# Tripura Rural Economic Growth and Service Delivery Project (TRESP)

Draft

# Environment & Social Management Framework (ESMF)

December 2022

**Tribal Welfare Department**
**Government of Tripura**

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## ABBREVIATIONS

| | | |
|---|---|---|
| ACM | : | Asbestos Containing Materials |
| ARDD | : | Animal Resource Development Department |
| BDO | : | Block Development Offices |
| BMP | : | Biodiversity Management Plan |
| BMMU | : | Block Mission Management Units |
| C&D | : | Construction & Demolition |
| CBOs | : | Community Based Organizations |
| CLF | : | Cluster Level Federation |
| CMLRC | : | Community Managed Livelihood Resource Centre |
| CMTC | : | Community Managed Training Centre |
| COO | : | Chief Operating Officer |
| CPCB | : | Central Pollution Control Board |
| CPF | : | Country Partnership Framework |
| CRIF | : | Community Resilience Infrastructure Fund |
| CSC | : | Construction Supervision Consultant |
| CTE | : | Consent to Establish |
| CTO | : | Consent to Operate |
| DFO | : | Divisional Forest Officer |
| DMMU | : | District Mission Management Unit |
| DoA/H | : | Department of Agriculture and Horticulture |
| DoE | : | Department of Education |
| DPMU | : | District Project Management Unit |
| DPR | : | Detailed Project Report |
| E&S | : | Environmental and Social |
| EC | : | Executive Committee |
| EHSG | : | Environmental Health and Safety Guidelines |
| EPA | : | Environmental Protection Act |
| e-PMS | : | Electronic Project Management System |
| ESCP | : | Environmental and Social Commitment Plan |
| ESSs | : | Environmental Social Standards |
| ESF | : | Environmental Social Framework |
| ESMF | : | Environmental and Social Management Framework |
| ESMP | : | Environmental and Social Management Plan |
| ESZ | : | Eco Sensitive Zone |
| FCA | : | Forest Conservation (Act) |
| FGD | : | Focus Group Discussions |
| FPO | : | Fruit Products Order |
| FRA | : | Forest Right Act |
| GBV | : | Gender Based Violence |
| GDP | : | Gross Domestic Product |
| GoI | : | Government of India |
| GIS | | Geographic Information System |
| GoT | : | Government of Tripura |

| | | |
|---|---|---|
| GPN | : | Good Practice Note |
| GRM | : | Grievance Redress Mechanism |
| GSDP | : | Gross State Domestic Product |
| IBRD | : | International Bank for Reconstruction and Development |
| ICAR | : | Indian Council of Agricultural Research (ICAR) |
| ICT | : | Information and Communications Technology |
| NMP | : | Nutrient Management Plan |
| PMP | : | Pest Management Plan |
| IPNMP | : | Integrated Pest & Nutrient Management Plan |
| IRC | : | Indian Road Congress |
| ITDNP | : | Integrated Transport Network Development Plan |
| LMP | : | Labour Management Procedures |
| LMS | : | Learning Management System |
| MoEF&CC | : | Ministry of Environment, Forests and Climate Change |
| NEP | : | National Education Policy |
| NER | : | North-East Region |
| NFHS | : | National Family Health Survey |
| NGO | : | Non-Governmental Organization |
| OBC | : | Other Backward Classes |
| PAP | : | Project Affected Person |
| PCCF | : | Principal Chief Conservator of. Forests |
| PD | : | Project Director |
| PDO | : | Project Development Objectives |
| PF | : | Preserved Forest |
| PG | : | Producer Groups |
| PIU | : | Project Implementation Unit |
| PMGSY | : | Pradhan Mantri Gram Sadak Yojna |
| PMU | : | Project Management Unit |
| PO | : | Producer Organizations |
| PoP | : | Package of Practices |
| PPE | : | Personal Protective Equipment |
| PPR | : | Preliminary Project Report |
| PVTG | : | Particularly Vulnerable Tribal Groups |
| PWD | : | Public Works Department |
| RAMS | : | Road Asset Management System |
| RAP | : | Rehabilitation Action Plan |
| RF | : | Reserved Forest |
| RPF | : | Resettlement Policy Framework |
| R&R | : | Resettlement and Rehabilitation |
| RS | : | Remote Sensing |
| SC | : | Scheduled Caste |
| SEP | : | Stakeholder Engagement Plan |
| SEA/SH | : | Sexual Exploitation and Abuse/ Sexual Harassment |
| SHG | : | Self Help Groups |
| SIPARD | : | State Institute of Public Administration and Rural Development |

| | | |
|---|---|---|
| SMC | : | School Management Committees |
| SLAS | : | State Level Achievement Surveys |
| ST | : | Scheduled Tribes |
| TaRL | : | Teaching at the Right Level |
| TTADC | : | Tripura Tribal Areas Autonomous District Council |
| TRESP | : | Tripura Rural Economic Growth and Service Delivery Project |
| TRP&PTG | : | Tribal Rehabilitation in Plantation & Particularly Vulnerable Tribal Group |
| TSCPB | : | Tripura State Pollution Control Board |
| TSKA | : | Teacher Subject Knowledge Assessments |
| TWD | : | Tribal Welfare Department |
| TRLM | : | Tripura Rural Livelihood Mission |
| VC | : | Village Council |
| VO | : | Village Organisation |
| WB/WBG | : | World Bank / World Bank Group |
| WLS | : | Wildlife Sanctuary |

# CHAPTER 1: INTRODUCTION

## 1.1. Background

Tripura is the third smallest state in India having a geographical area of about 10,491 square kilometers. It is a predominantly hilly (60%) and largely landlocked state, located in the south-western extremity of India's Northeastern region. The International border in the state with Bangladesh is 856 km. The state has only 27% cultivable land. Tripura has about 7,721 sq kms of forests area, which is nearly 73.64 % of the State's total geographic area. The state is currently organized into 8 districts and 58 blocks. The scheduled tribes live mostly in 23 of the 58 blocks which are administered by the Tripura Tribal Areas Autonomous District Council (TTAADC) and locally elected Village Committees. The Tribal Welfare Department (TWD), Government of Tripura (GoT) is planned the Tripura Rural Economic Growth and Service Delivery Project (TRESP) with the assistance of the World Bank. The overall objective of the TRESP is to expedite socio-economic development of Scheduled Tribes through a multi sectoral approach of sustainable livelihood and infrastructure development. While the project is covering 23 blocks for livelihood improvement support system, special focus is given at 12 identified aspirational blocks on additional provision for improving the economic opportunity through improved transport connectivity for rural populations.

TRESP will involve construction of school buildings, rural roads, post-harvest and other related infrastructure; diversification of agriculture & horticulture and allied services like livestock (poultry and piggery), fishing natural rubber processing; support to producer groups; improved learning; strengthened service delivery; besides capacity building of participating departments namely TWD, Departments of Education (DoE), Public Works Department (PWD), Department of Agriculture (integrated with Directorate of Horticulture), Department of Fisheries, Animal Resource Development Department (ARDD) and Tripura Rural Livelihood Mission (TRLM). The Society for TRESP is implementation agency for the project.

The World Bank's Environmental and Social Framework (ESF) is applicable to all subprojects under TRESP supported by the Bank, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs) of World Bank. Based on this, at this stage, the project has been overall categorized as substantial based on both environmental and social risks and impacts, and an Environmental and Social Management Framework (ESMF) is prepared for managing the environmental and social risks and impacts of the project.

## 1.2. Purpose of ESMF

The ESMF is prepared in-line with the World Bank's Environmental and Social Framework (ESF) and Environmental and Social Standards (ESS). The ESF

defines an ESMF as "an instrument that examines the risks and impacts when a project consists of a program and/or series of sub-projects, and the risks and impacts cannot be determined until the sub-project details have been identified." Depending on the nature and location of the proposed sub-projects, the project initiatives are likely to contribute to environmental and social risks and impacts on the project area during their construction, operation and maintenance stages. These environmental and social risks and impacts would assume importance when the sub-projects locations are in proximity to sensitive areas. Hence, there is a need for systematic environmental and social management with a pre-defined framework for risk and impact mitigation. As the sub-projects locations and activities are not finalized, to identify and manage associated risks and impacts, it is required to prepare an ESMF for the project. Thus, the purpose of the ESMF is to describe a framework for the management of the environmental and social risks and impacts during the preparation of sub-projects; including (i) procedures for screening the environmental and social aspects related to the subproject, (ii) identification of the risks and impacts, regulatory mechanisms, and management/mitigation measures and monitoring needs, (iii) details on the institutional roles and responsibilities for environmental and social, (iii) strategy and plan for capacity building of key stakeholders, (iv) plan for monitoring the implementation of environmental and social mitigation measures, (v) strategy for key stakeholders consultation.

This ESMF is intended to guide its users in:

- Undertaking/understanding of environmental and social impacts and risks associated with various components of the project;
- Standardizing work efforts and environmental and social documents;
- Improving the quality of the documents and the analysis;
- Facilitating the development and review of documents by PMU/PIUs; and
- Providing technical guidance on E&S risks and impacts identification.

The primary objectives of the ESMF are:

- To provide adequate and relevant information on the area/state where project components are expected to be sited, including environmental and social vulnerabilities, if any.
- To identify potential Environmental and Social (E&S) risks and impacts due to the proposed activities at a broader level.
- To ascertain the policy, legal and regulatory requirements that apply to the project, including national acts/standards, state norms and Environment & Social Standards (ESS) of the World Bank.
- Set out principles, process and procedures, including criteria for inclusion/ exclusion of sub- projects and E&S screening, to assess and avoid/manage the identified risks/impacts.
- Provide guidelines and generic plans to avoid, reduce/minimize, mitigate, and

manage adverse impacts and risks through different stages of the project cycle with regards to the planned activities/interventions under TRESP.
- Prepare a SEP, which will be used/applied at different stages of the project cycle
- Outline measures and requirements for capacity building to apply and implement the ESMF effectively, including monitoring and reporting.

## 1.3. Project Beneficiaries

The project will cover a total of 23 blocks across 8 districts comprising of 12 aspirational and 11 non aspirational blocks. An estimated 75,000 households from across 260 villages are targeted under the project. The interventions will also cover about 748 habitation across the 12 aspirational blocks under rural road sector.

The phasing of the project outreach has been undertaken based on the current status of institutions and the targets proposed under the project. The following table presents the target and phasing plan for the project.

The TRESP will directly benefit rural residents in the tribal-dominated blocks especially those living in the vicinity of the rural road network. The rural communities engaged in agriculture & horticulture and allied services like livestock (poultry and piggery), fishing natural rubber processing activities (including women) will benefit through the enhanced agro-logistic infrastructure and services and the resulting improvements in supply chain efficiency under the same component. The projecy will, in particular, benefit the rural communities made vulnerable by the COVID-19 pandemic through livelihood opportunities. The students and teachers associated with government-managed schools in the tribal areas will benefit from access to improved school complexes and learning environments and capacity building support. The opportunities offered for building capacity and the development of plans and strategies will help the tribal councils and public agencies responsible for rural roads, education, agriculture, and tribal welfare to strengthen their institutional capacities for evidence-based decision-making and sustaining the investments.

## 1.4. Methodology for Development of ESMF

The site visits in the subprojects in the project area made and available secondary data/documents were review reviewd. Applicability of National and State legal Acts and policies, and Environemhtal Social Standards of the World Bank were reviewed. Stakeholder consultations with line departments like Tribal Walfare Department (TWD), Public Works Department (PWD), Department of Education (DoE), Department of Agriculture and Horticulture (DoA/H), Animal Resource Development Department (ARDD), Department of Fisheries, Tripura Rural Livelihood Mission (TRLM), Forest Department of Tripura, etc were conducted. In addition to this, consultations were also conducted with the project beneficiaries like village committee, farmers, SHG Women, vendors in

the market areas; and at the institutional level like NGOs, CBOs, BDOs, Autonomous Tribal Councils (ATC), teachers and students at schools, PWD field officials, etc. Community in general is supportive and welcomes the TRESP initiative and at the same time, shared feedback on their specific requirements/issues. Based on site visits, consultations and interactions with lined departments and reviewing of geographical and socio economic context of the project region, the likely positive and negative potential environmental and social impacts from the project have been identified. The secondary data/information review and stakeholders consultations helped to identify and assess the environment and social risks in the project area.

The ESMF has been prepared based on gathering of data through both primary and secondary sources for environmental and social aspects in the project area. The steps followed in developing the ESMF are provided below:

- Review of the proposed project details and meeting/discussions with various key stakeholders,
- Field reconnaissance at sample subprojects to determine the key environmental and social parameters and aspects that are likely to be impacted by the project activities,
- Establishment of the baseline (describing the relevant physical, biological, and socioeconomic conditions) through field visits, desk research and discussions with stakeholders. This also included desk research of similar bank operations to understand probable social and environmental risks and impacts,
- Defining the country and state's legal/regulatory framework that will influence the implementation of the project and sub-projects including and the World Bank (WB) Environmental and Social Framework (ESF) and Environmental and Social standrads and identifying gaps in the current implementation practices associated with the type of sub-projects,
- Carrying out consultations with all relevant stakeholders those who have been identified through stakeholder and institutional analysis: these include government, communities, and institutions. The objective of the consultation sessions is focused to improve the project's interventions about the environment and social management and seeking views from the stakeholders on the environmental and social issues and the ways these could be resolved.
- Identifying the environment and the social risks and impacts of the activities supported.
- Defining the framework for management and mitigation methods to manage the risks and impacts, enhance project environmental and social benefits, and for improving stakeholder capacities to manage the project. It includes developing screening criteria, nagetic/exclustion list, activities wise Environmental and Social Management Plans (ESMPs), Resettlement Policy Framework (RPF); Labor Management Procedures (LMP); Biodiversity Management Mesures; Integrated Pest & Nutrient Management (IPNM) Plan, Stakeholder Engagement Plan, etc.

- Outline the procedures to be followed to comply with the WB ESF and National/State/Local level rules and regulations including preparation of various environmental and social documents, monitoring mechanism, stakeholder engagement, disclosure requirement, grievance redress, and institutional arrangement;
- Preparing the monitoring plan to oversee the implementation of management and mitigation measures/plan,
- Grievance redressal mechanism and citizen engagement measures and defining the proposed mechanisms for the project,
- Identifying the institutional capacity building and training requirements for implementing the environmental and social mitigation measures, and

## 1.5 Revisions/Modification of ESMF

This ESMF will be a "live document" enabling revision, as and when necessary. Unexpected situations and/or changes in the project or subprojects design would therefore be assessed and appropriate management measures will be incorporated by updating the Framework to meet the requirements of the country's legislation and the World Bank's ESF. Such revisions will also cover and update any changes/modifications introduced in the legal/regulatory regime of the country/ state. Also, based on the experience of application and implementation of this framework, the provisions and procedures would be updated, as appropriate in consultation with the World Bank and the implementing agencies/departments. The finalized version of the updated ESMF will be submitted to World Bank for its review and approval, and re-disclosed by both the borrower and the Bank following the disclosure procedures.

## 1.6 Structure of ESMF

The ESMF document for TRESP is presented under the following chapters:

**Chapter 1** as **Introduction** provides a background of the project; purpose of ESMF, project beneficiaries, methodology adopted for development of ESMF, revisions/modification of ESMF and Structure of the ESMF.

**Chapter 2** as **Project Description** presents the rationale, scope and strategy of TRESP, project development objective, Project Components and Activities; and Targeted Geography and Beneficiaries.

**Chapter 3** as **Policy, Legal and Regulatory Framework** describes applicable national and state's policy, acts, rules, regulations and their applicability; applicability of WB ESSs, comparison of Country's Legislations and Bank' ESF and applicability of EHS Guidelines of The World Bank.

**Chapter 4** as **Environmental and Social Baseline Conditions** provides baseline environmental and social conditions in the project area and Tripura State.

**Chapter 5** as **Potential Environmental & Social Risks & Impacts** describes typology of project activities, environmental and social risks and impacts of TRESP, Environment and Social Risks and Impacts Identified by each ESS and Borrower's ESS Capacity and Institutional Assessment.

**Chapter 6** as **Environmental And Social Management Framework** describes Background of ESMF, application of ESMF, broad scope of ESMF, description of negative list of activities, environmental and social screening of subprojects, preparation of ESMPs, other environmental and social instruments to meet requirements of applicable ESSs, linkage to the ESCP, updating of ESMF, institutional arrangements, capacity building, supervision, monitoring and reporting, management of contractors, typical budget for ESMF/ESMP implementation, stakeholder engagement, grievance redressal mechanism and information disclosure.

**Annexure of ESMF**

| | | |
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# CHAPTER 2 PROJECT DESCRIPTION

## 2.1 Rationale

Tripura is the third smallest state in the Northeast Region (NER) of India with a population of 3.7 million people (Census 2011), of which 74% reside in rural areas. The State is largely landlocked, and has only 27% cultivable land and 60% of Tripura's total area is covered by forests. Most of its population depends on agriculture which contributes to 23 % of the Gross State Domestic Product (GSDP). The State has very low industrialization levels and unemployment rates are high (estimated to be 41 % pre-pandemic). Tripura is located shares an international border with Bangladesh on three sides in the length. Its only national highway, which connects it to the rest of India and borders the states of Assam and Mizoram to the east, is frequently disrupted by landslides and rain. This particular geographic location poses a number of difficulties, including insufficient infrastructure, particularly in the areas of markets and transportation, communication snags brought on by the mountainous terrain, and shortened natural trade routes.

Tripura has had substantial economic progress in the last ten years, but pockets of poverty still exist. Tripura had low poverty rates compared to the rest of the nation (16.5 % in rural area, 7.4 % in urban in 2011–12), according to the most recent estimate of poverty derived from the Socio-Economic Caste Census. However, 23 of 58 blocks of the state, which are predominately populated by tribal people (Scheduled Tribes or STs), continue to be the state's poorest. The tribal dominant blocks have high rates of both secondary school dropouts and food insecurity. The bulk of the state's tribal population in 23 blocks has the worst rates of multidimensional poverty (STs). It is estimated that 20.9% of ST households are multi-dimensionally poor, compared to 8.9 % of Scheduled Caste (SC) families, 7.2 % of Other Backward Classes (OBC) households, and 9.1 % of general category households. In 23 tribal blocks, the majority of rural households depend on agriculture and related activities for their livelihood. Tripura Rural Economic Growth and Service Delivery Project (TRESP) is planned by the Tribal Welfare Department (TWD), Government of Tripura (GoT), with support from the World Bank to enhance connectivity and access to improved services and economic opportunities for tribal areas.

TRESP is consistent with the World Bank Group Country Partnership Framework (CPF FY18-22) across all its three pillars. The project components will help:

(i) support resource efficient growth through use of innovative, climate resilient agriculture, crop diversification, water and natural resources management, and use of locally sourced materials in turn reducing the carbon footprint (CPF Pillar 1);
(ii) enhance competitiveness and enable job creation by emphasizing economic integration (which in turn will be achieved by improving transport logistics and market linkages which can serve agriculture and

create opportunities for skill development and self-employment) (CPF Pillar 2); and

(iii) invest in human capital and improvements in service delivery by improving road connectivity and quality of education/teaching practices in schools (CPF Pillar 3).

Under the TRESP, Government of Tripura aims to target the tribal blocks for convergence in investments for inclusive growth and human capital development and for a multi-sector investment operation. 12 of the 23 most underdeveloped tribal blocks have been identified as "aspirational" for special emphasis on poverty eradication.

## 2.2 Scope and Strategy of TRESP

The World Bank is well positioned to support the Government of Tripura (GoT) through TRESP to address multi-dimensional poverty in its backward areas. This is the World Bank's first engagement with GoT, and it is expected to bring to the State its expertise, technical know-how across sectors, and international experience. Tripura's vision of reducing poverty, increasing incomes and improving learning outcomes in its most backward tribal blocks will require a strategic, multi-sectoral solution. TRESP unique is its ability to bring to the table different sectoral teams as well as its design that leverages positive synergies and inter-connections between sectors. For instance, the Project aims to drive efficiency and innovation in select agriculture and allied value chains in tribal blocks. But simultaneous investments in the road sector in these blocks will help increase market access for tribal populations, without which agriculture investments may be less fruitful. On the education side, TRESP will invest in vocational training of tribal students in trades like agriculture processing, which are expected to improve their opportunities in the primary sector. All activities under each of the sectoral solutions are designed to feed into each other, so they set off virtuous circles of economic benefits for tribal communities. Besides economic benefits, TRESP will also leverage the Bank's extensive experience on projects in India to ensure social and environmental benefits. The TRESP design will build on SHGs as platforms to drive community level investments in value chain development and postharvest infrastructure. This is expected to result in higher employment for women, more so tribal women in the state. Similarly, investments in capacity building of elected tribal and citizen representatives (SHG/SMC members) and data systems are expected to lay the foundations for need-based planning and better targeting of welfare schemes to tribal peoples.

## 2.3 Project Development Objective

The Project Development Objective (PDO) is 'to enhance connectivity and access to improved services and economic opportunities for tribal areas in Tripura'.

## 2.4 Project Components and Activities

The proposed project aims to promote socioeconomic development and improve the quality of life of rural communities living in targeted tribal blocks through an integrated approach. It utilizes an area-based approach to tackle multi-dimensional poverty, focusing on four key areas for intervention - improving agricultural productivity and livelihood opportunities, strengthening transport connectivity, addressing schooling transitions from primary to secondary levels and focusing on institutional capabilities for improved planning, service delivery and governance. The overarching framework is summarized in **Figure 2.1.**

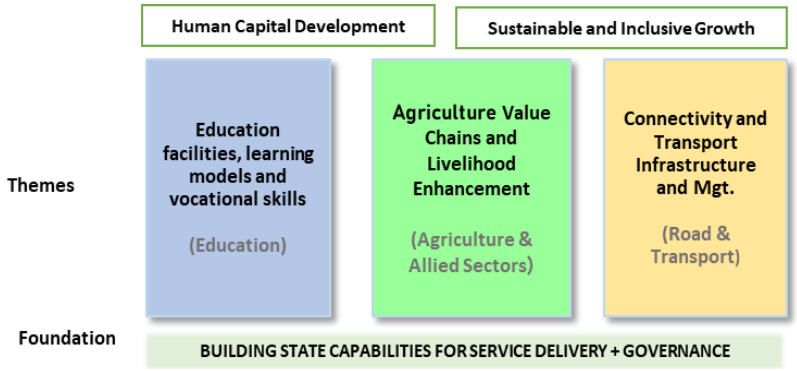


**Figure 2.1: Overarching Framework of the TRESP**

The project will support four components that, taken together, address some of the root causes that constrain socio-economic development in tribal blocks in Tripura. A more intensive approach will be undertaken in the poorest 12 aspirational blocks identified by the State (with a focus on improving their agricultural livelihoods, connectivity and education outcomes), while a broader approach will be adopted for agriculture and allied sector development, and institutional capacity building in all 23 tribal blocks (which includes the 12 aspirational blocks). Project Design Intervention and Outcomes of TRESP are presented in **Figure 2.2.**

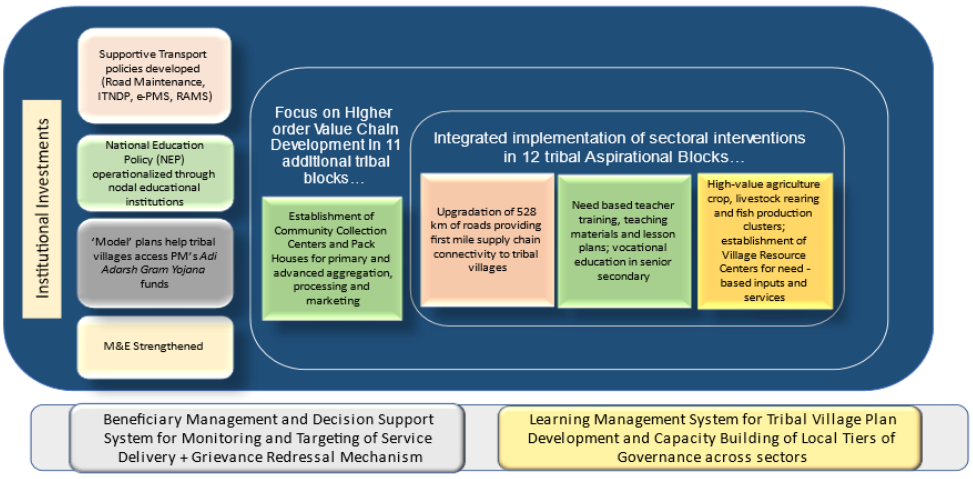


**Figure 2.2: Project Design Intervention and Outcomes**

The project components under TRESP are summarized below:

**Component 1: Strengthening Foundations for Economic Development**

The objective of this component is to improve rural livelihoods in tribal blocks via strategic investments in agriculture and allied sectors, complemented by investments in improving connectivity through road upgradation and rehabilitation. Activities under this component will comprise: (i) support to rural livelihoods through crop diversification, development of agricultural value chains and improvements in productivity via provision of better inputs, training, and technology; and (ii) improvements in road connectivity, establishment of rural transportation hubs, and development of planning and asset management systems to strengthen and upgrade 500-plus kilometers of roads to enhance access to markets and social services. Together, these activities will address some core challenges in the targeted blocks of the State, the relative remoteness and lack of connectivity and the compounding constraints these bring for livelihood opportunities. Investments made through this component will also target strengthening of state - level institutions for livelihoods improvement and agricultural productivity, and improvements in road management systems, with a view to improving governance and accountability in these sectors and enhancing sustainability of investments.

