involvement of women. | The preliminary design of the demos fully considered resource, financial and labor inputs for energy supply substitution, and has assessed the feasibility of these inputs and their potential impact, and reduce end-user labor inputs, including through scaling up and centralizing production, to the extent possible, especially to avoid increasing the burden on women and children.Impacts to gender dynamics will also be assessed as part of the projects SES documentation, including the SSA (for upstream impacts associated with Component 1), site-specific ESIAs (for demo site construction and implementation), and the LAMP. Appropriate management plans will be prepared for avoiding, and where avoidance is not possible, reducing, mitigating, and managing adverse impacts, via completion of stand-alone management plans, as planned in ESMF. |
| 1. Some project activities (most notably under Component 2) may require significant consumption of raw materials (e.g. biomass) and natural resources (energy and/or water)

*Standard 8: 8.6* | I=3L=3 | Moderate | Some renewable energy projects may present potential resource efficiency issues, such as whether biomass resources are being used more efficiently in biomass utilization projects. Note that in this project, the main biomass resource that will be used are agricultural waste (e.g., straw and animal manure). There are no growing of trees for harvesting for fuel use, nor harvesting of natural forests nor reforestation activities.Some renewable energy production may increase water demand, such as the high dependence of biomass power generation on water from a whole life cycle perspective. | The preliminary design of the demos projects considered the adequacy, availability and utilization efficiency of resources; for example, in biomass power projects, the utilization efficiency of biomass is much higher than that of traditional biomass (many straws are returned to the field); and for the energy and water consumption involved in RE/EE projects, the detailed demo engineering design will involve coupled analysis and accounting for the whole life cycle and water-energy nexus to avoid additional environmental pressure from the demos and their replications.Appropriate management plans will be prepared for avoiding, and where avoidance is not possible, reducing, mitigating, and managing adverse impacts, via completion of stand-alone management plans, as planned in ESMF. |
| 1. Risk of disrupting people’s daily lives and of conflict/grievances from local communities if project implementation disruptions arise as a result of financial access issues for private sector project partners.

 *Human Rights: P.4, P.6, P.7* | I=3L=3 | Moderate | Energy service delivery private companies involved in project construction may face financing difficulties causing them to stop the implementation or the operation of the demos. In such events, disruptions in the daily lives of people in the demo villages will be affected and may result in them suffering from disruptions to their access of energy sources.  | The demos are part of the corporate business plans of the partner companies, and they have also done their own due diligence and financial feasibility analyses of such investments While these partner companies have sufficient financial resources to implement the demos, the local governments are also in hand to continue supporting the implementation of the demos should there be some disruptions in the operations of these partners, since this is part of their responsibilities to support the country’s rural revitalization program. For the replication of the demos, the project includes a study on green investment and financing, a series of project activities including: assessment of the investment and financing capacity of participating companies; design of incentives for financial companies and their introduction in rural areas; training of financial practitioners, etc. The project also includes green finance related activities that will help local banks in the project areas develop green finance measures to support the demo replications. |
| 1. RE-based energy generation (power and non-power purposes) and EE system installations can be seriously affected by adverse climate-related events .

*Standard 2: 2.2, 2.3*  | I = 4P = 2 | Moderate | Some renewable energy projects (e.g., wind and solar) may be sensitive to climate change; the structural integrity of RE-based energy generation facilities can be sensitive to extreme events such as earthquakes and floods.Freezing damage can affect crop straw production, resulting in insufficient biogas production feedstock and affecting biogas production. Freezing damage can also affect livestock production efficiency and livestock manure production, resulting in insufficient biogas production feedstock.Low temperatures can affect biogas production rates, resulting in insufficient biogas production and unstable community energy supply. | It is already common in international design and engineering practices, as well as in the construction/installation of RE-based energy generation units to follow proper engineering and construction design and construction that ensure not only structural integrity but also climate resilience. This applies also in the procurement, design/engineering, installation, and operation of the pertinent installations. As specified in the project document , the design and construction/installation of the physical infrastructures that will be installed will be based on the technical and structural specifications that major bilateral and multi-lateral donors require for the infrastructure projects that they are funding in China.Climate and disaster related impacts will also be assed for the 8 demo sites as part of the site specific ESIAs that are to be conducted. Depending on the extent of the impacts of the adverse climate –related events, appropriate modifications in the installations (and budget) will be done. Potential reduction in the number of installations, or replacement with alternative demos will be done while considering the need to ensure the resulting interventions are still contributing to the realization of the project outcomes.Plan for addressing this potential risk (i.e. as it pertains to the thematic area of UNDP SES 2) is also included in the risk register (see Annex E of CEO Endorsement Request Document). |
| 1. The project will support 8 demonstrations, of which 2 demonstrations involve solar PV, in Beijing and Shanxi Province (the ‘2 Solar Demonstrations’). These demonstrations will be implemented in years 2 and 3 of the project.