**Subcomponent 1.1 - Diversified and Resilient Production and Value Addition**

Subcomponent 1.1 related to agriculture and allied activities are aligned with Pillars 1-4 of the GCRF. It will be implemented in approximately 260 villages of a total of 391 villages in 23 tribal blocks of Tripura. The villages will be selected through an extensive resource mapping of the blocks using agriculture, administrative and institutional data and Remote Sensing/Geographic Information Systems (RS/GIS) methods.

Specific activities under this sub-component will comprise: (i) the formation of producer collectives (Producer Groups (PGs) and Producer Organizations (POs)) and participatory planning within collectives for diversified and intensified production; (ii) provision of grants to PGs and POs to finance their establishment/incubation costs, inputs, equipment, and service costs, working capital and costs towards demonstrations/pilots; (iii) extension, training and inputs for diversification in agriculture and allied activities; (iv) establishment of Model CLFs as lead community financial institutions in each of the 23 tribal blocks through investments in their incubation, operations and maintenance; (v) additional investments in the form of 'viability gap funding' to speed up and enhance/deepen financial access to PG members for livelihood and enterprise promotion activities; and (vi) establishment of a Cluster-level Community Resilience Infrastructure Fund (CRIF) to help set up Community Managed Training Centers (CMTCs) and Community Managed Livelihood Resource Centers

(CMLRCs) which will support climate resilient production technology and farm mechanization, collectivization, storage and value added services. Infrastructure investments in the above areas through government financing will be leveraged.

The Project will support commodity-based market assessment studies and the development of a technology-based market information platform and related training for potential subscribers. Partnerships will be facilitated with select public and private sector agencies that can help producers link with markets and build skills and capacity of Community Resource Persons (CRPs) as market champions and entrepreneurs in high value agriculture, livestock, and fisheries.

Finally, this sub-component will finance activities to build capacities of producers through partnerships with technical support agencies. The project will invest in financial awareness and literacy initiatives for farmers to avail formal financial services, including digital financial services and support from Banks and Insurance Companies to engage with community institutions. Training and inputs will be provided to increase year-round availability of nutrient-rich foods. Training modules will also be developed to train CLF/PG members on dietary diversification. In addition, the project will support innovative pilots to understand the feasibility for access to carbon markets for key agroforestry crops that dominate the tribal landscapes.

**Subcomponent 1.2 - Road Connectivity Improvement and Management System**

Subcomponent 1.2 will finance 150 roads covering a total length of 527.94 km (29.90 km - Earthen Road to Black Top Road; 207.52 km - Brick Soled Road to Black Top Road; and 290.52 km – strengthening existing Black Top Road) across the 12 aspirational tribal blocks. The proposed road connections will be complemented with the creation of collection hubs for improved access to remunerative markets and income opportunities for tribal communities in these blocks. In addition, the subcomponent will include the development of a Road Asset Management System (RAMS) and Electronic Project Management System (e-PMS) as well as a study on the Integrated Transport Network Development Plan (ITNDP).

The RAMS will maintain the road inventory data including roughness index, condition survey, and traffic count that would enable the Public Works Department (PWD) to undertake planned management of the road assets. The e-PMS is expected to facilitate transition from manual processing to electronic processing of project documents viz; Detailed Project Reports (DPRs), bidding documents etc. The ITNDP study will identify possible synergies among different modes of transportation used currently in Tripura to facilitate supply chain management of various crops and improve market access for the farmers and other commodity producers. The ITNDP study will also show status and requirements for connectivity for developing and expanding cross-border trade with Bangladesh.

Subcomponent 1.2 will be managed by the PIU (PWD) team based in the PWD Headquarters in Agartala supported by the Divisional offices. The PWD staff will be supported by additional resources for managing the safeguard aspects of the road's component and the IT aspects (RAMS and e-PMS). These resources will be provided by the PMU (TWD).

In addition, services of the Tripura Space Application Center (TSAC) will be used to plot through the GIS maps all the schools, medical facilities, agriculture, and other associated facilities on the roads that have been shortlisted under the Project. The connectivity gaps beyond the agreed 527.94 km will be addressed on priority by the PWD using funds from existing schemes. In order of priority, the PWD department will leverage funds from other government programs to: (a) provide bridge connectivity; (b) for road maintenance; and (c) road upgradation to address connectivity gaps.

**Component 2: Investing in Human Capital Development**

Component 2 focuses on improving the learning levels of students from aspirational tribal blocks, helping to increase the average number of years of educational attainment and enhancing their preparedness to transition to the labor market. To facilitate this objective, the Project will support (i) training of primary school teachers on Teaching at Right Level (TaRL), (ii) provision of in-service teacher training and structured lesson plans and guidebooks adequately informed by data/evidence from State Level Achievement Surveys (SLAS) and Teacher Subject Knowledge Assessments (TSKA), (iii) provision of school-based vocational education aligned with students' aspiration and aptitude, and industry demand, and (iv) strengthening of learning environment and facilities in the senior secondary schools in the aspirational tribal blocks. Whilst schools in the aspirational tribal blocks are mostly accessible, last-mile connectivity in some cases is constrained by the non-availability of paved (all-weather) roads. As a result of this, on days of heavy rainfall (being made worse by climate change), there is increased absenteeism in schools leading to a loss in the number of days of instruction for students. This directly impacts their learning levels. TRESP investments in the roads sector maintain a focus on addressing this issue and providing much-needed last-mile connectivity where required. All sub components of Component 2 are aligned with Pillars 2 and 4 of the GCRF.

**Subcomponent 2.1 – Improving Teaching-Learning Interactions**

With a view to enhancing retention especially at the secondary and senior secondary levels, subcomponent 2.1 will try and improve the quality of classroom teaching-learning interactions by prioritizing the provision of enhanced in-service professional development support to teachers in the 12 aspirational tribal blocks. For primary grade teachers, the project will support the provision of a short-term in-service training course with a focus on multigrade and multilingual teaching to enable smooth transitions between

Kokborok, Bengali and English. This would be complemented with the provision of a standardized package of Teaching Learning Materials, especially for foundational learning. The course will be spread over multiple years to enable a practice of training-observation-training that allows for continuous improvement of teaching-learning practices. For upper primary, secondary, and senior secondary teachers, the Project will support the provision of need-based teacher training and structured-lesson plans. These will be informed by state-level assessment survey(s) of student learning and teacher subject knowledge assessments. The former will include the provision of subject-specific and pedagogical training, and the latter will adequately prioritize the provision of bridge education.

Development of the technical capacity and service delivery channels for the SCERT will be the sustainable transformation that the Project will attempt to facilitate through engagement of relevant technical experts/institutions. This will be done in alignment with India's New Education Policy (NEP) 2020, and the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) initiative.

**Subcomponent 2.2 – Facilitating Enhanced Workforce Readiness**

TRESP will support the provision of school-based vocational education in senior secondary (two trades per school) and secondary schools (one trade per school) in the 12 aspirational blocks. The selection of trades will be planned at the cross-section of industry demand (ascertained through the State Skill Development Mission), and students' aptitude and aspirations, facilitated through career counselling support. Preliminary analysis suggests that agriculture and food processing are among the areas of interest for tribal students. Existing training modules approved by the central government agencies will be enhanced with context and market-specific information. The Project will plan for skill development in trades adolescent boys aspire for and for which there is demand and also improve girls' participation in non-conventional trades and provide complementary soft skills trainings.

Furthermore, the agriculture sector is one of the four sectors preferred by students for school-based vocational education. With the course content and training modalities being defined and notified by the GoI, TRESP would seek to supplement the existing training with more market-relevant materials/training that will better align with the local contexts. Improved market orientation, technology enablement, increase productivity, and/or enhanced focus on higher-value crops/produce will be the focus under this area of support/intervention.

**Subcomponent 2.3 – Enhanced Learning Environment**

Aligning with the NEP (2020) focus on the development of school complexes, 31 senior secondary schools in the 12 aspirational tribal blocks will be strengthened with essential facilities including Information and Communications Technology

(ICT) and science laboratories, smart classrooms, vocational education laboratories, toilets, drinking water facilities, and furniture. Of these, 16 will receive support for brownfield redevelopment or strengthening of physical infrastructure. Senior secondary schools will also be leveraged as sites for teachers' in-service professional development. The improvement in road connectivity in the aspirational tribal blocks and a reduction in commute time will help spoke schools (secondary and elementary) better leverage these facilities.

**Component 3: Strengthening Institutions for Service Delivery and Economic Development**

The objective of this component is to strengthen capacity of local institutions so they can deliver on the activities outlined under components 1 and 2 of TRESP and contribute to the goal of improved service delivery and economic development in the tribal blocks of Tripura. Activities under the component will be structured using two-pronged approach. All subcomponents of Component 3 are aligned with Pillar 4 of the GCRF.

**Subcomponent 3.1 - Strengthening capacity to Develop Need-based Village Level Plans**

This sub-component will work with Tripura's State Institute of Public Administration and Rural Development (SIPARD) to: (i) develop a Learning Management System (LMS) that can build capacity of stakeholders currently mandated to make village development plans/livelihood plans/school plans in tribal blocks, including elected Village Committee members, Block Development Officers, Panchayat Secretaries, department officials and citizen representatives (members of CLFs/PGs and women's SHGs as well as members of SMCs); (ii) develop 'model' plans that can help tribal villages access project funds as well as other sources of government funding including the Prime Minister's Adi Adarsh Gram Yojana ; and (iii) deliver core-competency trainings (IT, procurement and others) for lower tier officials in the agriculture, education and road sectors, and CLF leaders involved in the delivery of components 1 and 2 in the 23 tribal blocks. This will ensure that investments being proposed under components 1 and 2 are responsive to the needs of vulnerable groups.

**Subcomponent 3.2 - Developing a Decision Support System for field level Monitoring**

This sub-component will work with the State's Directorate of Information Technology (DoIT) to: (i) strengthen an existing Beneficiary Management System (BMS) by merging it with relevant socio-economic indicators so as to enable effective targeting; (ii) develop a Decision Support System (DSS) to monitor coverage and implementation of different government programs in the 23 tribal blocks, particularly programs in the agriculture, roads and education sectors; (iii) develop a multi-modal, multi-lingual, mobile based citizen service platform that would enable people in the 23 tribal blocks to apply for key services in real-time; and (iv) strengthen the State's existing grievance redress

mechanism (the Chief Minister's Helpline) by reinforcing service-level agreements (SLAs)/protocols for delivery of each service so automated alerts can be sent to departments found delaying on resolution. The mobile based service platform will increase tribal people's access to services and the DSS will allow monitoring of government interventions in parallel to investments made by TRESP in the identified 23 tribal blocks to assess the extent of convergence. However once developed the platform and DSS can be expanded to other services/areas in the state. Similarly, strengthening the existing BMS and CM's Helpline will provide direct benefits to tribals who may be victims of elite capture in the absence of targeting data, and may not be able to hold politicians and officials accountable. But the setting up of transparent decision making facilitated through better data, and SLA protocols around grievance redress may have wider effects around how citizens of Tripura engage with and hold the state accountable at large.

**Subcomponent 3.3 – Project Management, Technical Assistance and Monitoring and Evaluation**

This subcomponent will enhance institutional capacities via the establishment of an integrated project management unit (PMU) in the society structure created under the State's Tribal Welfare Department (TWD). The PMU will coordinate with various project implementation units (PIUs) in the relevant State departments. The sub-component will support technical assistance, coordination and monitoring and evaluation costs, and any other operating costs of the Project.

**Component 4: Contingent Emergency Response**

Following a natural disaster event, the GoT may request the Bank to re-allocate project funds to support response and reconstruction. This component could also be used to channel additional funds should they become available because of an emergency. This component is aligned with Pillar 3 of the GCRF.

## 2.5 Targeted Geography and Beneficiaries

### 2.5.1 Targeted Geography

The State has 8 districts namely Dhalai, Gomati, Khowai, Sipahijala, Unakoti, North Tripura, South Tripura and West Tripura, and total 58 blocks. The state has 23 tribal dominated blocks where tribal population is in majority (Scheduled Tribes or STs). These 23 tribal blocks are administered by Tripura Tribal Areas Autonomous District Council (TTAADC) and locally elected Village Committees (VC). These blocks have higher levels of multi-dimensional poverty and house the largest share of its tribal population (STs). In comparison to Scheduled Caste (SC) homes at 8.9%, Other Backward Classes (OBC) households at 7.2%, and general category households at 9.1%, it is projected that 20.9% of ST households are multi dimensionally poor. Tribal communities and localities are

worse off in terms of infrastructure, basic service delivery, child nutrition and health, maternal health, and educational achievement in addition to noticeably severe poverty and food insecurity.

Tribal population in Tripura typically reside in isolated, dispersed villages that result in poor connection and difficult access to facilities, therefore poorer outcomes for them must be seen in the context of geographic isolation. In order to address service delivery and economic development in these blocks, a multi-sectoral intervention addressing a confluence of issues is required. Further, the level of food insecurity and secondary school dropouts are also high in the tribal-dominated blocks. The absence of post-harvest infrastructure, processing facilities and poor road connectivity in tribal bocks further limits storage, transportation of crop produces and marketing options. Access to remunerative markets is also limited by information asymmetry and poor road connectivity from tribal areas. Therefore, the project targets these 23 tribal blocks for convergence in investments for inclusive growth and human capital development. Further, the State has identified 12 of the 23 most underdeveloped tribal blocks as "aspirational" for special emphasis on poverty eradication. The targeted Geography of TRESP is shown in **Figure 2.3.**

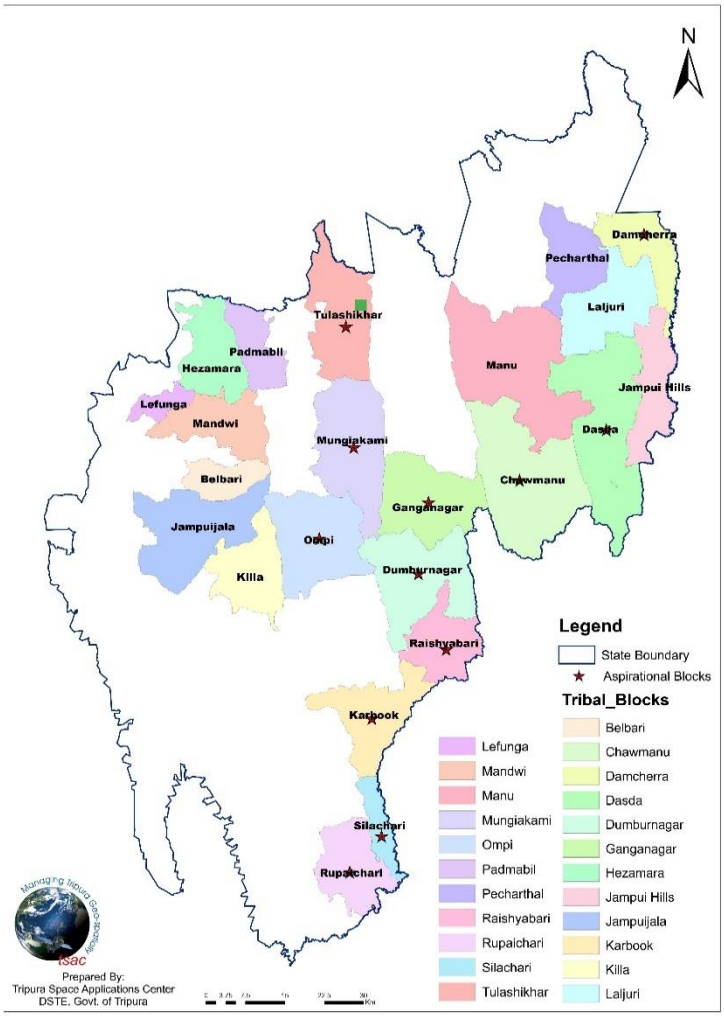


**Figure 2.3: Targeted Geography of TRESP**

### 2.5.2 Project Beneficiaries

About 75000 households in select 260 villages covered by 23 model CLFs will receive direct benefits through PG level investments, improved access to finance and extension services, mechanization equipment, productivity enhancement, post-harvest facilities, and marketing and digitization support services. Indirectly, additional livelihood incubation support will be provided to more than 40 non-model CLFs in tribal blocks. This is expected to result in indirect coverage/outreach to another 100,000 households.

An estimated population of nearly 67,700 school-going children who are expected to transition from primary to senior secondary grades in the 12 aspirational tribal blocks are the first line of direct beneficiaries, who will benefit from the school infrastructure enhancement component of TRESP. Furthermore, approximately 427,000 students from grade $6^{th}$ to $12^{th}$ in all the remaining blocks will benefit from improved student-teacher interactions because of evidence-based teacher capacity building and infusion of relevant teacher learning materials (structured lesson plans and guidebooks).

Large number of tribal population will be benefited from improvements in rural road infrastructure in the 12 aspirational blocks.

While TRESP will train elected tribal representatives, representatives from line departments and members of community institutions (e.g. SHGs, SMCs, POs, VOs) in the selected 23 tribal blocks, investments in learning management systems and beneficiary identification and grievance redress systems are likely to present significant positive externalities for the entire State (in terms of improved village planning and more effective targeting and coverage of government programs).

# CHAPTER 3: POLICY, LEGAL AND REGULATORY FRAMEWORK

## 3.1 Applicable Policy, Rules and Regulations

India has well defined environmental and social regulatory framework. The regulations applicability depends on nature and location of works proposed for new projects or modification/expansion of the existing projects. Broadly legislation can be divided into four categories *viz* environmental, forest, wildlife conservation, labour and social. The applicability analysis of regulations pertaining to all the above four categories was carried out for the activities proposed in various components under TRESP.

Article 48-A of the Constitution of India lays down a directive principle noting that the state shall endeavour to protect and improve the natural environment. Article 51-A of the Constitution declares it a fundamental duty of every citizen of India to protect and improve the natural environment and to have compassion for living creatures. The right to live in a healthy environment has been considered as a part of fundamental right to life under Article 21 of the Constitution.

The National Environment Policy of India aims at mainstreaming environmental concerns into all developmental activities. The objectives of this policy include: conservation of critical environmental resources, integration of environmental concerns in economic and social development, efficiency in environmental resource use, etc. The policy outlines a range of strategies that aim at: conservation of existing environmental resources through regulatory reforms; emphasis on education, information, capacity building; inter-sectoral collaboration; etc.

## 3.2 Applicable National and State Regulations

The key national and state environmental and social regulations relevant to TRESP are presented in **Table 3.1.**

**Table 3.1: National and State Environmental and Social Regulations Relevant to the TRESP**

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| **I.** | **Environmental Regulations** | | | | | | |
| 1. | Environment (Protection) Act-1986 | It is umbrella legislation. Various notifications, rules and schedules are promulgated under this act.<br><br>It has to protect and improve the environmental quality and preventing controlling and abating environmental pollution. | Yes | Activities under the TRESP, if not managed appropriately, likely to have the potential to create adverse environmental impacts in the local context. | -- | MoEF&CC and TSPCB | ESS 1<br>ESS 3<br>ESS 6 |
| 2. | Environmental Impact Assessment Notification, 2006 & subsequent amendments | The notification makes it mandatory for Building and Construction projects that have ≥ 20,000 sq.m. and <150,000 sq.m. of built-up area to obtain environmental clearance from the relevant government authority before any construction work, or preparation of land except for securing the land is started. | No | Agriculture value chains and rural livelihoods activities, road connectivity improvement and developing school complexes do not come in the preview of Environmental Impact Assessment Notification, 2006 & subsequent amendments. | No | MOEF&CC | ESS 1 |
| 3. | Forest Conservation Act, 1980 | To check deforestation by restricting conversion of forest areas into non- forested areas | Yes | In principle, sub project involving forest land shall not be taken under TRESP. However, in case forest land diversion is required for any sub project under TRESP, this act will be appliable | No | State Dept. of Forest/ MOEF&CC | ESS 1<br>ESS 6 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | | | | and prior forest clearance will be required. | | | |
| 4. | The Wildlife Protection Act, 1972 | The Act provides for the protection of wildlife and for all matters that are connected to wildlife and their habitat. This Act prohibits destruction, exploitation or removal of any wildlife, and provides for protection to listed species of flora and fauna. | No | This act is applicable for wildlife protection in the Wildlife Sanctuary, National Park, wildlife corridors, etc.<br><br>No subproject will be located within Wildlife Sanctuary, National Park, wildlife corridors, etc. Hence, wild clearance is not required. | No | NBWL, MOEF&CC, Supreme Court of India | ESS 1<br>ESS 6 |
| 5. | Eco Sensitive Zone Notifications | Regulate certain activities around National Parks and Wildlife Sanctuaries so as to minimise the negative impacts of such activities on the fragile ecosystem encompassing the protected areas. Eco Sensitive Zones have been notified for each National Park and Wildlife Sanctuary. | No | In case rural road construction activity in ESZ, necessary permission will be obtained. | No | NBWL, MOEF&CC, | ESS 1<br>ESS 6 |
| 6. | Biological Diversity Act 2002, and Biological Diversity Rules, 2004<br><br>The Tripura | Provide guideline in preventing the planning of project subcomponents near the environmental sensitive areas including national parks, wildlife sanctuaries | Yes | Applicable for conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the | | | ESS 1<br>ESS 6 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | biological diversity rules (2008) stipulate | etc., | | benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto. | | | |
| 7. | Air (Prevention and Control of Pollution) Act, 1981 | To control air pollution & controlling emission of air pollutants as per the prescribed standards. The NAAQ standards (CPCB) for Ambient Air Quality have been promulgated by the MoEF&CC. | Yes | This act is applicable for fugitive emissions from construction works for roads, schools, agriculture markets, etc; construction camps, plants, stack emissions from DG sets and hot mix plant; agriculture and livestock related activities and to manage ambient air quality in the sub-projects and ancillary activities. | Consent to Establish (CTE) and Consent to Operate CTO) for batching plants and Hot Mix plants etc. | TSPCB | ESS 1<br>ESS 3 |
| 8. | Water Prevention and Control of Pollution) Act, 1974 | To control water pollution by controlling discharge of liquid pollutants as per prescribed standards. | Yes | Applicable for construction and operation phases to manage liquid effluent discharges. | Consent To Establish (CTE) and Consent to Operate (CTO) | TSPCB | ESS 1<br>ESS 3 |
| 9. | Noise Pollution (Regulation and Control) Rule 2000 | The standards for noise for day and night have been promulgated by the MoEF&CC for various land uses. | Yes | This act will be applicable for all construction equipment/ plant and machinery including | None | TSPCB | ESS 1<br>ESS 3 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | | | | vehicles deployed for construction/project activities to regulate ambient noise levels<br><br>This act will be applicable to regulate noise nuisance during construction/project activities. | | | |
| 10. | Hazardous and Other Wastes (Management, & Trans-Boundary Movement) Rules, 2016 and amended thereof | Protection to the general public against improper handling and disposal of hazardous wastes | Yes | Rules will be applicable to used oil generated from construction equipment/ machinery during civil construction works. The rule includes storage, handling, transportation procedures and requirements for safe disposal of hazardous wastes to Authorised Recyclers. | Hazardous Waste Authorization | TSPCB | ESS 1<br>ESS 3 |
| 11. | Construction and Demolition Waste Management Rules, 2016 | The rules provide guidance for safe disposal and management of building materials, debris and rubble resulting from construction, repair, and demolition of any civil structure. | Yes | Rules shall be applicable to generation of wastes resulting from demolition of existing civil structures and construction debris. | Construction and Demolition Waste Management Plan should be prepared, prior to commencement of | Local Municipal Corporation | ESS 1<br>ESS 3 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | | | | | works. | | |
| 12. | Solid Waste Management Rules 2016 | Collection and disposal of municipal solid waste | Yes | Applicable to all forms/types of solid waste generated at construction activities, and existing institution. | Solid Waste Management Plan should be prepared prior to commencement of works | Local Municipal Corporation | ESS 1 ESS 3 |
| 13. | The Tripura Solid Waste (Management and Handling) Cleanliness and Sanitation Rules, 2019 | The rule facilitates and provides methods to manage the Municipal Solid Wastes in an efficient and reusable manner. | Yes | As project will involve generation and disposal of solid waste under different components. Such solid wastes will need to be managed in line with this rule. | No | Local Municipal Corporation | ESS 1 ESS 3 |
| 14. | Guidelines for extraction of trees from non-forest areas, 2010 | The guidelines are framed regarding the extraction of trees from non-forest areas including plantations in non-forest areas | Yes | Project interventions like road upgradation may require tree cutting for non-forest areas, thus these guidelines apply. | Yes | Forest Department/ District Authority | ESS 1 ESS 6 |
| 15. | Forest Right Act - 2006, The Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006 | To recognize certain forest rights in the forest dwelling Scheduled Tribes and other traditional forest dwellers such as the collection of Minor forest produce, access to grazing grounds and water bodies, traditional areas of use by nomadic or pastoral communities etc. | Yes | In case forest land diversion is required for rural road constriction, this act may be applicable. | Yes | Forest Department/ District Authority | ESS 1, ESS 5, ESS 6 |
| 16. | Guidelines to | Regulate and control ground | Yes | NOC is required for | NOC from | CGWA | ESS 1 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | Regulate and Control Ground Water Extraction in India, 2019 | water extraction for various purpose. | | water withdrawal from ground for civil construction | CGWA | | ESS 3 |
| 17. | E-Waste Management Rules, 2016 | The rules are applicable to the consumers of electrical and electronic equipment.<br>Large consumers of electrical and electronic equipment are required to ensure that e-waste generated by them is channelized through authorized collection centres or service providers to authorized dismantler or recycler. Additionally, records for e-waste are to be maintained for the State Pollution Control Board. | Yes | The applicability of the Rules is limited to the bulk consumers that generate significant quantities of e-waste, including educational institutions. E wastes may be generated from demolition of existing schools' buildings. | To be disposed to Authorised e-wastes Recyclers | TSPCB | ESS 1<br>ESS 3 |
| 18. | Bio-Medical Waste Management Rules, 2016 | To regulate and scientifically manage the human & animal anatomical waste, treatment apparatus like needles, syringes, and other materials used in health care facilities in the process of treatment | Yes | Biomedical wastes may be generated from first aid facilities at civil construction works, vaccination and medication of livestock, poultry, piggery, etc. | No | Local Bio-Medical Waste collection agency | ESS 1<br>ESS 3 |
| 19. | Code on Occupational Safety, Health and Working Conditions, 2020 | regulating the occupational safety, health and working conditions of the persons employed in an establishment and for matters connected therewith | Yes | Occupational Safety, Health and Working Conditions in construction and other works. | Yes | Labour Department | ESS 1<br>ESS 2 |
| 20. | Wetland | To ensure better | Yes | Applicable because | No | -- | ESS 1 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | (Conservation and Management) Rule 2010 | conservation and management and to prevent degradation of existing wetlands in India. | | fishery activities in pond and reservoirs are proposed. | | | |
| 21. | National Policy on Safety, Health and Environment at Workplace, 2009 | The policy provides an action program for enforcement of national standards on occupational health and safety at construction works, testing and laboratories. | Yes | The policy is applicable for ensuring safety of the workforce during the infrastructure up-gradation under the project. | No | -- | ESS 1<br>ESS 2 |
| 22. | National Building Code, 2016 | The code is published with an aim to provide unified building regulations for controlling and regulating building construction throughout the country for use by Govt. Departments, municipal bodies and other construction agencies. The code provides the 'accepted standards' in relation to material specification, testing or other related information. The code provides development control rules and general building requirements (*e.g.* floor area ratio, specifications on building design, etc.) for educational institutes. | Yes | The Code is applicable to the planned activities supported by the project. The standards prescribed under the code that are applicable to the project activities include the following: IS: 8827– 1978 recommendations for basic requirements of schools buildings (reaffirmed in 2006). IS: 2440 – 1975 Guide for Day Lighting of Buildings (Reaffirmed In 2004). IS: 14435 – 1997 Fire Safety in Educational Institution – Codes of Practice. IS 4963-1987: | Yes (approval of building plan) | Approval building plan from appropriate agency. | ESS 1<br>ESS 3 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | | | | Recommendation for Building and Facilities For Physically Handicapped.<br>IS 1893-1 (2002): Criteria for Earthquake Resistant Design of Structures.<br>IS 15498 (2004): Guidelines for Improving the Cyclonic Resistance of Low-rise Houses and Other Buildings/ Structures | | | |
| 23. | Building As Learning Aids (BaLA) guideline | BaLA is an innovative concept towards qualitative enhancement in elementary education through intervention in school building infrastructure. | Yes | Applicable in developing school building complexes, designing class rooms and providing child friendly learning resource. Applicable in Designing built elements like floor, wall, ceiling, door, window, furniture and playground as learning aids | No | Department of Education | ESS1<br>ESS3 |
| 24. | The Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, | The Act aims to stop the rampant encroachment and construction around the monuments and other sites of archaeological importance. As per the Act, construction | Yes | The Act is applicable in case the activity supported by the project is planned in close proximity to ancient monuments, | Permission from ASI | Archaeological Survey of India | ESS 8 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | 2010 | is prohibited in a radius of 100 meters from a protected monument and is regulated in a radius of >100-300 meters from a protected monument. Permission of the National Monuments Authority needs to be taken in case of repair/renovation in the prohibited area or regulated area. | | archaeological sites and remains. However, the screening process under the ESMF excludes possibility of any activities in the 'prohibited or regulated area' around protected monuments.<br><br>No notified Archaeological Monuments is located within 300m of the sub project. However, for chance finds the provisions laid out in the act will be applicable. | | | |
| 25. | The Building and Other Construction Workers (regulation of employment and conditions of service) Act, 1996 | To regulate the employment and conditions of construction workers and to provide for their safety, health and welfare measure and for other matter incidental thereto. | Yes | To ensure safety and welfare measures for workers employed at construction sites.<br><br>These regulations to be complied with during the construction of proposed road works. | License Safety and welfare measures for work force employed at construction sites are to be regulated in conformity with this act. | Regional Labour Commissioner | ESS 2 |
| 26. | Insecticide Act 1968;<br>Insecticide Rules | The GOI has notified various Acts for the control and prevention of pollution due to | Yes | The project activities are likely to involve the use of pesticides. These | No | -- | ESS 1<br>ESS 3 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | 1971; Insecticide (Control) Order 1985 | pesticides and fertilizers. The Act regulates the import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings or animal | | activities will comply with the requirements of the Insecticide Act – especially with regard to non-use of banned pesticides, safe use of pesticides, etc. | | | |
| **II.** | **Social Regulations** | | | | | | |
| 27. | The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 | This Act is applicable for acquisition of land for public purposes. | Yes | To provide relocation and livelihood assistance to non-title holder PAPs, consistence with the Act | No | TRESP and State Revenue Department | ESS 5 |
| 28. | Tripura Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2015 | The State Rules mirror the requirements under the national legislation and provides some additional provisions with respect to (a) Mandatory consent of the Gram Sabha, Panchayat or Autonomous District Council in all cases of land acquisition, The resettlement assistance requirements are similar to RFCTLARR Act, 2013. | Yes | To provide relocation and livelihood assistance to non-title holder PAPs, consistence with the Act | No | TRESP and State Revenue Department | ESS 5 |
| 29. | New Education Policy, 2020 | The Act calls for widespread consultation among all stakeholders-, including policymakers, parents, teachers, and community members- and large-scale | Yes | Applicable in the education related interventions of the proposed project. | Yes | Department of Education | ESS1 and ESS10 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | | advocacy a) to create demand for Early Childhood Care and Education (ECCE), b) to develop curriculum and assessments, c) facilitate collaboration with parents and other local stakeholders for governance of schools/ school complexes, including as members of SMCs d) ensure transparent disclosures. | | | | | |
| 30. | Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 | The Act is meant to serve as guidelines for the employees subject to the provisions of the Sexual Harassment Of Women At Workplace (Prevention, Prohibition And Redressal) Act, 2013. It aims to set out effective measures to avoid & to eliminate & if necessary to impose punishment for any sexual harassment in the workplace. | Yes | It will safeguard and protect women involved in the project from Sexual Harassment. | No | -- | ESS1 ESS2 ESS4 |
| 31. | Bonded Labour System (Abolition) Act, 1976 along with Rules, 1976 | An Act to provide for the abolition of bonded labour system with a view to preventing the economic and physical exploitation of the weaker sections of the people and for matters connected therewith or incidental thereto | Yes | Contractors shall employ numbers of Labours during civil construction. Contractor will ensure that there is no Bonded Labour by him or sub-contractors. | Labour License | State Labour Department | ESS 1 ESS 2 |
| 32. | The Child Labour (Prohibition and | The Act prohibits employment of children (those who have | Yes | Applicable to the project and PMU shall ensure | Labour License | State Labour Department | ESS 1 ESS 2 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | Regulation) Act, 1986 | not completed their fourteenth year) in certain occupations and processes (part II, Section 3). | | during design and construction stage of the proposed project | | | |
| 33. | Contract Labour (Regulation and Abolition) Act 1970 along with rules, 1971 | The objective of the Contract Labour Regulation and Abolition) Act, 1970 is to prevent exploitation of contract labour and also to introduce better conditions of work | Yes | Contractors shall employ work-force during Construction. The Act applies to the Principal Employer of an Establishment and the Contractor where in 20 or more workmen are employed or were employed even for one day during preceding 12 months as Contract Labour. | Labour License | State Labour Department | ESS 1<br>ESS 2 |
| 34. | Employees Provident Funds and Miscellaneous Provisions Acts 1952 along with EPF Scheme Rules and Forms | It is a beneficent piece of social welfare legislation aimed at promoting and securing the well-being of the employees | Yes | Contractors shall be employing Workman more than 20 persons during Construction Phase | Compliance of regulations | State Labour Department | ESS 1<br>ESS 2 |
| 35. | Employees State Insurance Act 1948 along with Rules and Regulations | Protect the interest of workers in contingencies such as sickness, maternity, temporary or permanent physical disablement, death due to employment injury resulting in loss of wages or earning capacity. Act also guarantees reasonably good | Yes | Contractor shall be applying large number of labours during construction which will include both Men and Women | Insurance | State Labour Department | ESS 1<br>ESS 2 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | | medical care to workers and their immediate dependents. | | | | | |
| 36. | Equal Remuneration Act, 1976 along with allied Rules | An Act to provide for the payment of equal remuneration to men and women workers and for the prevention of discrimination, on the ground of sex, against women in the matter of employment and for matters, connected therewith or incidental thereto. | Yes | Contractor shall be applying large number of labours during construction which will include both Men and Women. | Compliance of regulations | State Labour Department | ESS 1<br>ESS 2 |
| 37. | Inter State Migrant Workmen (Regulation of Employment and Conditions Service Act | To regulate the condition of service of inter- state labourers in Indian labour law. The Act's purpose is to protect workers whose services are requisitioned outside their native states in India. Whenever an employer faces shortage of skills among the locally available workers, the act creates provision to employ better skilled workers available outside the state | Yes | Contractor Shall be employing large number of workers during Construction from other States also. | Compliance of regulations | State Labour Department | ESS 1<br>ESS 2 |
| 38. | Minimum Wages Act 1948 along with Central Rules 1950 | To ensure that workman gets at least minimum wages as fixed by Govt. Minimum wages sets the lowest limit below which wages cannot be allowed to sink. | Yes | Contractor Shall be employing large number of workers during Construction | Compliance of regulations | State Labour Department | ESS 1<br>ESS 2 |
| 39. | Persons with Disabilities (Equal | It gives effect to the proclamation on the full | Yes | Contractor Shall be employing large number | Compliance of | State Labour Department | ESS 1<br>ESS 2 |

| S. No. | Act / Rules | Key Features | Applicable | Reason for Applicability | Regulatory Clearances Required | Authority | Equivalent ESS of WB |
|---|---|---|---|---|---|---|---|
| | Opportunities, Protection of Rights and Full Participations) Act , 1995 along with Rules,1996 and National Trust for Welfare of Persons with Disabilities Act,1999 with rules 2000. | participation and equality of the persons with disabilities in the Asian & Pacific Region and provides for their education, employment, creation of barrier free environment, social security, etc. | | of workers during Construction. | regulations | | |
| 40. | Right to Information Act 2005 | Empower the citizens, promote transparency and accountability in working of public authority, contain corruption | Yes | The project activities comes under the preview of Right to Information Act and any citizen can obtained any information about any aspect of the project. | -- | Nodal Officer of the project RTI | ESS 10 |

## 3.3 Applicability of WB ESS

The World Bank's ESF comprising environment and social standards (ESSs) are relevant to identify, avoid and mitigate the potential negative environmental and social risks and enhance the effectiveness of the positive impacts. The extent of relevance of these standards would vary depending on nature of sub-projects and activities under TRESP. Applicability analysis of ESSs to TRESP is presented at **Table 3.2**.

## 3.4 Comparison of National Legislation and Bank' ESF

The National and states regulatory framework is largely consistent and is complying with the ESF, however certain gaps exist in - ESS2 relating to community workers, establishing a functional GRM for different types of workers, ESS 4 relating to community exposure to health, The gaps are being covered by suitable project specific framework instruments and implementation arrangements listed in this ESMF. **Table 3.3** provides a comparison of the country's policy, regulations and WB's ESF duly highlighting the policy gaps and gap filling/ redressal measures.

## 3.5 Applicability of EHS Guidelines of The World Bank

Environmental Health and Safety Guidelines (General EHS Guidelines) of the World Bank are also applicable to the project and given in **Annexure 12.**

**Table 3.2: Applicable Environmental and Social Standards of the World Bank**

| Environmental and Social Standards | Key features | Applicability to the TRESP Project |
|---|---|---|
| ESS1: Assessment and Management of Environmental and Social Risks and Impacts | • Identify, assess, evaluate, and manage environment and social risks and impacts,<br>• Adopt a mitigation hierarchy:<br>➢ Anticipate and avoid risks and impacts,<br>➢ Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels, and<br>➢ Once risks and impacts have been minimized or reduced, mitigate and where significant residual impacts remain, compensate for or offset them, where | This standard is relevant. The ESMF for the project has been designed as per the provisions of ESS1. |

| Environmental and Social Standards | Key features | Applicability to the TRESP Project |
|---|---|---|
| | technically and financially feasible.<br><br>• Adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable,<br>• Utilize national environmental and social institutions, systems, laws, regulations and procedures where appropriate, and<br>• Promote improved environmental and social performance in ways which recognize and enhance borrower capacity. | |
| ESS2: Labor and Working Conditions | • Promote safety and health at the works,<br>• Promote the fair treatment, non-discrimination, and equal opportunity of project workers.<br>• Protect project workers, with emphasis on vulnerable workers<br>• Prevent the use of all forms of forced labour and child labour<br>• Support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law<br>• Provide project workers with accessible means to raise workplace concerns | This standard is relevant; Labour Management Procedures (LMP) have been prepared in line with the provisions under ESS2. |
| ESS3: Resource Efficiency and Pollution Prevention and Management | • Promote the sustainable use of resources, including energy, water and raw materials,<br>• Avoid or minimize adverse impacts on human health and the environment caused by pollution from project activities,<br>• Avoid or minimize project- | The standard is relevant to TRESP. The activities supported by the project, specifically civil construction works (for schools, roads and post-harvest infrastructure), |

| Environmental and Social Standards | Key features | Applicability to the TRESP Project |
|---|---|---|
| | related fugitive /stack emissions of short and long-lived climate pollutants,<br>• Collection and disposal of sewage and waste water from project activities,<br>• Avoid or minimize generation of hazardous and non-hazardous waste, and<br>• Minimize and manage the risks and impacts associated with pesticide use. | agriculture & horticulture, and livestock (poultry and piggery), fishing and rubber processing activities. ESS 3 promotes resource-use efficiency and pollution prevention and management. |
| ESS4: Community Health and Safety | • Anticipate or avoid adverse impacts on the health and safety of project-affected communities during project life cycle from routine and non-routine circumstances,<br>• Promote quality, safety and climate change considerations in infrastructure design and construction,<br>• Avoid or minimize community exposure to project-related traffic and road safety risks, diseases, and hazardous materials, and have in place effective measures to address emergency events, and<br>• Ensure that safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities, | The standard is relevant to TRESP. The activities supported by the project, specifically civil construction works (for schools, roads and post-harvest infrastructure), agriculture & horticulture, and livestock (poultry and piggery), fishing and rubber processing activities can cause risk and impacts to Community Health and Safety. ESS 3 promotes resource-Community Health and Safety. |
| ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement | • To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives.<br>• To avoid forced eviction.<br>• To mitigate unavoidable adverse social and economic impacts from | ESS 5 is relevant<br><br>A few roads will require donation of small land parcels as well as shifting of roadside vendors (especially near markets). Temporary impacts on adjacent |

| Environmental and Social Standards | Key features | Applicability to the TRESP Project |
|---|---|---|
| | land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost6 and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.<br>• To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure<br>• To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable dis-placed persons to benefit directly from the project, as the nature of the project may warrant.<br>• To ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected | land parcels during construction are envisaged and also temporary impact on livelihood of road-side vendors during construction. |
| ESS6:Biodiversity Conservation and Sustainable Management of Living Natural Resources | • To protect and conserve biodiversity and habitats.<br>• To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact | ESS 6 is applicable to TRESP.<br><br>Many roads are near forest areas. Trees falling and shrubs clearing may be required in non- |

| Environmental and Social Standards | Key features | Applicability to the TRESP Project |
|---|---|---|
| | on biodiversity<br>• To promote the sustainable management of living natural resource<br>• To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities | forest areas, which may have potential impacts on bio-diversity due to the project activities. |
| ESS 7: Indigenous People/ Sub Saharan African Historically Underserved Traditional Local Communities | • To ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource- based livelihoods of Indigenous Peoples.<br>• To avoid adverse impacts of projects on Indigenous Peoples/, or when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts<br>• To promote sustainable development benefits and opportunities for Indigenous Peoples in a manner that is accessible, culturally appropriate and inclusive<br>• To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples.<br>• To obtain the Free, Prior, and Informed Consent (FPIC) of affected Indigenous Peoples | ESS 6 is applicable to TRESP.<br><br>TRESP will support four components in the poorest 12 aspirational blocks identified by the State (with a focus on improving their agricultural livelihoods, connectivity and education outcomes), while a broader approach will be adopted for agriculture and allied sector development, and institutional capacity building in all 23 tribal blocks (which includes the 12 aspirational blocks) |
| ESS8: Cultural Heritage | • Protect cultural heritage from the adverse impacts of project activities and | This standard is relevant to TRESP. |

| Environmental and Social Standards | Key features | Applicability to the TRESP Project |
|---|---|---|
| | support its preservation,<br>• Address cultural heritage as an integral aspect of sustainable development,<br>• Promote meaningful consultation with stakeholders regarding cultural heritage, and<br>• Promote the equitable sharing of benefits from the use of cultural heritage. | This ESS 8 is relevant when tangible forms of cultural heritage, unique natural features or tangible objects that embody cultural values and certain instances of intangible forms of culture are impacted or are to be used for commercial purposes. Possible chance finding or notified cultural heritage site, beliefs, etc. may be located near the project areas. |
| ESS10:Stakeholder Engagement and Information Disclosure | • Establish a systematic approach to stakeholder engagement that helps Borrowers identify stakeholders and maintain a constructive relationship with them,<br>• Assess stakeholder interest and support for the project and enable stakeholders' views to be considered in project design,<br>• Promote and provide means for effective and inclusive engagement with project- affected parties throughout the project lifecycle, and<br>• Ensure that appropriate project information is disclosed to stakeholders in a timely, understandable, accessible, and appropriate manner. | The stakeholders need to be consulted throughout the project preparation and implementation period, making ESS10 relevant to the project. Stakeholder Engagement Plan (SEP) has been prepared in line with the provisions of ESS10. |

**Table 3.3: Comparison of Country's Environmental Regulations and WB ESF and Gap Filling Measures**

| S. No. | Environmental and Social Standards (ESS) | Equivalent National Environmental Policy and Regulations | Policy Gaps vs ESS and gap filling (redressal) Measures |
|---|---|---|---|
| 1. | ESS1: Assessment and Management of Environmental and Social Risks and Impacts | • The Environment (Protection) Act - 1986<br>• The Wild Life (Protection) Act 1972,<br>• Forest (Conservation) Act 1980<br>• Eco Sensitive Zone (ESZs) Notifications by MOEF&CC<br>• Environmental Impact Assessment Notification-2006 & subsequent amendments<br>• Water (Prevention and Control of Pollution) Act, 1974, 1988;<br>• Environmental (Protection) Act, 1986 Rules with amendments till date<br>• Air (Prevention and Control of Pollution) Act, 1981, 1987;<br>• Noise Pollution (Regulation and Control Act) 2000 and amendment till date<br>• Solid Waste Management Rules, 2016<br>• Hazardous & Other Waste (Management and Trans-boundary Movement) Rules, 2016<br>• The E-Waste (Management) Rules, 2016,<br>• Construction & Demolition, Waste Management Rules, | ESS1 is applicable for TRESP. Gaps exist regarding assessments, consultations, monitoring and ESCP.<br><br>The following additional measures are required:<br><br>• Conduct an environmental and social screening of the subprojects;<br>• Undertake stakeholder engagement and disclose appropriate information in accordance with ESS10;<br>• Develop an ESCP, and implement all measures and actions set out in the legal agreement including the ESCP; and<br>• Conduct monitoring and reporting on the environmental and social performance of the project against the ESF. |

| S. No. | Environmental and Social Standards (ESS) | Equivalent National Environmental Policy and Regulations | Policy Gaps vs ESS and gap filling (redressal) Measures |
|---|---|---|---|
| | | 2016<br>• Motor Vehicles (Amendment) Act 2019<br>• Guidelines to Regulate and Control Ground Water Extraction in India (With effect from 01.06.2019),<br>• National Building Code 2016 and relevant standards of the Bureau of Indian Standards (BIS),<br>• Energy Conservation Building Code 2017. | |
| 2. | ESS2: Labour and Working Conditions | • The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and the Building and Other Construction Workers Welfare Cess Act, 1996 (BOCWW Cess Act)<br>• Contract Labour (Regulation & Abolition) Act 1970,<br>• Minimum Wages Act 1948, Payment of Wages Act 1936,<br>• Child Labour (Prohibition & Regulation) Act 1986,<br>• Bonded Labour System (Abolition) Act, 1976<br>• Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979<br>• Employees Compensation Act | The National and state legal provisions almost cover all requirements in ESS2 except relating to community workers and a functional GRM for different types of workers.<br><br>Hence, an overall project level Labour Management procedures (LMP) will be prepared to cover above requirements.<br><br>The project specific OHS management measures as a part of LMP will use appropriate good international practices/standards (such as WBG EHS guidelines, ILO standards) which will be followed in conjunction with requirements defined under various Indian legislations. |

| S. No. | Environmental and Social Standards (ESS) | Equivalent National Environmental Policy and Regulations | Policy Gaps vs ESS and gap filling (redressal) Measures |
|---|---|---|---|
| | | 1923<br>• Employees P.F. and Miscellaneous Provision Act 1952 (since amended)<br>• Maternity Benefit Act 1961<br>• Sexual Harassment of Women at the Workplace (Prevention, Prohibition and Redressal) Act, 2013<br>• Payment of Wages Act 1936<br>• Equal Remuneration Act 1976<br>• Payment of Bonus Act 1965<br>• Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979<br>• Employer's Liability Act, 1938<br>• Employees State Insurance Act 1948<br>• The Personal Injuries (Compensation Insurance) Act, 1963 | |
| 3. | ESS3: Resource Efficiency, Pollution Prevention and Management | • Water (Prevention and Control of Pollution) Act, 1974, 1988;<br>• The Environmental (Protection) Act, 1986 Rules with amendments till date<br>• Air (Prevention and Control of Pollution) Act, 1981, 1987;<br>• Noise Pollution (Regulation and Control Act) 2000 and amendment till date<br>• Solid Waste | The majority of ESS3 requirements are addressed by the existing regulations and indirectly for resource efficiency, pollution prevention and management aspects. Further, provisions need to be made to commensurate mitigation measures as:<br>• To assess the resource requirement and implement technically and financially feasible measures for |

| S. No. | Environmental and Social Standards (ESS) | Equivalent National Environmental Policy and Regulations | Policy Gaps vs ESS and gap filling (redressal) Measures |
|---|---|---|---|
| | | Management Rules, 2016<br>• Hazardous & Other Waste (Management and Trans-boundary Movement) Rules, 2016<br>• The E-Waste (Management) Rules, 2016,<br>• Construction & Demolition, Waste Management Rules, 2016<br>• Motor Vehicles (Amendment) Act 2019<br>• Guidelines to Regulate and Control Ground Water Extraction in India (With effect from 01.06.2019),<br>• National Building Code 2016 and relevant standards of the Bureau of Indian Standards (BIS),<br>• Energy Conservation Building Code 2017. | improving efficient consumption of energy, water and raw materials, as well as other resources.<br>• Resource efficiency and pollution prevention to be assessed and minimize/control the release of pollutants to air, water and soil due to routine and non-routine circumstances, and with the potential for local impacts. |
| 4. | ESS 4: Community Health and Safety | • Air (Prevention and Control of Pollution) Act, 1981;<br>• Water (Prevention and Control of Pollution) Act, 1974, for Pollution-Prevention-and-Management;<br>• The Noise Pollution (Regulation and Control) Rules, 2000<br>• Solid Waste Management Rules 2016<br>• Hazardous & Other Waste (Management and Trans-boundary Movement) Rules, | While acts and rules cover for all of ESS 2 and ESS 4 requirements, gaps exist for community - community exposure to health issues.<br><br>The gaps need to be addressed through suitable provisions in ESMPs. Also, contractor obligation as part of ESMP for Community health and safety to include need for labour influx management, air and noise pollution control, proper disposal of wastes, sewage and |

| S. No. | Environmental and Social Standards (ESS) | Equivalent National Environmental Policy and Regulations | Policy Gaps vs ESS and gap filling (redressal) Measures |
|---|---|---|---|
| | | 2016<br>• Construction & Demolition, Waste Management Rules, 2016<br>• Harmonized Guidelines and Space Standards for Barrier Free Built Environment for Persons with Disability and Elderly Persons 2016,<br>• Occupational Safety, Health and Working Conditions Code 2019, | water, etc |
| 5. | ESS 5: Land Acquisition, Restrictions on Land use and Involuntary Resettlement | • The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 | Gap exists specifically related to aspects such as identification of non-titleholders as PAPs; cut off dates for non-titleholders and valuation of structures with depreciation. The gaps are addressed with suitable provisions in RPF. |
| 6. | ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources | • Biological Diversity Act, 2002,<br>• Wildlife Protection Act 1972 (WLPA),<br>• The Forest (Conservation) Act, 1980 and amendments and The Forest (conservation) Rules 1981 and amendments, State Forest Acts,<br>• Eco Sensitive Zone (ESZs) Notifications by MOEF&CC<br>• Wetland (Conservation and Management) Rules 2017, | The National and state legal provisions almost cover all requirements in ESS6.<br><br>Some subprojects are likely to be located in forest area within existing ROW. Hence, an overall project level Biodiversity Management measures will be prepared to cover ESS 6 requirements. |

| S. No. | Environmental and Social Standards (ESS) | Equivalent National Environmental Policy and Regulations | Policy Gaps vs ESS and gap filling (redressal) Measures |
|---|---|---|---|
| 7. | ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Tradition Local Communities | • Article 366 (25) of the Constitution of India<br>• Article 244(1) of Constitution of India - The Fifth Schedule under Article 244(1) of a subsequent Act of Constitution "Scheduled Areas" as such areas as the President may by order declare to be Scheduled Areas after consultation with Governor of that State.<br>• Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006<br>• Panchayats (Extension to the Scheduled Areas) Act, 1996 | While PESA Act requires clear communities acceptance vide a Gram Sabha resolution on the proposed activity with a pre-defined quorum of participation, ESS 7 requires ascertaining Free Prior and Informed Consent under three circumstances – impacts on land, cultural heritage and if requiring relocation. FPIC does not require unanimity and may be achieved even when individuals or groups within Indigenous Peoples/groups explicitly disagree. Hence, in such cases both Gram Sabha resolution and FPIC under these three circumstances will be required. |
| 8. | ESS 8: Cultural Heritage | Ancient Monuments and Archaeological Sites and Remains Act, 1958 | Provisions from the act meets the ESS 8 requirements.<br><br>ESS 8 will be applicable only if any of the sub project directly or indirectly impacting any cultural heritage or chance finds during the construction of sub-projects |
| 9. | ESS 9: Financial Intermediaries | Not relevant | |
| 10. | ESS10: Stakeholder Engagement and Information Disclosure | • Environmental Impact Assessment Notification-2006 and subsequent amendments<br>• RFCTLARR Act 2013<br>• Right to information Act 2005 | There is a provision of public hearing in EIA Notification 2006 and also RFCTLARR Act 2013 mandates consultations with affected persons. However, the statutory process does not require preparation of a SEP or |

| S. No. | Environmental and Social Standards (ESS) | Equivalent National Environmental Policy and Regulations | Policy Gaps vs ESS and gap filling (redressal) Measures |
|---|---|---|---|
| | | | equivalent document as well as conducting meaningful consultations and information disclosure, that is accessible to all stakeholders. Measures to address the gap include – preparation of SEF and SEP wherein process of stakeholder consultations with all stakeholders – affected, other interested and physically disadvantaged and vulnerable groups who will be identified and engaged by the project; information disclosure that will take place on project activities/ developments and feedback sought; and GRM mechanism that shall be put in place for the entire project, are described in detail. |

# CHAPTER 4: ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS

The environmental and social baseline conditions were collected from concerned departments, websites and published sources. The objective of collection of baseline conditions for ESMF is to identify and document the initial environmental and social conditions of the region that helps in identification of risks and impacts and determining mitigation measures. Environmental and social baseline conditions are described in the following sections.