In both of the 2 Solar Demonstrations:- Co-financing will be used to purchase the Solar PV equipment. - GEF INV will be used to purchase related equipment, such as smart meters and energy efficiency equipment. GEF INV will NOT be used to procure any Solar PV equipment. A particular risk area of potential concern for the co-financing aspect of the project is related to labour issues (i.e. UNDP Standard 7)*Human Rights: P.2* *Standard 7: 7.1, 7.6*  | I=3L=3 | Moderate | UNDP’s corporate policy on social and environmental safeguards applies to both GEF INV and any co-financing.  | Amongst other national laws, the Labor Law of the People’s Republic of China provides legal protection for Chinese workers and establishes a system of judicial labor arbitration.In order to comply with UNDP’s corporate standard 7 on labor issues[[1]](#footnote-1), UNDP will develop a labour assessment and management procedure for the project. This management plan will be finalized in year 1 of the project, prior to the implementation of the 8 demonstrations in year 2 onwards. The management plan will also be used for the replication of these demonstrations under the project. . |
| 1. The project could contribute to cumulative environmental or social impacts in the area through unintended negative consequences from policy or legislative change as a result of activities under Component 1.

*Standard 1: 1.14* | I=4L-2 | Moderate  | There is a possibility that upstream policy or legislative changes supported by Component 1 of the project may negatively impact the biophysical receptor environment, as well as people’s livelihoods if not properly managed.  | Environmental and social impacts as a result of the project are expected to be overwhelmingly positive. However, upstream policy interventions/initiatives will need to be adequately assessed to ensure that any adverse social or environmental are adequately avoided, managed or mitigated during the development of such policy interventions. In order to assess and manage upstream policy risks, the project will undertake a SESA that shall inform activities supported as part of Component 1 of the project.  |
|  | **QUESTION 4: What is the overall project risk categorization?**  |
|  |
| ***Low Risk*** | **☐** |  |
| ***Moderate Risk*** |  |  |
| ***Substantial Risk*** | **√** | **The overall risk is Substantial. The project has been categorized as “Substantial” given the varied range of risks rated as “Moderate” that require more extensive assessment and management measures.** **An ESMF has been developed during the PPG Stage.** **Further studies/assessments will be required during project implementation, including site specific E&S assessments (and appropriate management plans) at demo sites, a SESA for Policy Formulation activities under Component 1, and the development of a labor management procedure that will be required in the first year of project implementation and before any construction activities can take place.** |
| ***High Risk*** | **☐** |  |
|  | **QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)** |
| Question only required for Moderate, Substantial and High Risk projects  |
| ***Is assessment required? (check if “yes”)*** | **X** |  |  | ***Status? (completed, planned)*** |
| *if yes, indicate overall type and status* |  | **X** | Targeted assessment(s)  | Completed: stakeholder analysis, gender analysisPlanned: Labor Assessment and Management Procedures |
|  | **X**  | ESIA (Environmental and Social Impact Assessment) | Prior to the construction/implementation of activities relating to the demo sites (i.e. Outputs 2.1 and 2.2), site specific environmental and social impact assessments will be required |
|  | **X**  | SESA (Strategic Environmental and Social Assessment)  | Planned (most specifically in relation to activities under Component 1)  |
| ***Are management plans required? (check if “yes)*** | **X** |  |  |
| *If yes, indicate overall type* |  | **X** | Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others)  | Completed: Gender Action Plan, Stakeholder Engagement Plan has been completedLabor management plan to be completed by end of yr. 1.  |
|  | **X**  | ESMP (Environmental and Social Management Plan which may include range of targeted plans) | Planned (as an output of the site-specific ESIAs that are required for Outputs 2.1 and 2.2)  |
|  | **X** | ESMF (Environmental and Social Management Framework) | Completed. |
| ***Based on identified risks, which Principles/Project-level Standards triggered?*** |  | **Comments (not required)** |
| ***Overarching Principle: Leave No One Behind***  |  |  |
| ***Human Rights*** | √ |  |
| ***Gender Equality and Women’s Empowerment*** | √ | The site-specific environmental and social assessments of each demo site shall include the evaluation of impacts on gender equality and women’s empowerments. The assessments shall identify mitigation measures to be carried out during demo implementation. A gender action plan is also prepared.  |
| ***Accountability*** | √ |  |
| ***1. Biodiversity Conservation and Sustainable Natural Resource Management*** | √ | All demos are subject to site-specific environmental and social assessments during their engineering design. The assessments shall include the assessment of biodiversity conservation and natural resource management issues. The assessments will identify the required mitigation measures which will be carried out during demo implementation. |
| ***2. Climate Change and Disaster Risks*** | √ |  |
| ***3. Community Health, Safety and Security*** | √ | The site-specific environmental and social assessments that will be conducted for each demo site shall include impact assessments on community health, safety, and working condition issues. The assessments will identify mitigation measures, which will be carried out during demo implementation. |
| ***4. Cultural Heritage*** | √ |  |
| ***5. Displacement and Resettlement*** | √ |  |
| ***6. Indigenous Peoples*** | √ |  |
| ***7. Labour and Working Conditions*** | √ | All demos will be subject to a labor management plan, to be developed in year 1 of the project by UNDP, together with the implementing partner (MARA), PMO and project partners. |
| ***8. Pollution Prevention and Resource Efficiency*** | √ | Each demo are subject to site-specific environmental and social assessments during their engineering design. The assessments shall include the assessment of biodiversity conservation and natural resource management issues. The assessments will identify the required mitigation measures which will be carried out during demo implementation. |