## 4.1 Environmental Baseline conditions

Environmental baseline conditions of the project area including Tripura State are described below:

### 4.1.1 Location and Geography

Tripura is a state in Northeast India. The third-smallest state in the country, it covers 10491.69 $km^2$ and is bordered by Bangladesh to the north, south, and west, and the Indian states of Assam and Mizoram to the east. Tripura lies in a geographically isolated location in India, as only one major national highway, NH-8, connects it with the rest of the country. Five mountain ranges- Hathai Kotor, Atharamura, Longtharai, Shakhan and Jampui Hills - run north to south, with intervening valleys; Agartala, the capital, is located on a plain to the west.

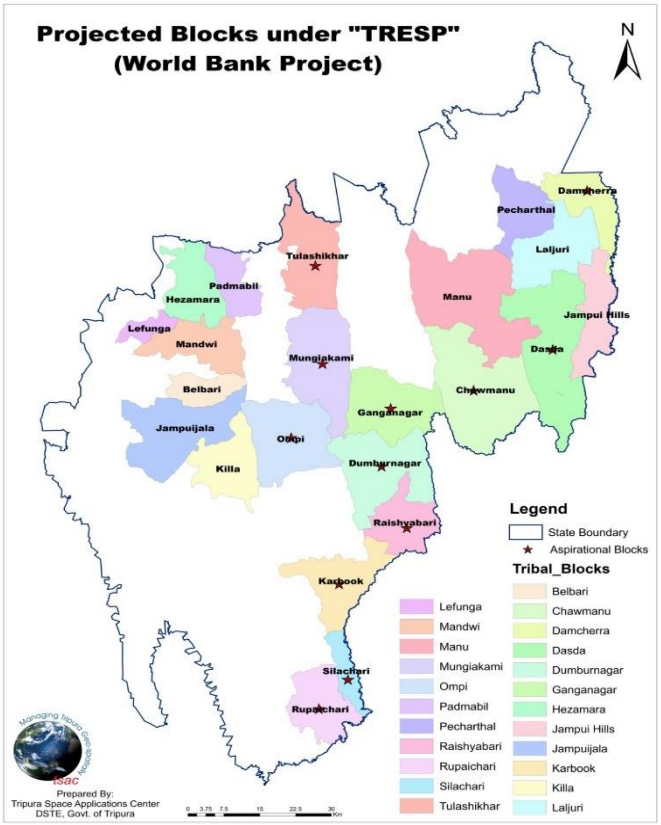


Figure 4.1:Project Block on Tripura State Map
*Source: TSAC, DSTE, Govt of Tripura*

The TRESP project area falls under 23 tribal blocks which embraces 8 districts namely West Tripura, North Tripura, Gomati, South Tripura, Dhalai, Khowai, Sipahijala and Unakoti. The project block on Tripura State is shown in **Figure 4.1.**

### 4.1.2 Topography and Physiography

The physiography of the project area is characterised by hill ranges, valleys and plains. Tripura state has anticlinal ranges of hills running north to south, from Boromura in the west, through Atharamura, Longtharai and Shakhan, to the

Jampui Hills in the east. At an altitude of 939 m, Betling Shib in the Jampui range is the state's highest point. The elevation map of project blocks is shown in **Figure 4.2.** The small isolated hillocks interspersed throughout the state are known as tillas, and the narrow fertile alluvial valleys, mostly present in the west, are called Doong. A number of rivers originate in the hills of Tripura and flow into Bangladesh. The Khowai, Dhalai, Manu, Juri and Longai flow towards the north; the Gumti to the west; and the Muhuri and Feni to the south west. Physiography of the Tripura State is shown in **Figure 4.3.**

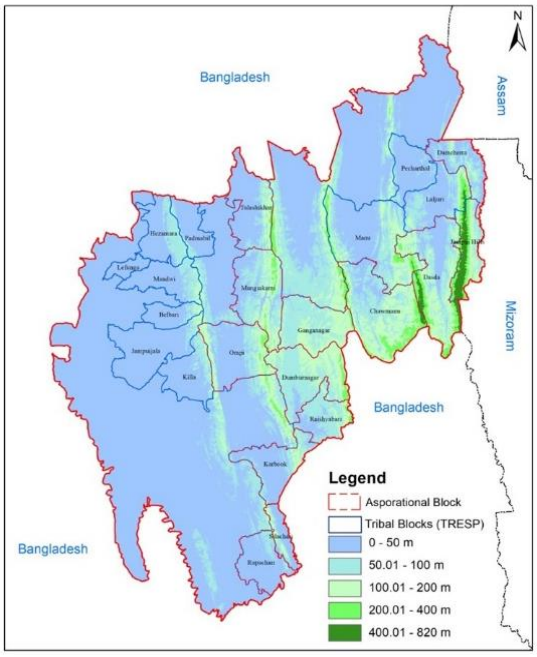


Figure 4.2:Elevation Map of Project Blocks
*Source: PMU TRESP*

Several of the blocks under TRESP project including the Aspirational blocks have hilly terrain. The undulating terrain of the project areas have an elevation range of up to 800+ meters around the Jampui Hills and should be accordingly considered for their respective terrain challenges and remoteness. As such most of the blocks have some portion at elevation range at more than 100 m. The Aspiration blocks is having elevation ranges 100 m to 400m, which higher than non-aspirational blocks. In general, the topography of the project areas are having more of hilly terrain, hillocks and undulating pattern.

The lithostratigraphy data published by the Geological Survey of India dates the rocks, on the geologic time scale, between the Oligocene epoch, approximately 34 to 23 million years ago, and the Holocene epoch, which started 12,000 years ago. The hills have red laterite soil that is porous. The flood plains and narrow valleys are overlain by alluvial soil and those in the west and south constitute most of the agricultural land. Geology map of the Tripura state is presented in **Figure 4.4.**

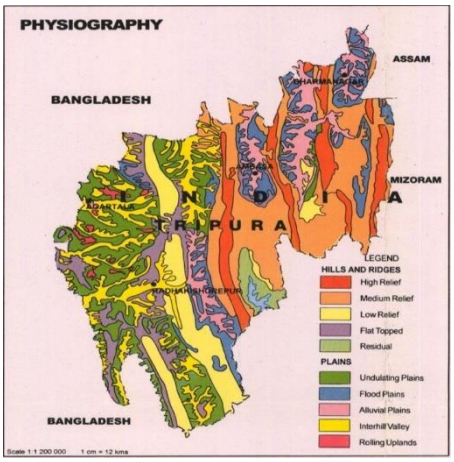


Figure 4.3:Physiography Map of Tripura
*Source: NBSS&LUP (ICAR), Nagpur*

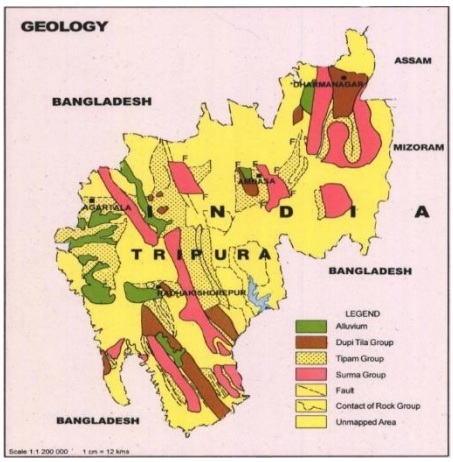


Figure 4.4: Geology Map of Tripura
*Source: NBSS&LUP (ICAR), Nagpur*

### 4.1.3 Soil

The soil in Tripura state and project area can be classified into five distinct categories. Soil map in Tripura state is presented in **Figure 4.5.** The project area is occupied by the red loamy soil and the sandy soil. The soil taxonomic units of this category are the *Typic/Ultic Hapludalfs*, *Typic Ustochrepts*, *Ultic HaplustaIfs*, *Udic Ustochrepts*, *Typic PaleudaIfs* and the *Typic U.stochrepts*. The soil type is the second most dominant type in the region covering 33.06 % of the land area. The three other types of soil that prevail in the region are the lateritic soil, younger alluvial soil and the older alluvial soil. The project area has mostly acidic soil with pH range 5.1-5.5. Organic content is moderate. Iron and Manganese content are sufficient. Phosphorus and Zinc content are low. Erosion, drainage and flooding are major issues as well.

The soil of project area are faced with the problem of rapid soil erosion. The erosion map of Tripura State is shown in **Figure 4.6**. This occurs due to chemical weathering with the high annual rainfall. Another factor that is responsible for the rapid erosion of soil in Tripura is the withdrawal of vegetation in the state which has caused the high velocity of the wind to remove the soil cover.

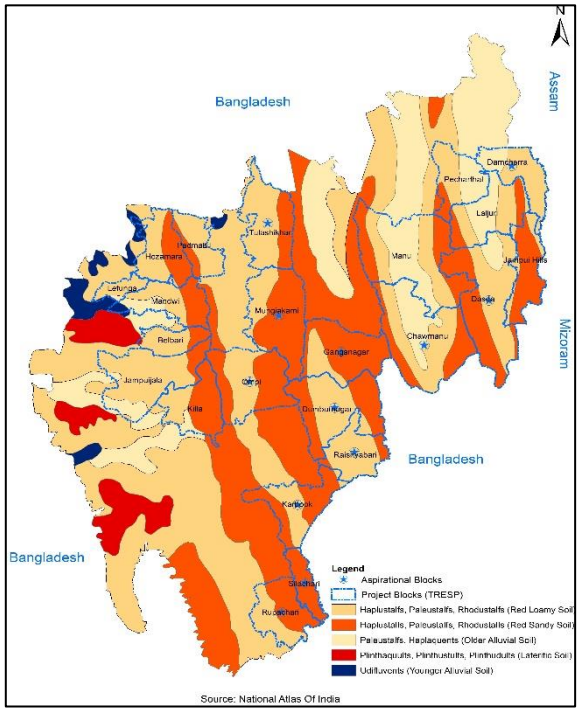


Figure 4.5: Soil Map of Tripura
*Source: National Altus of India*

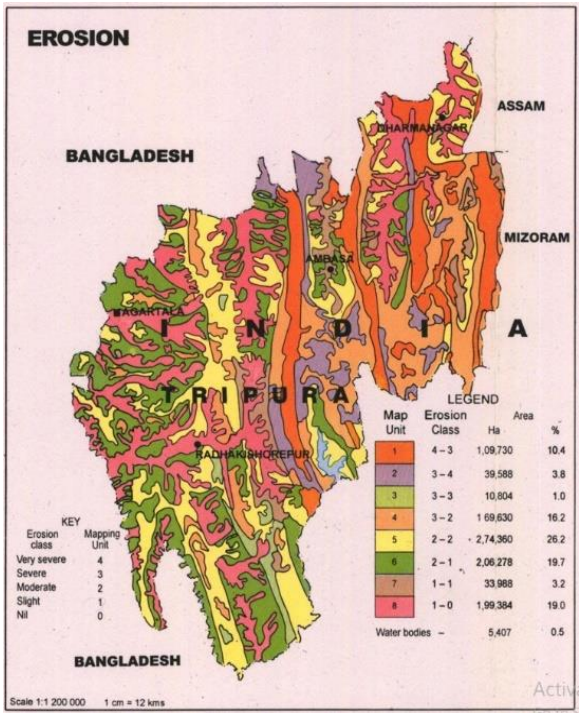


Figure 4.6: Erosion Map of Tripura
*Source: NBSS&LUP (ICAR), Nagpur*

Based on agro ecological zones of Tripura, the project blocks of North and east regions (Dumburnagar, Chawmanu, Dasda, Damcherra near Jampui Hills) is having red and lateritic soil. Red Loam and sandy Loam is distributed majorly in the project blocks of north and south region. Such soil is normally associated

with forest ecosystem and is rich in nutrient. Due to heavy rain fall in the region, such soil is prone to heavy erosion, especially in slope areas.

### 4.1.4 Climate

The climate of Tripura and project area exhibits a strong seasonal variation. The state is characterised by a warm and humid tropical climate with five distinct seasons namely, spring, summer, monsoon, autumn and winter. Spring starts from late mid-February & continues till mid March. Winter returns if there is rain a fresh in mid-February. Summer season starts from middle of March and reaches its peak in April - May. During summer months, the daily maximum temperature is 31°C while the mean temperature is 20°C. The winter (November end – February). January being the coldest month has mean daily minimum temperature of only 8.9°C and a maximum temperature of 25.2°C. Declining trend is observed from west to east while temperature range is approx. 9° – 31°C. Humidity is generally high throughout the year. In the summer season, relative humidity is varied from 50% to 74% whereas in the rainy season it is over 85%.

The monsoon generally breaks in the later part of May or first week of June and lasts till September. In Tripura, annual rainfall ranges between 1922 mm and 2855 m. Maximum rainfall is observed in the north-eastern parts of the state. Trends indicate average rainfall in last three years was 2120. Rainy Season overlaps between two seasons *i.e.* Pre-monsoon and Monsoon. The project blocks of north and east region (Chawmanu, Dasda, Damcherra near Jampui Hills) of the state, might receive heavier rainfall than the project's central and western blocks. Thunderstorm events are observed during pre-monsoon followed by the heavy rain during monsoon.

### 4.1.5 Ambient Air Quality

Ambient air quality of has been studied for the available stations of Agartala city by Tripura State Pollution Control Board (TSPCB). As per latest record (2021-2022), the monthly trend of Nitrogen Dioxide ($NO_2$), Sulphur Dioxide ($SO_2$) was found within permissible limit of CPCB standard while Suspended Matters in the air *i.e.* $PM_{10}$ & $PM_{2.5}$ shows slight above than permissible standard during post monsoon season. Overall, project area maintains good constant air quality, except for the winter seasons when burning of fossil fuels.

As per TSPCB record Deepavali 2020, the project block such as Ambassa bazar has ambient air quality standard within permissible limit. Overall air quality of the project area (tribal blocks) is under satisfactory category.

### 4.1.6 Drainage and Rivers

The state has 10 rivers namely Howrah, Gomati, Khowai, Dhalai, Manu, Juri, Feni, Burima, Deo & Muhuri running over a total length of 903 km across the state. All rivers are rain-fed and ephemeral in nature. All these rivers have

watershed/catchments areas of over 9433 ha covering 6 major hill ranges. There are six types of lakes with numbering of 408 wetlands, of which water logged (seasonal) are most numerous followed by oxbow lakes and other lakes/ponds.

### 4.1.7 Ground Water

In case of ground water, the primary hydrogeological unit of the State is composed of the semi-consolidated tertiary deposits. Friable sandstones, clayey sandstones, sandy shales and shales make up these formations. Three main zones can be created by further subdividing the semi-consolidated formations – a) centre region of the syncline valleys; b) unconfined aquifers of moderate regional area; c) intermontane and smaller valleys. Iron contamination is a major issue and affects Dhalai, North Tripura, South Tripura and West Tripura.

### 4.1.8 Agriculture

Tripura's economy is primarily agrarian, agriculture and its allied activities contribute nearly 18% to the state's Net Domestic Product with 42% of the population involved in this sector. Also, 88% of cultivated area is under rice cultivation. Tripura has three cropping seasons as pre-kharif, kharif and rabi; and 24% of geographical area can be attributed to net cropped area while 60% is under forest. TTADC has 73% of geographical area under forest and 20% under cultivation while only 13% net cropped area is under irrigation. Main crops grown are paddy, maize, pulses, oil seeds, jute and mesta, vegetables etc. Only 19% of TTADC area is under plain land category while other areas are characterised by gentle-steep slope or high area. Jhum is practiced by many as tradition or low-risk activity especially when ownership of land is absent. Main alternative offered to steer population away from Jhum is engagement in rubber plantation which has contributed to upliftment of people. Jhum is low-risk but yields less, is detrimental to the environment and allows no access to benefits of modern agriculture practices. Agriculture in tribal areas (TTADC) is less in comparison to other non-tribal areas due to the various reasons– lack of access to modern agriculture practices, economic situation, terrain, low yield from Jhum practices.

Allied sectors include animal husbandry and fisheries. Land holding is approximately 0.5 ha and livestock rearing is a crucial alternative taken by many as source of income. In TRESP blocks more prominence of livestock activities exists when compared to entire state. Fishery sector is also very crucial as demand for fish is highest in the country.

### 4.1.9 Rubber Plantation

Since its introduction in 1963 by the State Forest Department, Tripura has become 2$^{nd}$ largest producer of natural rubber in the country, after Kerala, accounting for about 9% of the total production of India. Tripura also has the second largest rubber growing area in the country, after Kerala State.

Rubber plantation is one of the important commercial crops of Tripura and the large amount of revenue is earned from this crop cash by the Government of Tripura. The botanical name of the rubber plant is *Havea brasiliensis* and it produces sticky white latex which is collected and processed to produce rubber. Rubber plantation gives long term continuous return for about 25 years. The map for area suitability for rubber of Tripura State is given in **Figure 4.7.**

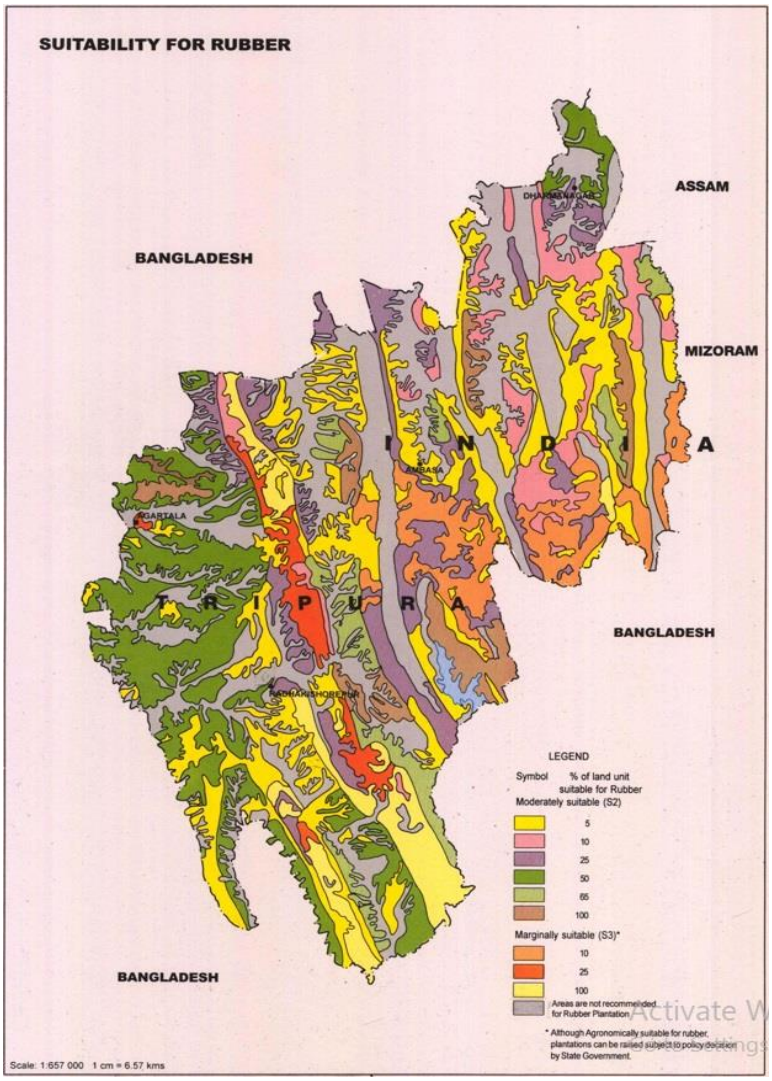


Figure 4.7: Suitability for Rubber Map of Tripura State
*Source: NBSS&LUP (ICAR), Nagpur*

### 4.1.10 Natural Hazard Profile

Tripura is frequently visited by natural disasters which play havoc on an already impoverished economy. Tripura is prone to earthquakes, floods, forest fires, cyclones, storm events, drought and landslides. The state has witnessed five cyclones during last two years where the damages to the properties were very high. During the current year, two tornadoes affected to Bishalgarh and Boxanagar areas and such kind of incidents repeated after eight years. It affected heavily to the houses, crops, livelihoods and injured to many people

within minutes. The tornado hit Bishalgarh on last 1st May 2012 damaged about 1000 houses and injured 45 persons within 10 minutes in that particular patch.

According to the Bureau of Indian Standards, the project area lies in seismic zone V. Past trends include seismic activities of Richter Scale 6.3 and 7.5 posing much danger to people and infrastructure. During 2011 & 2012, the state witnessed four tremors measuring above 4 on the Richter Scale where the epicentre were in the State. The last tremor was 4.2 on the Richter Scale at 11:31:44 hrs on 25th November 2012 located in West Tripura District.

### 4.1.11 Floods

Floods are a recurring calamity and particularly affecting the vulnerable sections. Nearly all the rivers are rain-fed and are prone to flood. During the past twenty years two massive floods occurred in 1999 and 2004 causing huge economic cost.
Low lying areas are quite prone to the onslaught of excessive rainfall. Erosion causes widespread destruction to land, roads and property during such events and water borne diseases also increase.

### 4.1.12 Landslides

Tripura state experiences landslides almost each year during monsoon season causing casualty and huge economic losses. Eight influencing factors such as slope, lithology, drainage density, rainfall, land use land cover, distance from rivers and roads and soil type play key role in landslide. Most of the areas of the state come under very low to moderate landslide susceptibility zones. Around 73.2% area of the state is found to be under low landslide susceptible zones during the pre-monsoon season, around 62% area is prone to landslides with moderate susceptibility during monsoon season and 68.5% area comes under landslides with low susceptibility zones during the post-monsoon season.

### 4.1.13 Drought

Although drought is not a periodic calamity in the project area, it does occur at times such as the dry spell of 1988-99. Caused by extremely low rainfall, the drought of December 1988 and April 1999 had resulted in extensive damage to crops across the State. There is shortage of drinking water as the level of the groundwater declines. This affects agriculture farmers to quite an extent.

### 4.1.14 Forest

The forest map of Tripura State is presented in **Figure 4.8.** The forest cover in Tripura State is approximately 60% of the geographical area of the state, out of which reserved forests constitute 66.33%, protected forest constitute for 0.03% and unclassified forest 33.64%. In term of forest canopy density classes, moderately dense forest is about 44.67%, open forest is 30.33%, very dense forest merely is 1.04% and non-forest is 23.27%. Shrubs cover merely 0.69%

area. Tripura state has six forest type as per Champion and Seth Forest Classification system, which belong to forest type group *viz.* Tropical Moist Deciduous Forest constitutes 88.94% while Tropical Semi Evergreen Forest constitutes 11.06%. According to the biogeographic classification of India, Tripura state falls in North-East biogeographic zone. Tripura hosts three different types of ecosystems as mountain, forest and freshwater.

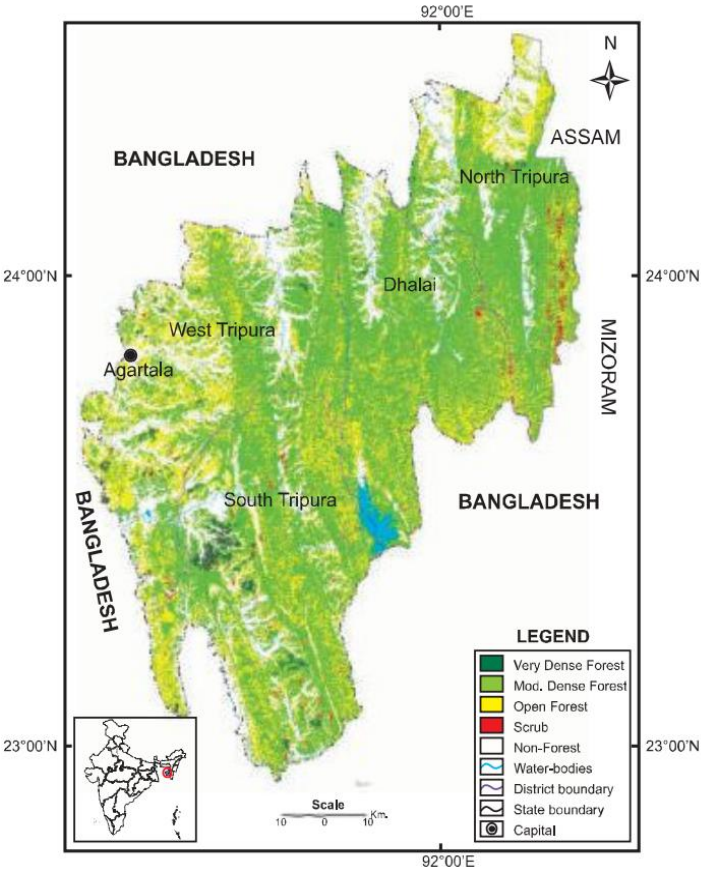


Figure 4.8: Forest Map of Tripura State
*Source: Forest Department*

In the project area, Tropical Semi Evergreen Forest on the hill slopes and the sandy river banks are dominated by species such as *Dipterocarpus, Artocarpus, Amoora, Elaeocarpus, Syzygium and Eugenia*. Tropical moist deciduous forests comprise majority of the vegetation as moist deciduous mixed forest and Sal predominant forest. The interspersion of bamboo and cane forests with deciduous and evergreen flora is a peculiarity of Tripura's vegetation. Grasslands and swamps are also present, particularly in the plains. Herbaceous plants, shrubs, and trees such as *Albizia, Barringtonia, Lagerstroemia and Macaranga* flourish in the swamps of Tripura.

As per Forest Department, 379 trees species, 320 shrubs species, 581 herbs species, 165 climbers species, 16 climbing shrubs, 35 ferns, 45 epiphytes and 4 parasites species are found in the Tripura state. Out of these species, 7 are endemic and 18 are rare plants, along with 266 species of medicinal plants in the State. Plant-Diversity Index (Shannon-Weiner) is reported 5.23.

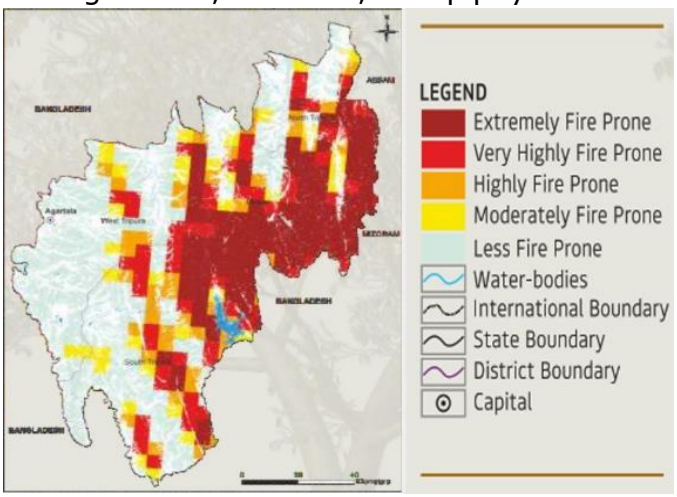


Figure 4.9: Forest Fire Map of Tripura State
*Source: Forest Department*

**Forest Fires**

Forest fires are unrelenting disaster occurring across the forest of the State. 32.27 % forest

are extremely fire prone, 18.18% very high fire prone, 10.53 % very high fire prone, 8.31% Moderately fire prone and 32.71% less fire prone. Forest fire map of the Tripura state is shown in **Figure 4.9.** (*Source ENVS - TSPCP*).

### 4.1.15 Wildlife Protected Area

There are 6 protected areas *i.e.* 4 Wildlife Sanctuaries and 2 National Parks in the Tripura state. The map for wildlife protected area of Tripura state including Elephant Corridor is shown in **Figure 4.10.** These protected areas are covering an area of 603.65 $km^2$, constituting 5.75% of the total geographical area of the state. Sepahijala WLS, Trishna WLS, Gomati WLS, Trishna WLS and Rowa WLS are 4 wildlife sanctuaries while Clouded Leopard National Park and Bison National Park are 2 national parks in the state. Notified elephant corridor has been noticed in the project blocks of Tulashikhar and Mungiakami under Khowai district. Movement of elephant near the few of the village habitations (Ramkrishnapur VC and Maharanipur VC) has been reported during site visit and also confirmed from PCCF Office at Agartal). No subproject is falling in the Eco-sensitive Zone of wild life sanctuaries and national park; and near notified elephant corridor.

In terms of Fauna, there are 90 mammal species from 65 genera and 10 orders in the Tripura state. 342 bird species are reported, of which about 58 are migratory species. There is high diversity of birds of prey, frugivorous birds, marsh birds and flower peckers.

### 4.1.16 Archaeological and Cultural Heritage Site

Tripura is a land of rich cultural heritage and traditions. The place has few ancient and interesting historical and heritage sites of national importance. Some of these places date back to the $7^{th}$ century. The archaeological sites are mainly dedicated to the Gods and Goddesses and are now prime tourist attractions. There are 8 Archaeological Survey of India (ASI) protected sites namely, Sculptures and rock reliefs of Unakoti Tirtha, Unakuti Range (Unakuti Range), Ancient Remains, Baxanagar (Baxanagar), Gunavati Group of Temples, Radha Kishorpur (Radha Kishorpur), Temple of Chaturdasa Devata, Radha Kishorpur (Kishorpur), Bhubaneswari Temple, Rajnagar (Rajnagar), Thakurani Tilla, Paschim Pillak (Pillak), ncient Mound called Shyamsundar Ashram Tilla, Baikhora Jolaibari(Baikhora Jolaibari), Ancient Mound known as Puja Khola and Paschim Pillak(Paschim Pillak). None of these, falls in the vicinity of the subproject. There is no state protected monument in Tripura State.

| S.N. | PA Name | Area in $km^2$ |
|---|---|---|
| 1 | Clouded Leopard NP | 5.08 |
| 2 | Bison NP | 31.63 |
| 3 | Gumti WLS | 389.54 |
| 4 | Rowa WLS | 0.85 |
| 5 | Sepahijala WLS | 13.54 |
| 6 | Trishna WLS | 163.08 |

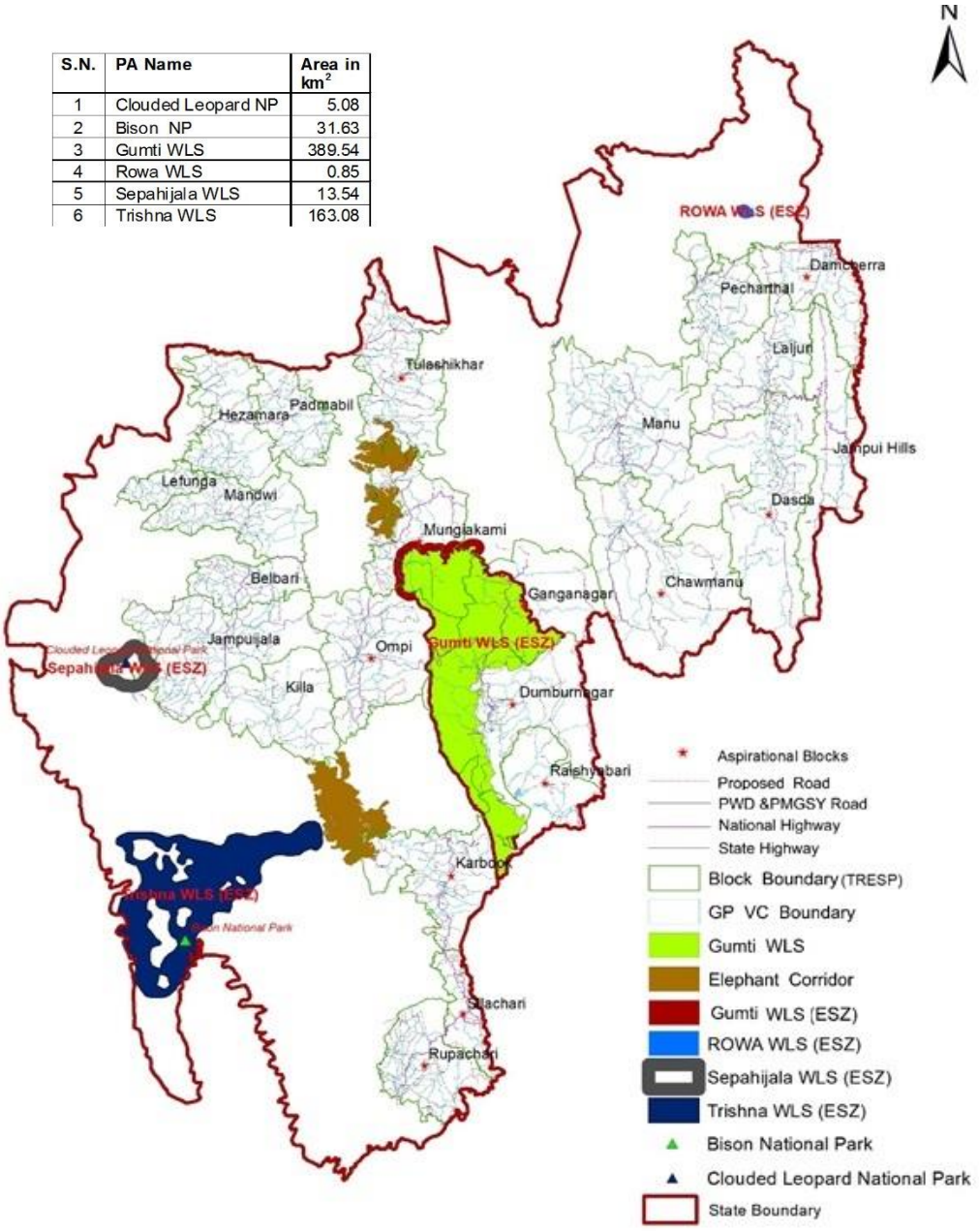


Figure 4.10: Wildlife Protected Area of Tripura State
*Source: Forest and Wildlife Departments*

## 4.2 Social Baseline conditions

This section gives a brief note regarding the overall situation of Tripura with detailed descriptions of the project districts. The comprehensive explanation covers GDP, annual growth rate, demography, sectors of economy, tourism, physical infrastructure, transport & linkages, gender profile, poverty, education and health.

### 4.2.1 Tripura State Profile

The North-Eastern state Tripura is the 3rd smallest State of India with total area of 10,491.69 sq. km. It shares borders with Mizoram and Assam and international border with Bangladesh. The demographic profile of the State and project district as per census 2011 is presented in **Table 4.1**:

**Table 4 1 Demographic Profile of Tripura State**

| Sr. No. | Parameter | Parameter Description | |
|---|---|---|---|
| 1. | Population | Total - 36,73,917<br>Male - 18,74,376; Female - 17,99,541 | 73.83 per cent of the state population live in the rural areas<br>Density is 350 persons per sq. km |
| 2. | Sex Ratio | 960 females for 1000 males | Between census 2001 and 2011, sex ration has increase<br>The sex ratio of the State is more than the national average (943 females per 1000 males) |
| 3. | Literacy Rate | General – 87.22%<br>Urban - 93.47 %; Rural - 84.90 % | The literacy rate of the State is more than the National Literacy Rate i.e., 74.04%. |
| 4. | Workforce Participation | Total - 14,69,521<br>Main - 11,59,561; Marginal - 3,09,960 | The overall Workforce Participation Rate (WPR) is 39.99%.<br>The work participation rate among the rural population of the State is 41.14%. |
| 5. | Scheduled Tribes | Population - 11,66,813 (31.8%)<br>Male - 5,88,327; Female - 5,78,486 | There are a total of 19 ethnic groups and many sub-groups.<br>The largest group Tripuri has a population of 5,92,255 |

**Socio-economic Profile of Tripura State -** There are 08 districts, 23 subdivisions, 58 rural development blocks, 591 Gram Panchayats, eight Jilla Parishads, nine Nagar Panchayats, 10 Municipal Councils and 1 Municipal Corporation. In addition, 587 village committees are working as Gram Panchayats under 6th Schedule areas. Autonomous District Council (ADC) was created for preservation of language and culture of Tripura Tribal Areas. It encompasses 68.10% of total area and roughly is home to one third of the population. The socio-economic profile of Tripura State is given in **Table 4.2.**

**Table 4.2: Socio Economic Profile of Tripura State**

| Sr. No. | Parameter | Parameter Description | |
|---|---|---|---|
| | | | |
| 1. | Economic profile | GDP - ₹ 5.89 million<br>Avg. Annual Growth Rate between 2001-2001 - 3.34%. | 42% of the population depends on agriculture and allied activities. |
| 2. | Education | Tripura has a total of 4,455 schools.<br>The total enrolment in all schools of the state is 767,672. | |
| 3. | Health | Birth rate - 13.9%<br>Infant mortality rate – 28%<br>Total fertility rate - 1.7% | Public Health Care Indices are better than national average<br>The state is vulnerable to epidemics of malaria, diarrhoea, Japanese encephalitis and meningitis |
| 4. | Market | Tripura has 555 rural markets, 30 urban markets and 21 regulated market for the agricultural commodities.<br>Only 53% are accessible. | |
| 5. | Transport | Tripura is connected to Assam and other Indian states by the National Highway 44 & also connected through air and rail. | |
| 6. | Gender Dynamics | 153 rape cases, 157 molestation cases, 119 female kidnapping cases and 22 dowry deaths were reported in Tripura at a Glance 2021(Directorate of Economics & Statistics, Planning (Statistics) Department, GoT) | |

### 4.2.2 Administrative Set-up

Tripura has 8 districts and 58 blocks. Out of which, 23 blocks (including 12 aspirational blocks) have been identified for TRESP. Details of districts, blocks and blocks identified for TRESP are given in **Table 4.3.**

**Table 4.3: Districts, Blocks and Blocks Identified Under TRESP**

| Sr. No. | District Name | Total Area (Sq. km) | Total No. of blocks | Total no. of Blocks identified for TRESP | Name of Blocks identified for TRESP |
|---|---|---|---|---|---|
| 1. | North Tripura | 1422.19 | 8 | 4 | Dasda Damcherra Laljuri, Jampui Hills. |
| 2. | Unakoti | 686.97 | 4 | 1 | Pecharthal |
| 3. | Dhalai | 2312.29 | 8 | 5 | Chawmanu, Manu, Ganganagar, Dumburnagar, Raishyabari. |
| 4. | Khowai | 1377.28 | 6 | 3 | Tulashikhar, Mungiakami, Padmabil, |
| 5. | West Tripura | 983.63 | 9 | 4 | Belbari, Mandwi, Hezamara, Lefunga. |
| 6. | Sepahijala | 1043.04 | 7 | 1 | Jampuijala |

| Sr. No. | District Name | Total Area (Sq. km) | Total No. of blocks | Total no. of Blocks identified for TRESP | Name of Blocks identified for TRESP |
|---|---|---|---|---|---|
| 7. | Gomati | 1522.8 | 8 | 4 | Killa, Ompi, Karbook, Silachari. |
| 8. | South Tripura | 1514.322 | 8 | 1 | Rupachari. |

The project will cover eight districts namely, West Tripura, North Tripura, Gomati, South Tripura, Dhalai, Khowai, Sipahijala and Unakoti. The comparison of Demographic & Socio-economic profile of project districts is given in **Table 4.4.**

As per the socio-economic data, March 2022, from Panchayat Department of Tripura, it is observed that the total population of Tripura State is 35, 64, 847, out of which, 14,45,574 are scheduled tribe. However, the scheduled tribe in the project districts is 8,98,822. Total scheduled tribes in India are 10,42,81,034. The major socio-economic indicators are:

### 4.2.3 Agriculture

Majority of rural households in 23 tribal blocks depend on agriculture and allied sectors for their livelihood but face significant social and economic disadvantages as compared to other blocks. Most households depend on agriculture for a living. Paddy is the primary crop followed by maize, pulses and oilseeds. The gross cropped area is low because of the hilly landscape and small landholdings which results in low productivity and marketable surpluses. The number of farmers in tribal blocks that practice jhum (slash and burn) cultivation is reducing over the years and farmers prefer to grow settled crops and engage in livestock and fishery for better returns and sustainability.

The options and earnings of small producers are restricted by inadequate post-harvest facilities, market access, and agricultural extension. The climate in Tripura is favourable for farming and horticulture crops like pineapple, jackfruit, tea, rubber, ginger, turmeric, and oranges. Tribal livelihoods also depend heavily on small animals like chickens, pigs, and goats, as well as fishing. However, due mostly to subpar production practices and technologies, these producers are unable to exploit the full economic potential of their livelihood activities. Despite the existence of several water bodies, the production per acre for fish, for instance, is noticeably low.

Tripura has approximately 38000 women Self Help Groups (SHGs) that cover women in 400,000 rural households indicating an outreach of 50-60% of all rural households in the State. However, only about one in two SHGs are linked to banks and draw an average credit in the range of Rs 100,000-150,000 (approximately Rs. 9,000-12,000 per SHG member). This is grossly inadequate for meaningful investments for unlocking opportunities for transformative

livelihoods activities. The GoI is implementing the Deen Dayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) in the State for creating strong community institutions led by women, with an emphasis on financial inclusion as a foundational strategy for poverty reduction and livelihoods enhancement.

### 4.2.4 Education

The literacy rate of Tripura is 87.22%, (male literacy is 91.53% and female literacy is 82.73 %), more than the National average of 74.37%. Tripura reports a 100% primary education Gross Enrolment Rate for all social groups. However, the drop-out rates are significantly higher in tribal blocks. Nearly one-in-four students drop out before completing their secondary schooling; another 25-30% of students do not transition to senior secondary schooling due to lack of sufficient seats in government-managed schools (especially in topographically challenging tribal blocks) that offer free of cost education.

Dropout rates for boys are consistently higher than for girls at all levels of schooling. School dropouts increase significantly after upper primary (grade 8), with nearly 31.3% of boys enrolled in secondary schools (grades 9 and 10) dropping out, compared to 28.3% girls. In fact, Tripura has the highest secondary school dropout rate for boys in the country. The consultations were conducted with the young boys and girls in the project preparatory stage. They submitted that this is mostly because of two reasons. The first is economic -most boys, particularly from tribal households, dropout to start work at a young age, so they can help their families. Those who do manage to complete school are not able to find jobs because they do not have the relevant vocational skills for trades that have a demand. Second, access and distance to secondary schools also present a constraint.

### 4.2.5 Health

The infant mortality rate in Tripura is estimated at 38 deaths (less than the National average of 41 deaths) before the age of one year per 1,000 live births It has increased more from the year 2015-2016 estimate of 27 deaths. Infant mortality rate is highest among scheduled tribes compared to other social groups. Further, it is higher for children whose mothers have below 10 years of schooling.

Malnutrition is higher among scheduled tribes than among children belongs to other categories. Stunting and underweight is somewhat higher for male children than female children.

### 4.2.6 Road connectivity

Tripura, due to its geographical location has poor road connectivity and poor access to facilities. While Tripura has 23,792 km of roads (853 km national highways, 1,057 km state highways, 461 km other district roads, 834 km border

roads, and 20,587 km village roads), it lacks all-weather connectivity to many habitations particularly in the tribal blocks. Existing roads are not well maintained.

Transportation of agricultural products to markets and processing facilities in Tripura is primarily provided by informal cartels networked with intermediaries. This is particularly challenging for marketing, especially from remote tribal locations as the poor quality of roads and the high transportation costs impede efficient connectivity between collection points, wholesale markets, and terminal markets.

### 4.2.7 Women

Female-work participation rates (37.5 %) among the Tripura tribals in 2001 were the second lowest (after Assam) in the NER and were also lower than the all-India average of 44.8 % for tribal women in 2001. This situation persisted until 2011-12, the last round for which labour force data is available for tribal women in Tripura.

Ray (2014) suggests that this may be because tribal women, while productive are engaged in supporting household enterprises: gathering fuel, tending to livestock or poultry, or producing handicrafts that their families then sell. As they are not paid for their work, they do not enter the ranks of workers. On the other hand, among the tribal women who work, there has been a sharp rise in the proportion of casual laborers working on plantations or on MGNREGA, the GoI's public works program.

**Table 4.4: Demographic & Socio-economic Profile of Project Districts**

| Sr. No. | Parameter | Demographic & Socio-economic Profile | | | | |
|---|---|---|---|---|---|---|
| | | **West Tripura** | **North Tripura** | **Gomati** | **South Tripura** | **Dhalai** |
| **District Demographic Profile** | | | | | | |
| 1. | Population[1] | Total - 9,18,200<br>Male - 4,66,152<br>Female - 4,52,048 | Total - 4,15,946<br>Male - 2,25,031<br>Female - 2,19,548 | Total - 4,29,868<br>Male - 219,505<br>Female - 210,363 | Total - 4,30,751<br>Male - 2,20,162<br>Female - 2,10,589 | Total - 3,77,988<br>Male - 1,94,544<br>Female - 1,83,686 |
| 2. | Sex Ratio | 970 females for 1000 males | 967 females for 1000 males | 967 females for 1000 males | 957 females for 1000 males | 944 females for 1000 males |
| 3. | Literacy Rate | General – 91.07 %<br>Urban - 94.04 %<br>Rural - 88.01% | General – 90.92 %<br>Urban - 90.92 %<br>Rural - 90.92 % | General – 91.07 %<br>Urban - 94.04 %<br>Rural - 88.01% | General – 84.68 %<br>Urban - 89.96 %<br>Rural - 79.16 % | General – 85.72 %<br>Urban - 91.31 %<br>Rural - 79.79 % |
| 4. | Scheduled[2] | Population - | Population - | Population | Population - | Population - |

[1] As per Census 2011
[2] Economic Review Report (2019-2020)

| Sr. No. | Parameter | Demographic & Socio-economic Profile | | | | |
|---|---|---|---|---|---|---|
| | | **West Tripura** | **North Tripura** | **Gomati** | **South Tripura** | **Dhalai** |
| | Tribes | 1,76,596 (19.2% of dist. pop.) | 1,17,106 (28.05 % of dist. pop.) | - 1,76,547 (41.07 % of dist. pop.) | 1,52,691 (34.45% of dist. pop.) | 2,10,608 (55.68 % of dist. pop.) |
| District Socio- Economic Profile | | | | | | |
| 1. | Economic profile | Agartala is situated in West Tripura and is an employment centre for many. Agriculture is the overall employer. | Primarily based on Agriculture, animal resource development and fisheries. Fisheries are one of key sources of income apart from tea, rubber and bamboo plantations. | Agriculture is the main occupation. A large population also engages in daily wage employment | Primarily based on agriculture, animal resource development and fisheries. Tea gardens along with rubber and bamboo plantations are some of the main employers | Most backward District of the state as per Panchayati Raj. Agriculture is the main employer and Jhum is still practiced. |
| 2. | Education | 311 Primary Schools<br>155 Middle Schools<br>103 High Schools<br>108 HS (+2) Schools<br>6 General Degree Colleges | 223 Primary Schools<br>160 Middle Schools<br>62 High Schools<br>41 HS (+2) Schools<br>2 General Degree Colleges | 287 Primary Schools<br>186 Middle Schools<br>74 High Schools<br>42 HS (+2) Schools<br>2 General Degree Colleges | 339 Primary Schools<br>155 Middle Schools<br>103 High Schools<br>108 HS (+2) Schools<br>6 General Degree Colleges | 311 Primary Schools<br>155 Middle Schools<br>103 High Schools<br>108 HS (+2) Schools<br>6 General Degree Colleges |
| 3. | Health | 4 Hospitals<br>17 PHC/RH<br>124 Dispensary/ Sub-Centre<br>1 Ayurvedic Institutions<br>6 Homeopathic Institutions<br>456 beds | 2 Hospitals<br>15 PHC/RH<br>94 Dispensary/ Sub-Centre<br>3 Ayurvedic Institutions<br>7 Homeopathic Institutions<br>320 beds | 3 Hospitals<br>13PHC/RH<br>143 Dispensary /Sub-Centre<br>6 Ayurvedic Institutions<br>8 Homeopathic Institutions<br>462 beds | 3 Hospitals<br>21 PHC/RH<br>156 Dispensary/ Sub-Centre<br>7 Ayurvedic Institutions<br>6 Homeopathic Institutions<br>520 beds | 4 Hospitals<br>17 PHC/RH<br>124 Dispensary/Sub-Centre<br>1 Ayurvedic Institutions<br>6 Homeopathic Institutions<br>456 beds |
| 4. | Linkages | West Tripura is connected to Assam and other Indian States by the National | North Tripura is connected by the NH 44 and rail network to rest India. | NH 8 running from Karimganj in Assam to Sabroom in Tripura, | The district is well connected by NH8 and railways to Agartala. Initiatives | Dhalai is connected to Assam and other Indian states by the NH 44 and 44A and rail |

| Sr. No. | Parameter | Demographic & Socio-economic Profile | | | | |
|---|---|---|---|---|---|---|
| | | **West Tripura** | **North Tripura** | **Gomati** | **South Tripura** | **Dhalai** |
| | | Highway 44. It is also having a robust rail network. | | passes through this district. 2 stations in the district, providing connectivity to Agartala and surrounding major cities of the state. | have been taken to set up a SEZ at Jalefa, Sabroom. Feni Bridge construction at Sabroom will improve the further trans-border communication. | network. |
| 5. | Gender Dynamics | Total of 86.2% (age 15-49) are literate and 30.9% are done schooling for 10 or more years (NFHS5). From various report, Crime against women/1000 female population is 7.72%. | 83.1% (age 15-49) are literate and 23.7% have done schooling for 10 or more years (NFHS5). From several reports, crime against women/1000 female population here is 4.21%. | Percentage of sexual crimes against women to total crimes against women in the district is 31.21%. | crime against women/ 1000 female population in South Tripura is 6.18 and 25.93% sexual crime against women to total crime against women. | Women age 20-24 years married before age 18 years is 38.9%. As per several reports, crime against women per 1000 female population in Dhalai is 3.97 and 49.32% sexual crime against women to total crime against women. |

# CHAPTER 5: POTENTIAL ENVIRONMENTAL & SOCIAL RISKS AND IMPACTS

## 5.1 Typology of Project Activities

The TRESP aims to promote socioeconomic development and improve the quality of life of rural communities living in tribal geographies in the state of Tripura through a multi-sectoral approach. More specifically, the project aims at improving the economic opportunity and transport connectivity for rural populations, including tribal women. Transport connectivity will be improved through a statewide rural road improvement program in support of rural road efficiency and accessibility to social and economic amenities such as markets, schools, and other services. Additionally, the project will support human capital development in these geographies by enhancing school complexes and learning environments, improving access to these facilities, addressing retention of secondary students, and improving early grade teacher capacities.