**Final Sign Off**

*Final Screening at the design-stage is not complete until the following signatures are included*

|  |  |  |
| --- | --- | --- |
| ***Signature*** | ***Date*** | ***Description*** |
| QA Assessor |  | UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted. |
| QA Approver |  | UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD)**,** Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC. |
| PAC Chair |  | UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.  |

### SESP Attachment 1. Social and Environmental Risk Screening Checklist

|  |  |
| --- | --- |
| **Checklist Potential Social and Environmental Risks** |  |
| INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions. |  |
| **Overarching Principle: Leave No One Behind****Human Rights** | **Answer (Yes/No)** |
| P.1 Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)? | *No* |
| P.2 Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project? | *Yes* |
| P.3 Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights? | *Yes* |
| *Would the project potentially involve or lead to:* |  |
| P.4 adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups? | Yes |
| P.5 inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? [[2]](#footnote-2)  | No |
| P.6 restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities? | Yes |
| P.7 exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals? | Yes |
| **Gender Equality and Women’s Empowerment** |  |
| P.8 Have women’s groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)? | No |
| *Would the project potentially involve or lead to:* |  |
| P.9 adverse impacts on gender equality and/or the situation of women and girls?  | *Yes* |
| P.10 reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? | Yes |
| P.11 limitations on women’s ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being* | No |
| P.12 exacerbation of risks of gender-based violence? *For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc*. | No |
| **Sustainability and Resilience:** Screeningquestions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below |  |
| **Accountability**  |  |
| *Would the project potentially involve or lead to:* |  |
| P.13 exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them? | Yes |
| P.14 grievances or objections from potentially affected stakeholders? | Yes |
| P.15 risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project? | No  |
| **Project-Level Standards** |  |
| **Standard 1: Biodiversity Conservation and Sustainable** [**Natural**](#SustNatResManGlossary) **Resource Management** |  |
| *Would the project potentially involve or lead to:* |  |
| 1.1 adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes* | Yes  |
| 1.2 activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? | Yes |
| 1.3 changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5) | Yes |
| 1.4 risks to endangered species (e.g. reduction, encroachment on habitat)? | No |
| 1.5 exacerbation of illegal wildlife trade? | No |
| 1.6 introduction of invasive alien species?  | No  |
| 1.7 adverse impacts on soils? | Yes |
| 1.8 harvesting of natural forests, plantation development, or reforestation? | No[[3]](#footnote-3) |
| 1.9 significant agricultural production?  | No |
| 1.10 animal husbandry or harvesting of fish populations or other aquatic species? | No |
| 1.11 significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction* | Yes |
| 1.12 handling or utilization of genetically modified organisms/living modified organisms?[[4]](#footnote-4) | No  |
| 1.13 utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[[5]](#footnote-5)  | No  |
| 1.14 adverse transboundary or global environmental concerns? | Yes |
| **Standard 2: Climate Change and Disaster Risks** |  |
| *Would the project potentially involve or lead to:* |  |
| 2.1 areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions? | No |
| 2.2 outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters?  *For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes* | Yes |
| 2.3 increases in [vulnerability to climate change](#CCVulnerabilityGlossary) impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)?*For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population’s vulnerability to climate change, specifically flooding* | Yes |
| 2.4 increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change? | No  |
| **Standard 3: Community Health, Safety and Security** |  |
| *Would the project potentially involve or lead to:* |  |
| 3.1 construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams) | Yes |
| 3.2 air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation? | Yes  |
| 3.3 harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)? | Yes |
| 3.4 risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health? | No |