The activities to be undertaken under TRESP are likely to include:

- Agriculture and horticulture; fisheries (promoting semi-intensive aquaculture and piloting cage culture); backyard poultry; piggery and small-scale rubber processing, strengthening of postharvest infrastructure, improving marketing and value addition. These activities would be implemented in approximately 260 villages (out of a total of 391 villages) in 23 tribal blocks of Tripura (Component 1A).
- The activities pertaining to rural roads are envisaged to be largely brownfield in existing 150 roads covering a total length of approximately 529 km (30 km - Earthen Road to Black Top Road; 208 km - Brick Soled Road to Black Top Road; and 291 km – strengthening existing Black Top Road) across identified 12 aspirational blocks (out of 23 tribal blocks), with small chainages. (Component 1B)
- Construction and upgradation of school buildings (Component 2.1).

The thematic flow chart of project components of TRESP having the E&S risk potentials is shown in **Figure 5 1**.

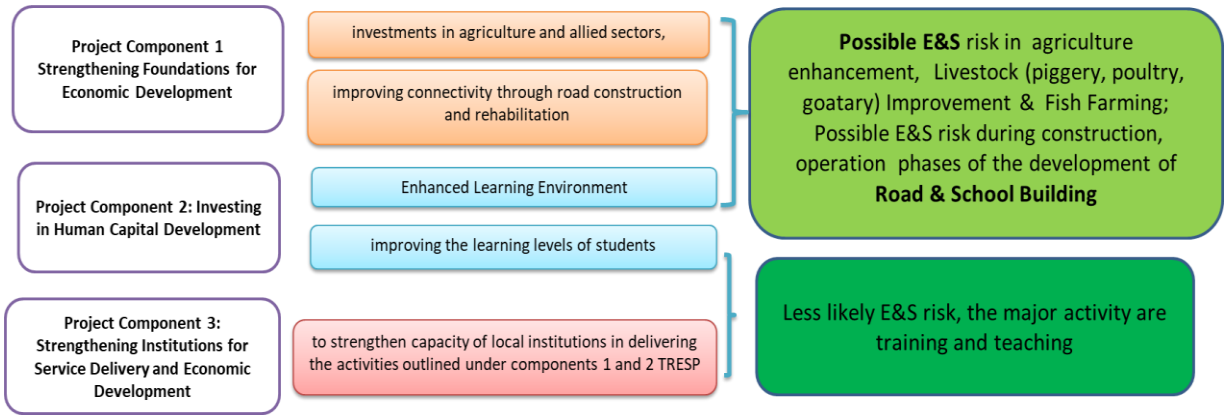


**Figure 5.1: Thematic Flow Chart of Project Components and E&S Risk and Impacts**

The above activities under TRESP are likely to involve beneficial and adverse environmental and social risks and impacts during various stages of the project. Identification of potential adverse risks and impacts is necessary to develop Environmental and Social Management Framework (ESMF) complying Environmental & Social Framework (ESF) and Environmental and Social Standards (ESSs). The project adopts a framework approach as the sub-projects have not been identified and delineated at this point of time. Thus, site specific risks and impacts have not been identified, but the activities are largely known. Site Specific ESMPs will be prepared as part of DPRs.

## 5.2 Environmental and Social Risks and Impacts of TRESP

The project is envisaged to benefit the people, especially tribals, living in the project area by increasing marketable surplus of high-value agriculture commodities, stabilizing production of livestock and fisheries (promoting semi-intensive aquaculture and piloting cage culture); improved road connectivity and transport for rural and tribal population, improved access to public services and institutions, enhanced quality of education and transfer of employable skills, improved livelihoods and incomes of farmers, improved market infrastructure and efficient use of water resources. The construction and upgradation of rural roads, schools and post-harvest facilities would ensure resilient services for improved road connectivity, education facilities, agriculture/aquaculture, fisheries and livestock, efficient market linkages, etc. By strengthening Farmer Producer Organizations (FPOs), adaptive governance systems and capacities, the project will empower the communities to efficiently develop climate resilience and better adaptation. The TRESP will bring significant benefits to the population in 23 predominantly tribal blocks on Tripura State.

Though the rural roads are of small chainages, and on existing alignments, where natural forest conversion is not envisaged on most of the roads as sufficient RoW is available, the risks and impacts due to the upgradation/ construction are rated substantial because: (i) they fall in areas surrounded by private lands, forested areas (comprising largely rubber plantations, bamboos and pockets of forests) but outside the wild sanctuaries, national parks, critical natural habitats and environmental sensitives zones; (ii) require felling of few trees in non-forest area, clearing of shrubs within existing right of way (RoW) that can potentially impact flora and biodiversity; (iii) occasional wild elephant movements in areas close to a few identified roads; (iv) geographic setting in hilly and undulating areas with loose/weak top soil at places that makes the area prone to minor slippages/landslides, erosion and impact on drainage; (v) environmental impacts during construction stage are health and safety of workers, traffic and road safety issues, work zone safety issues, excessive use of natural resources,, generation of dust, air and water pollution, generation of scarified bituminous wastes from existing blacktop roads, bricks wastes from brick sole roads, construction debris and wastes, spillage of hazardous wastes (used oil from construction camp, paint wastes, etc.); (vi) weak capacity of implementing agencies in managing environmental risks. The risks and impacts

due to construction of school buildings/ market extension services, agriculture and allied services are expected to be temporary, limited/localized and predictable and reversible.

The impacts due to construction of school/buildings include: (i) impacts related to construction works, including on community/users of the schools and occupational health and safety risks to workers; (ii) issues associated with operation and maintenance, including hazardous materials/chemicals and waste management in laboratories, students' meal kitchen; e-waste management; water management; emergency preparedness; menstrual hygiene management.

The potential risks from agriculture and allied activities are expected to be local and predictable with low footprint. These risks could arise from improper and overuse of agrochemicals and pesticides and subsequently soil and water degradation.

TRESP supports civil works within existing right of way (rural roads) and physical boundaries (schools) along with other interventions on education, agriculture, livelihoods and capacity building in tribal blocks. Even though Land Acquisition is not expected, civil works in about 10-20% of the rural roads will likely involve voluntary donation of small land parcels The borrower may propose to use part of land for the project obtained by way of donation subject to Bank's prior approval. and shifting of temporary roadside structures and vendors. These small-scale, resettlement impacts in sparsely populated, remote areas, will need to be screened, avoided and/or mitigated. About 70-80% of construction workers will be from local communities. Despite moderate levels of non-local labour, risks and impacts on tribal communities with low absorptive capacity will need to be monitored and managed. Construction activities will result in temporary reduction in access to school facilities, roads, and other public facilities causing inconvenience to road users, residents, school students and neighboring communities.

Given that project will engage closely with tribal communities in predominantly tribal areas with special constitutional provisions/safeguards, risks of inadequacies in meaningful consultations, broad community support, and social and cultural compatibility of project interventions will be important. Risk of excluding vulnerable and disadvantaged groups in project planning and benefits will need to be mitigated through inclusive social mobilization and beneficiary targeting. Project interventions are not expected to cause adverse impacts on land and natural resources under traditional ownership or customary use/occupation or local cultural heritage.

Consultations with communities and line agencies suggest Gender Based Violence (GBV) prevalence as well as access to GBV services to be low. The education department has constituted school level committees to deal with Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) and GBV related complaints. It also runs a dedicated grievance redress cell and child helpline.

The activities under TRESP will be a source of environmental and social impacts & risk, however these will be limited and largely localized and temporary. The potential environmental impacts and risks for sub-projects and proposed mitigation measures are summarized in following subsections with reference to the World Bank's applicable ESSs.

## 5.3 Environment and Social Risks and Impacts identified by each ESS

Anticipated environment and social risks and impacts identified by each ESS are described below:

### 5.3.1 Assessment and Management of Environmental and Social Risks and Impacts (ESS1)

The E&S risks and impacts, described in Section 5.2 above, will be managed through an Environmental and Social Management Framework (ESMF), including the Resettlement Policy Framework (RPF), Stakeholder Engagement Plan, Labour Management Procedures (LMP), and Environment and Social Commitment Plan (ESCP) during planning, design and implementation stages. The ESMF includes an exclusion / negative list that prohibits project financing and support to activities i) within wildlife sanctuaries, national parks, eco sensitive zones, critical biodiversity areas, Ramsar sites and other wetlands important from biodiversity point of view; ii) involving significant physical displacement; iii) causing adverse impacts on customary tribal lands, natural resources and cultural properties; and iv) opposition of tribal leaders as well as community institutions. The ESMF also includes procedures for undertaking E&S screening of sub-projects and for preparing site-specific Environmental and Social Management Plans (ESMPs), based on the generic ESMPs provided as guidance. The ESMF includes guidance on community consultations and participation in design and implementation of investments; Resettlement Policy Framework (RPF), guidelines on carrying out consultations for voluntary donation; and provisions for training of project staff and communities on E&S issues. Since the project will be implemented in predominantly tribal areas, key requirements of ESS7 are included in ESMF including RPF, Stakeholder Engagement Plan, the project's institutional arrangements, grievance mechanisms, intervention planning and implementation processes. The Word Bank Group's Environment, Health and Safety Guidelines (EHSG) are applied while developing ESMF and other ESF instruments. The clients propose to engage a Construction Supervision Consultant (CSC) to monitor the quality of work being done as well as the implementation of the sub-project specific ESMPs.

**(A) Rural Roads**

The anticipated impacts and risks of improper civil construction works for the

rural roads will include generation of scarified bituminous wastes from existing black top roads, bricks wastes from brick sole roads, disturbance to local hydrology and drainage, fugitive dust and gaseous emissions from the operation of construction machines, ready mix and hot mix plants, dust emissions during excavation and earth work, noise generation, water pollution due to discharge of untreated sewage and waste water from construction and labour camps, wastes generation, soil contamination due improper disposal of sewage/waste water, wastes and spillage of fuel oil, used oil and lubricating oil on the construction site/construction camps, potential inducement of soil erosion and possibility of minor landslides/slips, impact on drainage, local waterbodies, work zone safety, accidents injuries, traffic and public safety issues during construction, etc. Anticipated impacts during the construction stage will be localised and temporary and will be mitigated by the implementation of ESMP for Rural roads.

Even though Land Acquisition is not expected under TRESP, civil works in about 20% of the rural roads will possibly involve voluntary donation of small land parcels and potentially lead to social risks and impacts. The borrower may propose to use part of land for the project obtained by way of donation subject to Bank's prior approval. In such circumstances, Bank will require borrower to demonstrate that the principles available in ESS5 for voluntary donations are followed. The project might also require shifting of temporary roadside structures and vendors, risks of inadequacies in meaningful consultations, broad community support, and social and cultural compatibility of project interventions will be important. Risk of excluding particularly vulnerable tribal groups (PVTGs), shifting cultivators (Jhumias), landless, wage labour dependent households, minority households and antyodaya households in project planning and benefits. Despite lower levels of non-local labour, risks and impacts on tribal communities with low absorptive capacity will need to be monitored and managed.

**Mitigation Measures**

Site specific Environmental and Social Management Plan (ESMP) based on the generic ESMPs for rural roads provided as guidance with this ESMF will be implemented to mitigate the anticipated risks and impacts during design, pre-construction and construction stages of the rural roads.

**(B) Schools**

Anticipated environmental risks and impacts due to schools will include fugitive dust emissions from demolition of existing structures, dust emissions ($PM_{10}$ & $PM_{2.5}$) during site preparation & excavation of foundations; asbestos containing wastes occurrence and disposal, emissions from the operation of construction machines, cement mixing equipment; fugitive emissions from vehicles running to the construction sites and transporting construction materials; fugitive emissions during the unloading of cement bags; fugitive emissions during mixing of cement with other building materials; exhaust gaseous emissions ($NO_2$, $SO_2$, CO, un-burnt hydrocarbons) from DG sets and construction equipment; noise generation during demolition and construction activities, improper disposal of

wastes, spillage of fuel oil, used oil and untreated sewage from construction sites, contamination of soil from improper storage of fuel oil and disposal of raw sewage and solid wastes. Presence of labour will increase the SEA/SH and GBV risks for school students, women and adolescent girls in schools and villages. Construction activities will result in temporary reduction in access to school facilities, roads, and other public facilities causing inconvenience to road users, residents, school students and neighbouring communities. Some schools will need to move students into temporary school structures (as the old structures will be demolished).

**Mitigation Measures**

Environmental and Social Management Plan (ESMP) based on the generic ESMP for schools provided as guidance with this ESMF will be implemented to mitigate the anticipated risks and impacts during design, pre-construction and construction stages of the schools.

**(C) Agriculture and Allied Services**

The project will support agriculture and horticulture activities to increase the produce from selective crops, therefore excess use of pesticides is anticipated. There may be multiple impacts and challenges associated with use of pesticides and agrochemicals. Risks and impacts due to use of excessive use of pesticide include: pollution of ground and surface water resources; impact on fish and other aquatic life; development of pest resistance due overuse of pesticides; public health issues associated with chronic and acute exposure to pesticides; bioaccumulation or bio-concentration of pesticides in food chain; food safety issues; poisoning from improper use of pesticides by farmers and farm labour; impact from improper disposal of pesticide containers; accidental or incidental introduction of invasive species; limited capacity of farmers to adequately manage pesticides.

The potential localised risks and impacts from fisheries will be due to excessive use of fish feed and antibiotics; odour problem from dead fishes and deterioration of water quality and excess use of chemicals/nutrient in cage culture fisheries.

Anticipated risks and impacts from poultry will be breeding of flies and rodents, etc; and gaseous emissions *viz* Ammonia ($NH_3$) and Hydrogen Sulphide ($H_2S$) emanated from the excreta generated from the birds causes odour.

Obnoxious odour from piggery shed, disease outbreak, unhygienic conditions may pose health issues in the vicinity.

The potential risks and impacts anticipated from rubber processing activities are fume generation from use formic acid; water pollution; use of wood for heating

**Mitigation Measures**

Anticipated impacts from agriculture and allied services will be localised and reversible and will be mitigated by the implementation of ESMPs. Site specific Environmental and Social Management Plan (ESMP) for agriculture & horticulture, fisheries, poultry, piggery and rubber processing based on generic ESMPs annexed ESMF will be implemented during different stages of the project. Integrated Pest Management (IPM) Plan and Integrated Nutrient Management (INM) Plan will be prepared and implemented under the project.

### 5.3.2 Labour and Working Conditions (ESS2)

TRESP activities will involve engagement of direct workers and contract workers and staff hired by PMU and PIUs, as well as officials of Government of Tripura to carry out the project activities and primary supply workers. The direct workers are expected to be about 50 in PMU/PIU. The scale of labour deployment is expected to be moderate at the rate of around 20-30 workers per 10-kilometer road stretch and about 25-30 workers for every school complex. Most skilled workers are expected to be migrant workers from neighbouring states and likely to constitute about 15-20 percent of the total labour deployment. Producer collectives and Women's Federations are likely to engage paid workers for field level activities.

The key labour risks are related to low awareness and orientation among the labour force on health and safety issues at worksites as well as provisioning of safety measures; lack of inadequate facilities at worksites and labour camps; delayed or non-payment of fair and minimum wages; safety and security of women workers at worksites; migrant labour impacting vulnerable communities. GBV/SEA-SH related risks from construction are expected to be moderate due to largely local labour mobilization, robust supervision of the project by communities as well as PMU and PIUs. Conforming with ESS 2 requirements, a Labour Management Procedures (LMP) has been prepared to guide management of labour-related issues in TRESP.

**(A) Rural Roads**

Labor and working condition related risk and impacts from construction of rural roads would include safety issues like injuries/accidents/fatalities leading to even death while at works during civil construction and other project activities; Occupational health and safety risks to workers due to working on rural roads, hot bitumen, vehicles moving on the road, operation of equipment and machinery, exposure to air and noise pollution etc. will be addressed through OHS guidelines; short terms effects due to exposure to dust and noise levels while at work; inadequate accommodation facilities at work force camps, including inadequate sanitation and health facilities; non-payment of wages; discrimination in employment (*e.g.* abrupt termination of the employment, working conditions, wages or benefits etc.); sexual harassment at work; health risks for labor relating to communicable and transmittable diseases. In addition,

other risks that would be applicable for all types of workers would be as unclear terms and conditions of employment; discrimination and denial of equal opportunity in hiring and promotions/incentives /training opportunities; denial for workers' rights to form worker's organizations, etc.; and absence of a grievance mechanism for labor to seek redressal of their grievances/issues.

**(B) Schools**

Risk and impacts related to Labor and working conditions from construction of schools would include safety issues like occupational health and safety risks due to exposure of workers to unsafe conditions while working at heights, health hazards due to exposure to air and noise pollution from excavation, materials handling and operation of equipment & machinery, risk of electrocute due to unsafe electrical equipment, panels and cables, injuries/accidents/fatalities leading to even death while at works during civil construction; health issues due to poor accommodation, non-availability of drinking water and sanitation facilities at work site and labor camps, non-payment of wages; discrimination in employment (*e.g.* abrupt termination of the employment, working conditions, wages or benefits etc.); sexual harassment at work; health risks for labor relating to communicable and transmittable diseases. Other risks and impacts will include unclear terms and conditions of employment; discrimination and denial of equal opportunity in hiring and promotions; absence of grievance mechanism for labor for redressal of their grievances/issues; and lack of absence first aid and medical facilities,

**(C) Agriculture and Allied Services**

In agriculture and allied services including agriculture, horticulture, livestock (Poultry and Piggery), fishing and small-scale rubber process services risk and impacts related to Labor and working conditions would include:

- Occupational health and safety risks and impacts due to exposure of workers to unsafe conditions, health issues due exposure of dust and noise pollution; inadequate sanitation facilities, discrimination in employment, sexual harassment at work, etc., during small civil construction activities for creating postharvest infrastructure;
- Occupational health hazards during application of pesticide/agrochemicals in agriculture and horticulture crop fields;
- Occupational health and safety hazards during rubber processing;
- Health hazards for labor from obnoxious odour from piggeries and poultry activities;
- Weak grievance redressal mechanism for redressal of grievances/ issues.

**Mitigation Measures**

The key mitigation measures for labor and working conditions are:

- compliance with prevailing national and state laws and policies on labor safety,

wage payment, migrant workers, non- discrimination and prevention of sexual harassment;
- provision of adequate, safe and gender-differentiated facilities at work and camp sites;
- creating awareness and training around occupational health and safety including on SEA/SH and GBV COC;
- setting up systems for grievance redress for workers, incidents and accident reporting and preventive measures;
- ensuring appropriate terms and conditions of work;
- assigning clear contractor roles and responsibilities related to labor and OHS in general and specific conditions of the contract and reflecting them in standard bid documents;
- sensitizing local communities and workforce on issues of labor influx and code of conduct;
- creating OHS Plans and Emergency Response Procedures. Contractors will be responsible for providing adequate accommodation, water, sanitation and Health facilities.

### 5.3.3 Resources Efficiency and Pollution Prevention and Management (ESS 3)

Environmental risks and impacts are anticipated due to traditional use of natural resources such as sand, aggregate, gravels, bricks, earth, water, electricity, etc. and generation of pollution from civil construction of rural roads and schools; and agriculture and allied activities. Risks and impacts as per ESS 3 from various project activities are described below:

**Rural Roads**

Traditional use of construction materials and technologies for rural roads construction will put pressure natural resources like aggregate, water and energy etc. The construction works of rural roads are likely to have potential for air pollution due to fugitive dust emissions from the excavation of existing roads, earth works; particulate and gaseous pollutants in the form of $NO_2$, $SO_2$, CO, un-burnt hydrocarbons and particulate matter ($PM_{10}$ & $PM_{2.5}$) emissions from operation of construction equipment; materials transporting vehicles, DG sets, etc; contamination of soil and water resources from improper disposal of scarified bitumen wastes, brick wastes, solid wastes; sewage and waste water from construction works sites and labor camps; soil erosions; silting and increase of turbidity of run off and surface water bodies during rains, air pollution from the hot mix plants, etc.

**Schools**

Improper building design without passive design considerations and efficient daylight and ventilation may lead to increased energy consumption during the operation stage. Lack of consideration to local climatic conditions may lead to buildings with lower thermal comfort and high energy use. Use of construction

water without proper storage and improper cement concrete curing methods will be led to wastage water resources.

The construction works at schools are likely to have potential for air pollution due to fugitive emissions from the demolition of existing schools; asbestos containing wastes occurrence and disposal; transportation and improper handling of construction materials; excavation of foundations; noise generation from construction machine operation and construction activities, air pollution from wood burning for cooking of food by laborers; contamination of soil and water resources from different types of wastes (solid wastes, e-wastes, etc); sewage and waste water from construction works sites and labor camps; etc.

**Agriculture and Allied Services**

Degradation of ambient air quality is anticipated due to improper use of pesticide and agrochemicals, contamination of water and soil due to excess use of pesticides and improper disposal of pesticide containers. Air quality in the vicinity may be degraded due to obnoxious odour from the piggery and poultry activities. From the rubber processing, fumes generated from formic acid and burning of wood for heating may impact ambient air quality. In addition, rubber processing will also generate effluent, which can contaminate soil and water resources, if not treated before disposal.

**Mitigation Measures**

The project activities pertaining to construction and upgradation roads within existing RoW, construction of school buildings and post-harvest facilities within existing premises would consider resource efficiency and pollution control and management aspects during design/Detailed Project Report (DPR) preparation and construction stage. The purpose will be to improve the quality of physical environment, enhance health/safety and reduce the environmental footprint.

For resource efficiency, focus will be on minimizing impact on use of raw material and natural resources and on minimising water demand during construction through: i) reuse of scarified bituminous wastes and excavated brick wastes in rural roads construction and conservation measures for construction of roads and schools, and; ii) reuse of demolition wastes from existing schools. The project will also emphasize on: improving natural light and ventilation in school buildings and enhancing energy efficiency; increasing water use efficiency for agriculture and aquaculture; and minimising greenhouse emissions.

Optimal use of natural resources like aggregate will be essential with the use of best construction practices and reuse of construction and demolition wastes from existing rural roads and schools. In the 15 % of rural roads, innovative road construction technologies namely Nano Technology, Reclaimed Asphalt Pavement (RAP), Full Depth Reclamation (FDR), etc. Waste bricks from brick sole road shall be used for brick aggregate, which will also used in road construction.

In addition to ESF, the World Bank Group's Environmental Health & Safety Guidelines will also be taken care in the project through ESMPs preparation and implementation. The project activities wise generic ESMPs comprise pollution prevention and management measures for the project specific activities. These have been prepared as part of Annexure of ESMF.

For pollution prevention and management, the project will focus on (i) waste management, including hazardous and e-waste; and sewerage/waste water from labor camps and construction sites (ii) stabilization of hill slopes and erosion prone areas by retaining walls and provision cross drainage structures (iii) measures for controlling dust, odor and noise pollution; (iv) measures in Integrated Pest Management (IPM) plan and Integrated Nutrient Management (INM) plan will be prepared for optimal use of pesticides and fertilizers in agriculture and horticulture fields.