| 3.5 transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)? | Yes |
| 3.6 adverse impacts on ecosystems and ecosystem services relevant to communities’ health (e.g. food, surface water purification, natural buffers from flooding)? | No |
| 3.7 influx of project workers to project areas? | Yes |
| 3.8 engagement of security personnel to protect facilities and property or to support project activities? | Yes |
| **Standard 4: Cultural Heritage** |  |
| *Would the project potentially involve or lead to:* |  |
| 4.1 activities adjacent to or within a Cultural Heritage site? | No |
| 4.2 significant excavations, demolitions, movement of earth, flooding or other environmental changes? | No |
| 4.3 adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect, and conserve Cultural Heritage may also have inadvertent adverse impacts) | Yes |
| 4.4 alterations to landscapes and natural features with cultural significance? | No |
| 4.5 utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes? | No |
| **Standard 5: Displacement and Resettlement** |  |
| *Would the project potentially involve or lead to:* |  |
| 5.1 temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)? | Yes |
| 5.2 economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?  | Yes |
| 5.3 risk of forced evictions?[[6]](#footnote-6) | Yes |
| 5.4 impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?  | No |
| **Standard 6: Indigenous Peoples** |  |
| *Would the project potentially involve or lead to:*  |  |
| 6.1 areas where indigenous peoples are present (including project area of influence)? | Yes  |
| 6.2 activities located on lands and territories claimed by indigenous peoples? | No  |
| 6.3 impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to screening question 6.3 is “yes”, then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk* | Yes |
| 6.4 the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned? | Yes |
| 6.5 the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? | No  |
| 6.6 forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above* | Yes |
| 6.7 adverse impacts on the development priorities of indigenous peoples as defined by them? | No  |
| 6.8 risks to the physical and cultural survival of indigenous peoples? | No  |
| 6.9 impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?*Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.* | Yes |
| **Standard 7: Labour and Working Conditions**  |  |
| *Would the project potentially involve or lead to: (note: applies to project and contractor workers)* |  |
| 7.1 working conditions that do not meet national labour laws and international commitments? | Yes |
| 7.2 working conditions that may deny freedom of association and collective bargaining? | No  |
| 7.3 use of child labour? | No  |
| 7.4 use of forced labour? | No |
| 7.5 discriminatory working conditions and/or lack of equal opportunity? | No  |
| 7.6 occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle? | Yes |
| **Standard 8: Pollution Prevention and Resource Efficiency** |  |
| *Would the project potentially involve or lead to:* |  |
| 8.1 the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or [transboundary impacts](#TransboundaryImpactsGlossary)?  | Yes |
| 8.2 the generation of waste (both hazardous and non-hazardous)? | Yes |
| 8.3 the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?  | No |
| 8.4 the use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the* *Montreal Protocol**,* *Minamata Convention**,* *Basel Convention**,* *Rotterdam Convention**,* *Stockholm Convention* | No |
| 8.5 the application of pesticides that may have a negative effect on the environment or human health? | No |
| 8.6 significant consumption of raw materials, energy, and/or water?  | Yes |

1. <https://info.undp.org/sites/bpps/SES_Toolkit/SES%20Document%20Library/Learning%20Materials/UNDP_S7_Labour%20Guidance%20Note_June2021.pdf> [↑](#footnote-ref-1)
2. Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to “women and men” or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people. [↑](#footnote-ref-2)
3. The main sources of raw materials for biogas and biomass energy production are: 1) agricultural waste such as straw; and livestock manure resources from animal husbandry. China's arable land resources are limited and cannot be used to produce dedicated energy crops, and the destruction of forest resources is not allowed in China. [↑](#footnote-ref-3)
4. See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety. [↑](#footnote-ref-4)
5. See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources. [↑](#footnote-ref-5)
6. Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families, or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights. [↑](#footnote-ref-6)