With respect to Carbon Emissions, the environment studies will estimate GHG due to implementation of Component 1 (rural roads, agriculture and allied activities), identify feasible measures for reducing such emissions, creating carbon sink, and climate resilient measures to suit local needs and challenges, and by possible use of alternative technologies.

The ESMPs will be part of bids and contracts and environmental mitigation cost will be budgeted in scope of contractor by including ESMP items in Bill of Quantity. The implementation of mitigation measures shall be monitored, documented and reported in MPRs/QPRs. Periodic trainings will be provided to staffs of both contractors and PIUs. The integration of ESMP in civil construction work bidding document is one of Society for TRESP's commitment in the Environmental and Social Commitment Plan.

### 5.3.4 Community Health and Safety (ESS 4)

The anticipated risks and impacts on community health and safety during the project activities are described below:

### (A) Rural Roads

The rural road construction activities may result risks and adverse impacts on the community health and safety by inefficient design of rural roads causing obstruction to natural drainage, minor land slide/slip, water logging; dust emissions and noise levels during road construction, soil erosion, injuries and accidents due to poor traffic management construction works and, odor and mosquito from disposal of untreated sewage and waste water from labor camps, SEA/SH and GBV related incidents, etc.

The anticipated risks to community health and safety from rural roads may be largely due to improper scheduling of construction works, disposal of untreated sewage and waste water from labor camp and construction sites, unsafe disposal of hazardous and solid wastes, haphazard dumping of construction wastes, differences in operating speeds, road geometry, functionality, enforcement level,

accidents due to unmanaged traffic on narrow rural roads, etc.

**(B) Schools**

Risks and impacts on community health and safety are anticipated due to inefficient design of the new school buildings leading to issues like water stagnation, health implications, community safety issues, etc; poor air circulation, insufficient ventilation and inadequate natural lighting, difficulties in access and safety issues for persons with disabilities, etc. During construction stage risks and impacts on community health and safety are likely due to odor and mosquito from disposal of untreated sewage and waste water from labor camps, SEA/SH and GBV related incidents, etc.

**(C) Agriculture and Allied Services**

The risks and impacts on the community health and safety are anticipated due to improper selection of crops for diversification resulting excess use of groundwater for agriculture/ horticulture; community health issues associated with chronic and acute exposure to pesticides; bioaccumulation or bio-concentration of pesticides in food chain; food safety issues; unhygienic conditions and obnoxious odour from piggery shed and poultry, disease outbreak in livestock; improper and excess use of chemicals/nutrient in cage culture fisheries, etc. Further, improper disposal of fishery wastes (like diseased dead fish) may lead to growth of microbes and flies in the vicinity and community may become vulnerable to diseases.

**Sexual Harassment/ Sexual Exploitation & Abuse**

The gender related risk assessment is the core of World Bank's approach to developmental challenges. The World Bank aims to actively address gender inequalities, by identifying issues and taking active steps to mitigate them. It seeks to integrate activities promoting gender equality and ensures that the World Bank is responsive to the different needs, constraints, capacities, and interests of both male and female in the project activities.

The World Bank's Good Practice Note (GPN), 2020 provides a comprehensive understanding of the nature and kinds of GBV. The GPN establishes an approach to identifying risks of GBV, in particular sexual exploitation and abuse and sexual harassment that can emerge in this project which involves civil works contracts. TRESP proposes civil works for upgradation of short segments of rural roads and upgradation/construction of school buildings in sparsely populated rural areas with significant presence of tribal communities.

The project will rely on local communities for sourcing construction labor, social mobilisers and community trainers and resource persons, and the requirements for labor camps and external temporary workers will be low. The construction labor is expected to be drawn largely from local communities and the SEA/SH risk from migrant labor force is low.

The influx of small numbers temporary workers and followers in the host community can lead to minor adverse social and environmental impacts on local communities, especially if the communities are rural, remote or small. Such adverse impacts may include Gender Based Violence and school dropout etc. This labor influx may have remote possibility of incidence of exploitative sexual relationships and human trafficking, however suitable mitigation measures will be taken eliminate the possibility of Sexual Harassment/ Sexual Exploitation & Abuse in the project.

The consultations carried out with the local community and personal discussions with women residing in the project areas, revealed that risks related to SEA/SH is low. Complying with the provisions of ESS 2, the project shall provide separate facilities for labourers including drinking water, washrooms, etc. The project shall ensure the labourers do not use school facilities and shall avoid interaction with students and staff.

**Mitigation Measures**

TRESP aims to plan, design and implement "resilient" rural roads for improving community health and safety which are already at high risks of earthquakes (Zone V, the severe risk earthquake zones), minor landslides, heavy rainfall, erosion and rain cuts in hilly areas, etc.

Anticipated risks and impacts related to community health and safety can be easily mitigated by various and safety and environmental mitigation measures, such as design of school buildings and rural roads, post-harvest infrastructure as per applicable environmental guidelines and regulations, proper construction and labor management as per ESMPs, traffic and speed management, proper road safety signages, improved surfacing, awareness among the rural roads and schools users; and farmers, etc. The contractor responsible for construction/upgradation of rural roads will prepare a traffic management plan for ensuring safety and smooth movement of traffic.

As the project would implement agriculture and allied activities, the potential risks will be mitigated through promoting appropriate and optimal use of agrochemicals to prevent adverse human health impacts from exposure during use, or accidental ingestion or misuse and following the Integrated Pest Management and Integrated Nutrient Management plans to be prepared under the project.

About 70-80% of construction labor will be sourced from local communities and will work on medium scale construction work on rural roads and school buildings. Hence potential of health, safety and SEA-SH and GBV risks for villages and schools as project workers/contractors is low to moderate. Apart from contractors and the labor workforce, the SMCs, Teachers, Students and Women's Federations will be provided training on supervising and mitigating CHS as well

as SEA/SH and GBV risks. Suitable signages will be used at potential risk places. Community Health and Safety, SEA/SH and GBV related incidents will be monitored and reported by PIUs. Further, all works, and operations will be planned, designed and implemented to comply with the World Bank Group's Environment, Health and Safety Guidelines (EHSG) and applicable codes and guidelines as per country's regulations to mitigate anticipated impacts in community health and safety. Awareness plan on HIV/AIDS and other diseases has been included in the LMP, which has implications on the local community, especially women.

### 5.3.5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement (ESS 5)

The road upgradation/rehabilitation will involve civil works for rural roads and school buildings. Construction for rural roads and school buildings will be within existing right of way and existing school boundary, respectively. The social risks relate to voluntary donation of small land parcels and temporary displacement of non-titleholders. The borrower may propose to use part of land for the project obtained by way of donation subject to Bank's prior approval. In such circumstances, Bank will require borrower to demonstrate that the principles available in ESS5 for voluntary donations are followed. These will involve unavoidable minor impacts on land and livelihoods which will be mitigated through the provisions of ESS5. As per experience in the State, about 10-20 percent of rural roads may need such donations and relocations. Apart from small scale impacts, significant physical or economic displacement due to TRESP interventions is not expected and has been placed in exclusion/negative list, along with any other subprojects involving a) land acquisition of tribal households; b) adverse impacts on customary tribal lands, natural resources and cultural properties; c) opposition from village committees and Gram Sabha, including women's federations. This exclusion/negative list will be updated, reviewed and revised during implementation based on project experiences monitoring field visits and due diligence.

All black-top rural roads (291 km) will be constructed within existing available RoW however for some brick sole (208 km) and earthen roads (30 km) may require additional small size of land. The consultations with landowners indicate that they are voluntary willing to donate required land for the proposed road development.

**Mitigation Measures**

Resettlement Policy Framework (RPF) as part of ESMF will provide guidance on the procedure to be adopted on voluntary land donation, especially with respect to informed consultations with individual donors, providing sufficient time and choices to them for taking decision related to land donation, formally documented willingness and objective facilitation of the process by the local body. When applicable, Resettlement Action Plans (RAPs) will be prepared to mitigate the loss of structures and livelihoods by the non-titled holders. The E&S

screening checklist and RAPs will be prepared as an integral part of the detailed subproject report (DPR) preparation process. The rehabilitation and relocation assistance provided to the project affected peoples (PAPs) will follow the entitlement matrix outlined in the RPF. The RPF will also include the specific requirements that apply to Schedule VI areas under the LARR Act 2013 and other laws on local self-governance, as well as the requirements of ESS7.

### 5.3.6 Biodiversity Conservation and Sustainable Management of Living Natural Resources (ESS 6)

The project will not support rural roads that are likely to pass through forest and requiring forest land diversion; passing through wildlife sanctuaries, national parks, critical/natural habitats, eco-sensitive zones. The ESMF includes an exclusion/negative list of activities in the screening criteria that will eliminate the possibility of activities being taken up in critical natural habitats/eco-sensitive zones having species with critical biodiversity values. However, many rural roads are in forest areas comprising largely rubber plantations, bamboos and pockets of forests. In the discussions with forest personnel and villagers indicated that occasional elephant movement is observed near few of the rural roads. Most of subprojects are out of the forest and conservation areas; therefore, diversion of forest land is not likely to be required in most of subprojects. In case any diversion of small area of forest land for rural roads is required, prior forest clearance will be obtained, and biodiversity management measures will be prepared by PMU/PIUs and implemented for these sub-projects. During construction near forests, workers may collect forest products and poach small common wild animals. Therefore, some risks and impacts are anticipated on the biodiversity. During operation of the improved roads, direct and indirect impacts to forest habitats and ecosystems are also not expected.

The project activities including schools, post-harvest infrastructure, agriculture and allied services will be outside the forest, wild sanctuaries, national parks, Ramsar sites, critical habitats and environmental sensitives zones.

Through agriculture-allied activities, the project aims to enhance agriculture productivity by providing high quality seeds and better fertilizers; to farmer and reducing the slash and burn practice in tribal areas. Thus, the project will benefit the region in ecological term by reducing the Jhum cultivation practices, reducing associated soil erosion and conservation of native plant species in forest areas. No direct adverse impact on flora and fauna is anticipated due to agriculture and allied activities. During livestock interventions, inappropriate breed selection, introduction of exotic species which can not to be acclimatize with the local climate may also pose risk in terms of increase mortality rate and further loss. In fisheries activities, there is chance of having introduction of exotic species of fisheries if not handled properly.

In the enhancing learning environment in school complexes, no direct impact on biodiversity and natural habitat is anticipated as school construction will be done within existing school complexes.

**Mitigation Measures**

- Measures to manage impacts on biodiversity will be prepared, adopted and implemented for those few specific rural road sub-projects where potential risks and impacts are identified during screening of subprojects.
- During construction, workers will be prohibited from using and collecting forest products, which will be spelled out in the workers code of conduct and ESMPs.
- The provisions will also be made in the bidding document to ensure that no materials for construction activities are sourced from any critical habitats, protected areas, forest areas and eco-sensitive zones for works/activities supported under the project.
- During construction works, relevant measures if required will be included in ESMPs, to prevent any possible impact on aquatic life due to discharges of untreated sewage and wastewater from worksites and/or improper disposal of debris in nearby water bodies and ponds.
- For trees felling (likely in small numbers) for the construction works under the project, requisite permission will be obtained from the Forest Department/Competent Authority prior to initiating civil works and provisions for compensatory plantation (as per condition of permission for tree falling) in line with regulatory norms will be built into the sub-project Detailed Project Reports/estimates.

### 5.3.7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities (ESS7)

TRESP interventions will extend over 23 predominantly tribal blocks where tribals, comprising 19 sub tribes, represent more than 80% of the population. These project areas are governed by the Tripura Tribal Areas Autonomous District Council (TTAADC) in line with the local tribal culture, customs, traditions, language as well as development priorities.

Given that TRESP will engage closely with tribal communities in predominantly tribal areas with special constitutional provisions/safeguards, the potential risks & impacts are: inadequate consultations and community engagement with village committees, SMCs and women's cluster level federations especially during subproject design and implementation planning; lack of access to school education, farm advisories & extension and grievance services in the native tribal language; inadequate community support from different sub tribes and village committees; incompatibility of proposed interventions with traditional livelihood and farming practices. Project interventions will require donation of small parcels of private lands from tribal households. Some of the road stretches will adversely impact the structures and livelihoods of non-titled holders during construction. Risk of excluding vulnerable and disadvantaged groups, especially PVTGs and minorities, in project planning and benefits will need to be mitigated with inclusive social mobilization and geographic and beneficiary targeting. Project interventions are not expected to cause adverse impacts on land and

natural resources under traditional ownership or customary use/occupation or local cultural heritage. Since subprojects involving physical displacement of tribal households and adverse impacts on their traditional lands, natural resources as well as cultural heritage are excluded, the requirement for FPIC is not anticipated.

TRESP components activities are planned exclusively for tribal blocks of Tripura, and tribals will be the overwhelming majority among the estimated 75,000 project beneficiaries, the requirements of ESS7 have been embedded in the project design, the ESMF, the SEP and RPF. During community stakeholder consultations, separate discussions were held with tribal households, traditional leaders and women to seek their suggestions and feedback on the proposed interventions.

TRESP activities, institutional arrangements and implementation processes comply with ESS7 requirements for recognizing, respecting and preserving indigenous knowledge, culture and practices; avoiding or minimizing adverse impacts, socially inclusive and culturally appropriate benefit sharing processes, meaningful consultations throughout project cycle. The SEP and ESMF includes guidelines for undertaking consultation and information dissemination with the community in local tribal language to ensure awareness, participation and to elicit feedback that can be used to design culturally appropriate interventions. Interventions in agriculture and schools will be aligned to traditional practices and vocational needs of the tribal households. During project preparation and subproject planning, participatory and meaningful consultations will be held with local tribal communities, village committees, school committees and traditional community leaders, to ensure adequate awareness about the project, its intended benefits and risks as well as ownership and participation in the project. The SEP includes multiple modes of engaging with tribal communities as well as information sharing, disclosure and grievance redressal mechanisms. The ESMF includes a negative list that prohibits project support to any interventions with potential to i) adversely impact customary tribal lands, natural resources and cultural properties; ii) create local conflict and opposition by tribal leaders and community institutions; and iii) create significant physical and economic displacement in project area. The RPF includes details of process to be adopted for screening subprojects for adverse impacts, preparation of RAP and provision for suitable rehabilitation and relocation assistance to affected tribal households. The project will be complying with all legal and administrative provisions applicable in Schedule VI areas.

**Mitigation Measures**

Key measures related to meaningful and informed consultations, culturally appropriate information disclosure, community support, land take and tribal heritage will be adopted and implemented.

### 5.3.8 Cultural Heritage (ESS 8)

TRESP is proposed to be implemented in 23 tribal blocks of the State. Given the

vast geographical area over which several sub-projects would be located under various components. The possibility of cultural heritage (such as sacred groves, religious places, burial sites etc) being impacted by certain sub-projects can not be ruled out. The project preparation will determine the presence of all such cultural areas assets and determine significance of the project's direct or indirect impacts on these. The proposed sub-projects will be screened at the design stage for potential cultural heritage impacts. Consultations with communities will also be utilized to screen any sensitive issues related to cultural heritage. Potential for any direct or indirect impact of project activities will be evaluated on cultural assets and determine the presence of any other such resources that may not be listed with national (Archaeological Survey of India) or state governments but could be of local significance.

**Mitigation Measures**

All necessary and adequate care shall be taken to minimize impact on cultural properties which includes cultural sites and remains, religious places, monuments and any other important structures in case identified during design stage. Any such identified cultural heritage impacts and/or chance finds will be dealt with in line with national legal requirements and requirements set forth under ESS 8. The procedures for handling chance finds are a part of the ESMF and will be included in the ESMPs and the Bidding Documents to handle any such situation that may come-up during project implementation.

All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on the site shall be the property of the Government and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precautions to prevent his workmen or any other persons from removing and damaging any such article or thing. He/She will, immediately upon discovery thereof and before removal inform the Environmental Expert of the PIU/PMU of such discovery and carry out the PIU's instructions for dealing with the same, waiting which all work shall be stopped. The PIU/PMU will seek direction from the Archaeological Survey of India (ASI) before instructing the Contractor to recommence the work in the site.

### 5.3.9 Stakeholder Engagement and Information Disclosure (ESS 10)

An inclusive Stakeholder Engagement Plan (SEP) consistent with ESS10 requirements will be prepared, approved, and disclosed. The SEP establishes a systematic approach for consultation and helps promote an inclusive and participatory approach for stakeholder engagement. It also includes multiple channels of communication and engagement with key stakeholders, stakeholder meetings, review meetings, web disclosure, and beneficiary feedback mechanisms throughout the life of the project. This will be done through telephone, video conference and a website, as well as periodic surveys and physical consultation meetings. The SEP will also include strengthening of an accessible and inclusive grievance redress mechanism that would be rolled out in the engineering institutions. Finally, the SEP will be updated as and when

necessary, during project implementation.

Extensive consultations were held in 8 blocks with stakeholders potentially affected by the proposed agriculture, animal husbandary, rural livelihoods, rural roads, education and tribal welfare and planning, institutional strengthening and capacity building related interventions. These identified stakeholders were farmers, community members, community resource persons, women self help groups and federations, elected representatives from village committees (VCs) and block committees, members of school management committees (SMCs), producer groups (PGs), along with representatives of respective line agencies and PIUs. During project preparation, multiple rounds of consultations were carried out:

a. Consultations with Block level officials, TRLM officials, representatives of sub-zonal committees and SHG members;
b. Consultations with education sector stakeholders by the school education department,
c. Consultations by E&S Consultants and PMU staff with about 450-500 stakeholders, including focused discussions with- women, tribal communities, PVTGs, potential land donors and shifting cultivators; and
d. Stakeholder workshop during ESA with block level PIU officials and representatives of local bodies. A Consultation checklist was used to get stakeholder feedback, constraints, and concerns on the proposed TRESP interventions.

TWD has prepared an SEP in accordance with ESS10. The SEP maps the component wise key project stakeholders, assesses likely stakeholder impacts, roles and interest related to the project interventions, their type of engagement or information needs and mode of engagement. Based on the assessment and feedback received, all information dissemination with the targeted communities will be in local language- Kokborok and Bengali. All project related E&S documents will be disclosed on the Borrower's website, including their translated executive summaries in the project areas. Participation of local communities in design and planning of sub-projects will be ensured and members of CBOs, POs and VCs will be the key target audience for capacity building initiatives.

The PMU under the Society for TRESP will be overall responsible for implementation of the SEP. At the PIUs and district levels, the nodal officers will engage with stakeholders through meaningful consultations.

## 5.4 Borrower's ESS Capacity and Institutional Assessment

The newly created Society for TRESP will be responsible for overall planning, budget allocation, coordination, and monitoring of the Project. For overall project coordination, an integrated Project Management Unit (PMU) with experienced project management, fiduciary, monitoring and evaluation, environmental and social specialists and operational experts will be established in the Society. The Public Works Department (PWD), Department of Education (DoE), Department of

Agriculture and Horticulture (DoA/H), Animal Resource Development Department (ARDD), Department of Fisheries and Tripura Rural Livelihood Mission (TRLM) will be the key Project Implementing Units (PIUs). The E&S specialists in the PMU shall support all the PIUs. PIUs will be responsible for detailed design and implementation of their respective sectoral investments. Most of the civil works under the project, including construction / restoration of rural roads, construction of schools, postharvest infrastructure, etc. are entrusted with Public Works Department (PWD).

The Society for TRESP under Tribal Welfare Department (TWD) and none of the above-mentioned PIUs have implemented any World Bank financed project in the past. They lack prior experience, institutional expertise, written operating procedures as well as dedicated human resources to prepare, design and implement this multisector project following Bank's ESF requirements. Though the PWD has implemented Government of India's road schemes, including Pradhan Mantri Gramin Sadak Yojana (PMGSY) following the national guidelines, it does not have designated environmental and social experts to comply with Bank's ESSs. Availability of technical expertise and consultants is a constraint in the state and the overall institutional capacity risk is assessed Substantial.

The project has prepared an Environment and Social Management Framework (ESMF) which identifies key capacity gaps and recommends key measures to strengthen institutional capacity of the PIUs in meeting the ESS requirements. These measures include: recruitment of qualified E&S specialists in PMU and selected PIUs, structured training program on ESS implementation, and provision of technical assistance, capacity building and implementation support by Bank's E&S Team. These measures have been included in the ESCP.

# CHAPTER 6: ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

## 6.1 Background of ESMF

Environmental and Social Management Framework (ESMF) is a tool for use by a project proponent to identify and address the potential environmental and social impacts and risks of a project across all stages from planning stage to its implementation and post- implementation operations. Keeping this in view, the present ESMF has been developed for use by Society for TRESP and implementing agencies (Line Departments) during various stage of the TRESP. A step-by-step methodology has been provided that can be followed during implementation of various components under the TRESP. In development of the ESMF, a standard list of activities & E&S risks and impacts identified from the project screening templates of the subprojects have been developed which would be generally applicable to all the subprojects under the TRESP. Under the ESF of the World Bank, ESS1 is the overarching ESS, which shall be used to determine the relevance of each of the ESS 2 to 8 and ESS 10, based on the identified standard list of activities.

As the exact details of the most of the subproject where civil construction works and other project activities will be undertaken under TRESP, are not yet known, an ESMF has been prepared. The ESMF consists of the set of mitigation, monitoring and institutional measures and associated procedures to be undertaken during the design, pre-construction, construction and functional stages of the rural roads, schools, agricultural, horticulture, livestock (poultry and piggery), fisheries and rubber processing activities to eliminate, offset or reduce adverse environmental impacts and risks.

## 6.2 Application of ESMF

ESMF will be applied to the overall project through a two-stage process as described below:

- **Stage I:** Undertaking Environmental and Social Screening of all subprojects of rural roads, schools, agricultural and horticulture activities, livestock (poultry and piggery), fisheries and rubber processing activities under TRESP using environmental and social checklists to identify environmental and social (E&S) risks and impacts.

- **Stage II:** Prepare Generic ESMPs depending on sub project specific activities.

The borrower will assess the sub-projects according to the same risk categories described in ESS1 and manage, supervise, and monitor the environmental risks and impacts of the subprojects through the project life cycle. Thus, Environmental and Social Management Plans (ESMPs) will be guided by the E&S Screening Criteria from the ESMF. All subprojects will be required to develop site-specific Environmental and Social Management Plans (ESMPs), taking into consideration the Bank's Environmental, Health, and Safety Guidelines (EHSGs); ESSs, and national and state regulations to define specific mitigation and prevention measures to prevent and reduce risks and impacts.

### 6.2.1 Broad Scope of ESMF

The ESMF is intended to ensure efficient environmental and social management during the proposed activities to be undertaken under TRESP. The ESMF contains:

1. Negative List of Activities
2. Screening of Sub-projects
3. Preparation and implementation of Environmental and Social Management Plans (ESMPs) meeting the requirement of World Bank's ESSs and other specific plans.
4. Institutional Arrangements
5. Capacity Building
6. Monitoring and Reporting

## 6.3 Description of Negative/Exclusion List of Activities

The activities that are likely to pose high risks and severe negative impacts on the environment, health and safety will not be supported under TRESP project. A list of such activities has been compiled as the 'Negative/ Exclusion List of Activities' and is presented in **Table 6.1**.

**Table 6.1 Negative/Exclusion List of Activities NOT to be Supported Under TRESP**

| Sr. No. | Activities not to be Supported By The World Bank under TRESP |
|---|---|
| 1. | Any subproject within protected areas (including National Parks, Wildlife Sanctuaries, etc), MoEFCC /State Govt Notified Eco-Sensitive Zones around National Parks and Wildlife Sanctuaries; and located/passing through Elephant Corridor. |
| 2. | Any activity that leads to conversion of natural or critical habitats, legally protected and internationally recognized areas of high biodiversity and in designated forest areas. |
| 3. | Any subproject in Ramsar site or Notified Wet lands |
| 4. | Construction/works involving use/installation of 'Asbestos Containing Materials (ACM)/Items. |
| 5. | Any activity that violates the provisions of applicable National |

| Sr. No. | Activities not to be Supported By The World Bank under TRESP |
|---|---|
| | and State laws and of International Treaties and Conventions where India is a signatory. |
| 6. | Any activity that has high probability of serious adverse effects to human health and/or environment. |
| 7. | Any activity requiring land acquisition under RFCTLARR Act 2013 |
| 8. | Involuntary land taking, irrespective of ownership, leading to loss of shelters, livelihood or sources of livelihood; loss of access to private and/or community property. |

Each sub-project to be supported under the TRESP project will be checked to confirm that it does not include any activity listed on the Negative/ Exclusion List of Activities. This applies to the all subprojects including civil construction works supported under the project. The contract documents of rural roads, schools, agricultural and horticulture activities, livestock (poultry and piggery), fisheries and rubber processing activities under TRESP will include necessary clauses to exclude support for any activities in the Negative/Exclusion List of Activities.

The responsibility for checking and ensuring that the none of the activities listed in the 'Negative/Exclusion List of Activities' is supported under the TRESP lies with PMU and PIUs. The Environment Experts of PMU and PIUs will check:

(a) all Detailed Project Reports (DPRs) and contract documents of subproject, and,
(b) all activities to ensure that they do not contain any activities on the Negative/Exclusion List of Activities.

## 6.4 Environmental Screening of Sub-projects

A screening procedure will be prepared and implemented in order to identify any environmental risks/impacts associated subproject. The environmental screening would be undertaken for each sub-project for rural roads, schools, agricultural and horticulture, livestock (poultry and piggery), fisheries and rubber processing activities under TRESP.

**Approach to Environmental Screening:** Environmental screening would be carried out comprising sub-project information, locations, proposed interventions and activities, proximity from forest, environmentally sensitive locations, bio-reserve, national parks, wildlife statuary, wet lands, etc.; applicability of laws, regulations and clearances & permits to be required; identification of E&S risks and impacts; and to classify the sub-project based on risk level (low, moderate or substantial and high) and finally, presenting conclusion on risk category, need for the detailed EA, needs for diversion of forest land, land acquisition and

recommendations for preparation of ESMP and RAP.

The Environmental and Social Screening for all subproject and activities under TRESP would be undertaken using project E&S screening templates given at **Annexure 1** to identify nature and extent of E&S risks and impacts for different types of proposed activities. Specifically for rural roads, care needs to be taken to identify whether these roads were constructed pre or post1980, as all rural roads constructed post 1980 would require Forest Clearance prior to start of civil works. Environmental and Social screening shall be carried out before preparation of DPRs by the environmental & social experts of the DPR Consultants through physical site visits/transect walk and will be made after thorough understanding of environmental settings at and around the subproject sites. Dully Environmental and Social screening checklists will be checked and verified by environmental and social expert of PIUs. The Bank will review a selection of sub-projects, through desk review /site visits and provide suggestions and guidance for improvements, if required. In the case of substantial risk categories of sub-projects, the Bank will review and approve all E&S checklists.

Environmental and Social screening will be carried out for 100% subprojects by DPR consultants/ Environmental and Social Experts of PIUs. The PMU will review the E&S screening checklists and will be sent to World Bank for reviewing its completeness, correctness and compliance and approval.

## 6.5 Preparation of ESMPs

Based on the risk classification of subprojects for Low to Moderate Risk, a site specific ESMP shall be developed at design stage of the sub-project by the DPR consultants wherein specific plans *e.g.* LMP, etc will be included. The site specific ESMPs (based on generic) shall comprise set of actions that need to be completed by PIUs and by the contractors of the sub projects. The contractor specific actions of ESMPs including LMP shall be annexed in the bid document and shall be part of contract agreement with the contractors.

The ESMPs will be developed depending upon the relevance of ESS 2-8. For all sub projects, DPR consultants/PIUs would be required to prepare site specific ESMP that includes camp management, labor influx management plan, LPM/OHS measures etc.. This ESMP shall be ready before the sub project bids are issued and relevant plans would be included in the bid documents.

The preparation of environmental management instrument, proportionate to the risks, as specified herein this ESMF is stated as a requirement in the Environment and Social Commitment Plan. All such ESMPs and other

relevant plans will be reviewed by PMU, TRESP and shared with the Bank for approval before the same are included in the respective bid documents. First three ESMPs from each activity under the project will be approved by World Bank (WB) to verify for completeness, compliance and consistency. In addition, Bank will review a selection of sub-projects, through desk review /site visits and provide suggestions and guidance for improvements, if required.

### 6.5.1 Procedures for Preparation and Implementation of ESMPs

A site-specific ESMP will be prepared for each subproject. The ESMP will provide details on: (a) the planned activities (b) the potential environmental impact of each activity – with details on quantities where applicable (c) measures to mitigate negative environmental impacts (d) measures to enhance positive environmental impacts (e) entity with responsibility for implementation of the identified mitigation and enhancement measures.

The two key steps to be followed are:

(a) preparation of the site-specific ESMP for each sub project based on the Generic ESMPs provided with ESMF
(b) Integration of the ESMPs into the Bid and Contract Documents for civil works.

To facilitate preparation of the site-specific ESMPs, the following are provided as guidance documents:

- 'Generic ESMPs for Civil Construction Works'; and Agriculture and Allied Activities have been provided in **Annexure 2** and **Annexure 10** for use as a guidance document,
- Environmental Code of Practices (ECoPs) for Rural Roads by NRRDA PMGSY,
- BaLA (**B**uilding as **L**earning **A**ide) in Elementary Schools - A Teacher's Manual (by Vinyas Center for Architectural Research and Design),
- MOEF&CC Guidelines to be followed by Educational Institutions for Sustainable Environmental Management (Dated 9th June 2015).

The process flow for ESMF for TRESP is shown in **Table 6.2**

**Table 6.2: Process flow for ESMF**

| Project Phase | Project Activity | Tasks | Responsible Entities |
|---|---|---|---|
| Pre- planning | Selection of Subprojects | • Check and ensure that the none of the activities listed in the Negative/Exclusion List | PIUs and DPR Consultants |

| Project Phase | Project Activity | Tasks | Responsible Entities |
|---|---|---|---|
| | | of Activities are supported under the TRESP.<br>• Screen all subprojects/ activities to ensure that they do not contain any activities on the Negative/ Exclusion List of Activities. | |
| Planning Phase | Screening of Subprojects | • Screening of subprojects to be done using a pre-defined E&S checklist;<br>• Completing the checklist in consultation with concerned PIUs/ Department;<br>• The internal verification on accuracy and coverage of risks and impacts. | PIUs and DPR Consultants |
| Planning Phase | Preparation of Site specific Environmental and Social Management Plan | • Ensure Site specific ESMP provides detail on the planned activities;<br>• The potential environmental impact & risks from each activity;<br>• Measures to mitigate negative environmental impacts and risks;<br>• Measures to enhance positive environmental impacts;<br>• Ensure all the key risks/impacts are adequately addressed and that provision has been made to meet the costs involved. | PIUs and DPR Consultants |
| Construction Phase | Implementation of ESMP | • Implementation of mitigation measures and ESMP | Contractors |
| | | • Provided orientation on the mitigation measures and ESMP | CSC/PIUs |

| Project Phase | Project Activity | Tasks | Responsible Entities |
|---|---|---|---|
| | | • Supervise, monitor, reporting and documentation of implemented ESMPs. | CSC/PIUs |

## 6.6 Environmental and Social Instruments to Meet Requirements of Applicable ESSs

The environmental risks and impacts identified in Chapter 5 shall be addressed through the following mitigation and management plans as per appliable ESSs of The World Bank.

**6.6.1 ESMPs (As per ESS1, ESS2, ESS3, ESS4, ESS8):** ESMPs separately for project activities will include provisions for addressing risks relating environmental, health & safety aspects; construction debris, solid and other waste management; gaseous pollutants and noise generation from DG set, construction machines and vehicle movement for transporting construction materials; air, water noise pollution control; pollution prevention and environmental quality management, health and safety of project workers and nearby community, any risks of labor influx, such as communicable and non-communicable diseases; construction and workers camp management, construction site management, work zone safety, traffic management, etc for each sub project. This will be site specific ESMP for subproject identified as low to moderate risk (as per E&S Screening). Generic ESMPs for civil construction works for rural roads, schools, post-harvest infrastructure, agriculture & horticulture, livestock (poultry and piggery), fisheries and rubber processing activities are given in **Annexure 2** and **Annexure 10**, respectively.

**6.6.2 Labor Management Procedures (LMP) (As per ESS2) –** LMP lay down and spell out the requirements relating to: health and management for labor, provision of terms and conditions of employment; promoting of non-discrimination and equal opportunity; worker's organization etc. and finally a mechanism to redress grievances mechanism to the direct and contracted workers. Labor Management Procedures are presented in **Annexure 11.**

### 6.6.3 Resettlement Policy Framework

The Resettlement Policy Framework (RPF) is prepared considering the Land donation activities; anticipated impacts in components' sub-project activities and from the review of applicable legal and policy framework discussed in Chapter 3 of this Environment and Social Management Framework (ESMF). The framework bridges the gaps identified between national and state legal framework; and provisions and requirements laid

down in Environment and Social Standard (ESSs)-5. It lays down the principles and procedures for management of social impacts caused by the project activities and guide the process of the social impact assessment and preparation of Resettlement Action Plans (RAPs). Resettlement Policy Framework are presented in **Annexure 12.**

### 6.6.4 Biodiversity Management Measures (ESS 6)

In the project area, many subprojects are situated in the vicinity of forest and ecological conservation areas. However, most of subprojects are out of the forest and conservation areas; therefore, diversion of forest land is not likely to be required in most of subprojects. In case any diversion of small area of forest land for rural roads is required, prior forest clearance will be obtained, and biodiversity management measures will be prepared by PMU/PIUs and implemented for conserving, restoration and enhancement of biodiversity value in the area. The measures will describe the management actions and biodiversity conservation guidelines, necessary to deliver the desired outcomes. The actions will be specific, measurable, achievable and time-bound.

### 6.6.5 Integrated Pest and Nutrient Management Plan (ESS 1 and ESS 3)

The project will support agriculture and horticulture activities to increase the produce from selective crops and therefore excess use of pesticides is anticipated. There are multiple impacts and challenges associated with pesticide use. These include: pollution of ground and surface water resources; killing of fish and other aquatic life; development of pest resistance due overuse of pesticides; public health issues associated with chronic and acute exposure to pesticides; bioaccumulation or bio-concentration of pesticides in food chain; food safety issues; poisoning from improper use of pesticides by farmers and farm assistants; impact from improper disposal of pesticide containers; accidental or incidental introduction of invasive species; limited capacity of farmers to adequately manage pesticides.

**Integrated Pest Management (IPM)** will be prepared and implemented for managing pest, and for safe and optimal use of pesticides. IPM is a comprehensive method or approach for managing pests that combines cultural, biological, and chemical control strategies into a single complimentary management strategy that maintains long-term control of pest populations with minimal environmental impact and economic loss.

**Nutrient Management Plan (NMP)** will help farmers to efficiently meet their production objectives and protect the environment. NMP will provide balanced recommendations for farmers on which nutrient sources to apply to soil and what rates they should be applied at soil. There will be four key steps to nutrient management planning *i.e.* determine the supply of

nutrients from the soil; look up the crop nutrient requirements at that level of soil supply; estimate the supply of nutrients from organic manures applied; and deduct the estimated manure nutrient supply from crop requirements to find the amount of fertilizer to apply.

### 6.6.6 Resettlement Action Plan (RAP) (ESS 5)

In accordance with RPF provisions, brief/limited RAP will be prepared that enumerates nature and quantum of each type of social and livelihood impacts, impacted persons by socio-economic category and entitlement measures and budget.

### 6.6.7 Stakeholder Engagement Plan (SEP) (ESS 10)

SEP has been prepared and disclosed for meaningful consultations and accessible, functional and responsive GRM for key stakeholders.

## 6.7 Linkage to the ESCP

The Environmental and Social Commitment Plan (ESCP) sets out material measures and actions, any specific documents or plans, as well as the timing for each of these. The ESCP which will be part of legal agreement and will be signed by Implementing Agency (IA) will require the IA to comply with the provisions of any other E&S documents required under the ESF and referred to in the ESCP, such as the Environmental and Social Management Plans (ESMPs), Labor Management Procedures (LMP), Bio-diversity Management Plan (BMP), Integrated Pest and Nutrient Management Plan (IPNMP), Stakeholder Engagement Plan (SEP), etc. The ESCP will be prepared based on the ESMF and the findings of engagement with stakeholders. It will clearly spell out the plans to be prepared with timeframe and responsibility. Adherence to the aforementioned ESMF processes and provisions will therefore be ensured through the ESCP.

## 6.8 Updating of ESMF

This ESMF will be an "up-to-date" or a "live document" enabling revision, when and where necessary. Unexpected situations and/or changes in the project or subcomponent design would therefore be assessed and appropriate management measures will be incorporated by updating the Framework to meet the requirements of country's legislations and Bank ESF. Such revisions will also cover and update any changes/modifications introduced in the legal/regulatory regime of the country/ state. Also, based on the experience of application and implementation of this framework, the provisions and procedures would be updated, as appropriate in consultations with the World Bank and the implementing agencies/departments. Finalized version of updated ESMF will be submitted to WB for its review and approval.

## 6.9 Institutional Arrangements

The newly created 'Society for TRESP' will be responsible for overall planning; budget allocation; coordination; and monitoring of the Project. For overall project coordination, an integrated Project Management Unit (PMU) with experienced project management, fiduciary, monitoring and evaluation, environmental and social specialists and operational experts will be established in the Society. The Public Works Department (PWD), Department of Education (DoE), Department of Agriculture and Horticulture (DoA/H), Animal Resource Development Department (ARDD), Department of Fisheries and Tripura Rural Livelihood Mission (TRLM) will be the key Project Implementing Units (PIUs). The E&S specialists in the PMU shall support all the PIUs. PIUs will be responsible for detailed design and implementation of their respective sectoral investments. Most of the civil works under the project, including construction/restoration of rural roads, construction of schools, post-harvest infrastructure, etc. are entrusted with Public Works Department (PWD).

The Governance Structure of Society for TRESP is shown in **Figure 6.1.** Organogram TRESP with E&S Personnel is shown in **Figure 6.2.**

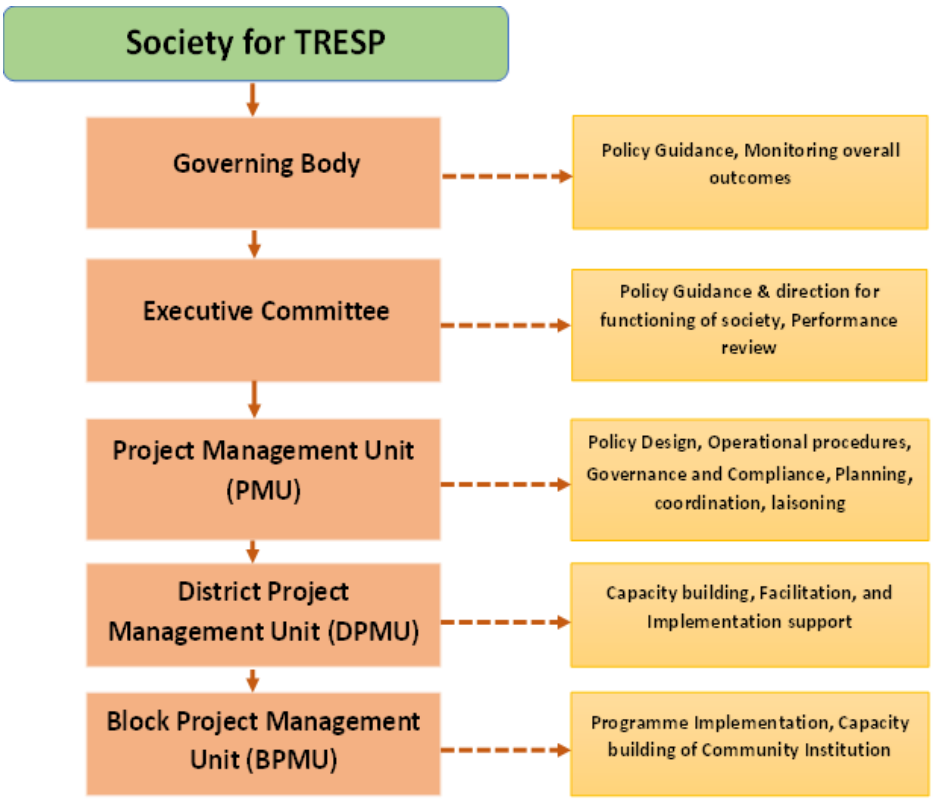


**Figure 6.1: Governance Structure of Society for TRESP**

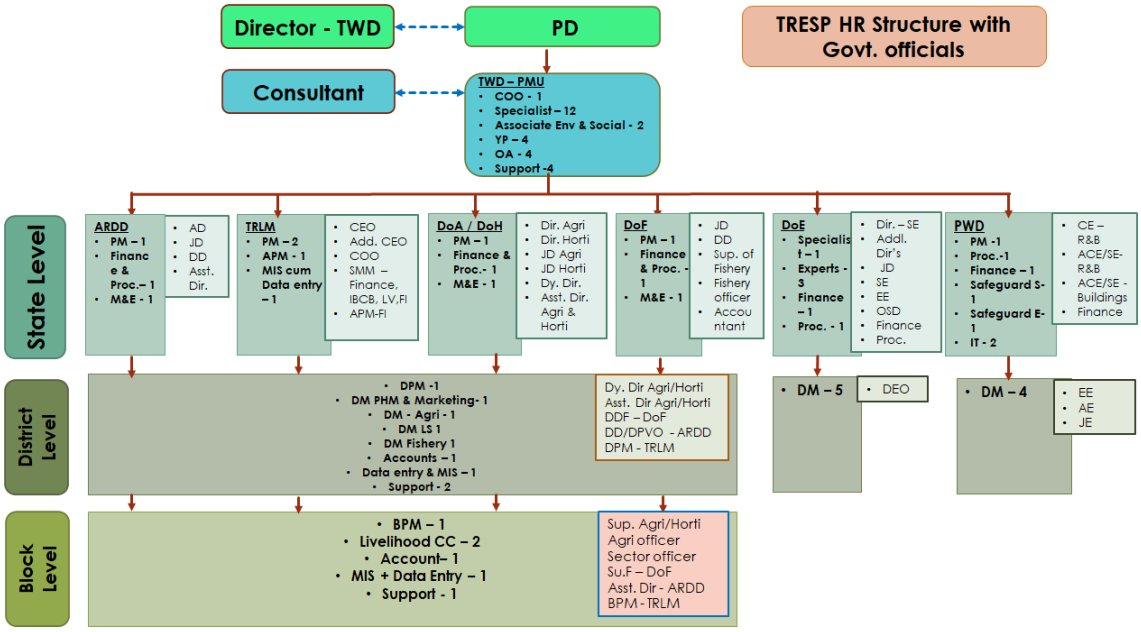


**Figure 6.2: Organogram TRESP with E&S Personnel**

## 6.10 Capacity Building

The TRESP will require proactive measures to be undertaken in order to improve the understanding of the project personnel at Society for TRESP, PIUs, CSC and contractors' levels on World Banks' ESF and ESSs; ESMPs, LMP, SEP, BMP, IPNMP and environmental management for various activities under the project. The PMU TRESP with the support of Environmental & Social Experts of PIUs will conduct trainings and workshops for effective implementation of ESMF and ESMPs.

As intuitional capacity of 'Society for TRESP' and PIUs (Line Departments) involved in the project is lacking, therefore additional resources for training and capacity building at all project levels are required.

The following trainings and capacity building activities will be undertaken for the project staff, environmental and social experts, PIU nodal persons, consultants, contractors and community organizations on the following themes:

- Occupational health and safety,
- Community health and safety,
- Labor Management, including managing risks of labor influx,
- Biodiversity Management,
- Traffic and road safety,
- Implementation of ESMPs for Rural Roads, Schools, agriculture and allied, livestock, rural livelihoods, rubber, Fisheries, Poultry and Piggery,

- Alternative materials and new technologies in rural roads,
- Integrated Pest Management (IPM) Plan and Integrated Nutrient Management (INM) Plan for Agriculture and Horticulture,
- Emergency Preparedness and Response,
- Construction Supervision and Audit,
- GBV and SEA-SH risk mitigation measures,
- Stakeholder Engagement,
- Procedures for land-take and preparation of Abbreviated Resettlement Action Plans (ARAPs), and
- Grievance redressal measures.

The training to carry out environmental screening and implementation of ESMF and environmental management in undertaking construction for rural roads, schools, post-harvest infrastructure; and agriculture and horticulture, livestock (poultry and piggery), fisheries and rubber processing under TRESP will have to be imparted to the key functionaries at the various levels of the project. Details on the capacity building plan are presented in **Table 6.3**:

**Table 6.3: Capacity Building Plan**

| S. No. | Topic | Frequency & Duration | Participant Level | Training Aspects |
|---|---|---|---|---|
| 1. | Overview of ESMF provisions and requirements | 1-day orientation at planning stage.<br><br>Every six months | PMU Society for TRESP, Officials of PIUs, Design consultant, and Contractors, | • National and State Environmental Acts/ Legislations<br>• World Bank's Environmental and Social Framework (ESF), Environmental and Social Standards (ESS);<br>• World Bank Group's Environmental, Social, Health and Safety Guidelines.<br>• Environmental Management Framework of the TRESP<br>• ESMPs for sub-projects under TRESP.<br>• Implementation, Supervision, Monitoring, reporting Mechanisms under ESMF. |

| S. No. | Topic | Frequency & Duration | Participant Level | Training Aspects |
|---|---|---|---|---|
| 2. | Implementation of ESMPs and LPM | 1-days training during planning and implementation stage.<br><br>Every six months | Officials of PIUs and Contractors | • Requirement of ESMPs and LMP,<br>• Identifying and addressing of EHS and issues,<br>• Implementation of mitigation measures in ESMP,<br>• Monitoring and reporting mechanism. |
| 3. | Environment, Health and Safety Aspects and Implementation of ESMP | 1-days training during planning and implementation stage.<br><br>Every six months | Officials of PIUs and Contractors | • Environment, Health and Safety Aspects in various activities under the project.<br>• Mitigation measures for anticipated environmental and social management plan.<br>• Addressing Community and Workers Health and Safety issues,<br>• Implementation of OHS measures,<br>• Supervision, monitoring and reporting. |
| 4. | RPF and RAP | Half day and Every six months | Officials of PIUs and Contractors | • Highlights RPF,<br>• Provision of ESS 5 relevant to the project,<br>• Anticipated Social Impacts and its mitigation,<br>• Process of preparation of RAPs. |
| 5. | SEP including GRM | Half day and Every six months | Officials of PIUs and Contractors | • Identification of stakeholders,<br>• Consultation process and recording suggestions,<br>• Mechanism for GRM |

## 6.11 Supervision, Monitoring and Reporting

To ascertain the implementation of the project activities in an environmentally and socially acceptable manner and in line with the acts/policies of Government, ESMF, ESMPs and World Bank ESF, periodic supervision and monitoring will be conducted by PIUs/CSC. It will help to assess the progress made in implementation of environmental and social safeguards and measures required for its improvement. It will provide necessary feedback for the project management for timely decision making and achieving the objectives.

### 6.11.1 Monitoring of Statutory Compliances

For every contract under the project, the statutory compliances of the contractor will be monitored. The statutory compliances have been identified under the Chapter 3 of ESMF.

The environmental and social components, which are significant impact areas at work locations, have been suggested for periodic monitoring. The following specific environmental parameters should be measured, in qualitative and quantitative terms. The monitoring and reporting arrangements is suggested as per **Table 6.4**. In cases Environmental and Social Experts of PMU and PIUs to advise on required actions, the contractors will have to implement recommended actions in time bound manner.

**Table 6.4: Monitoring & Reporting for ESMP**

| Key Indicators | Standards | Monitoring Parameters | Responsibility | Frequency |
|---|---|---|---|---|
| Disposal of C&D Waste | Periodic Removal of Debris and other waste | • Quantity of construction, and demolition waste generated<br>• Quantity and construction and demolition waste disposed as per the approved Waste Management Plan | Contractors | Weekly |
| Safety at Workplace and Construction Sites | Compliance with Worker Safety Standards | • Use of PPE by workers,<br>• Provision of safety signage and barricades at construction site,<br>• Incidents | Contractors | Weekly |

| Key Indicators | Standards | Monitoring Parameters | Responsibility | Frequency |
|---|---|---|---|---|
| | | including minor & injuries, major injuries, fatal injuries, etc.<br>• Health condition of workers. | | |
| Water Logging and Drainage | As per ESMP | Visual impressions | Contractors | Quarterly |
| Waste and Waste Water Disposal | As per ESMP and applicable rules | Waste and Waste Water collection and disposal | Contractors | Weekly |
| Air Quality and Noise | As per ESMP & applicable rules | • Suppression o dust,<br>• Muffler an acoustic enclosures<br>• Ear muff and plug. | Contractors | Weekly |
| Site Restoration | As per ESMP | Restoration of all works sites | Contractors | After construction |

### 6.11.2Reporting System

The reporting system will be bottom-up and feedback mechanism will be in a top-down approach in the implementation frame. The indicators for monitoring and reporting will vary during the construction and operational phases. During the construction phase, contractors will undertake monitoring and reporting on the environmental parameters.

To enable coordination and reporting in a streamlined manner on ESMF implementation and environment management at subprojects, the following two periodic reports are mandated:

1. **Monthly Environment Progress Report (MEPR)**: Monthly progress report will be submitted by the various PIUs to the PMU, TRESP showing status implementation of Environmental management with photographs having digital dates and flagging important environment management related issues emerging in the reporting quarter.

2. **Quarterly Environment Progress Report (QEPR)**: This is a consolidated report submitted on a Quarterly basis by the PMU, TRESP to the World Bank highlighting and flagging important Environment related matters/issues that may have emerged in the reporting period and seeking guidance on those that require hand-holding or expert advice. The format for Quarterly Environment Progress Report (QEPR) will be finalized with the World Bank.

### 6.11.3 Third Party Audit

Third Party Audit Report will be prepared by an independent entity (Third Party) engaged by Society for TRESP for capturing the status of environmental and social compliances under the project as per the ESF instruments.

## 6.12 Management of Contractors

All contractors engaged on the project will require to operate in a manner consistent with the ESMF and the ESMPs. The PIUs will manage all contractors in an effective manner including:

- Assessing the environmental and social risks associated with sub-projects through screening and sub-project specific Environmental and Social Management Plans (ESMPs),
- Implementation of ESMPs and OHS measures as per Labour Management Procedures,
- Ascertaining that contractors engaged are legitimate and reliable enterprises, and have knowledge and skills to perform their tasks in accordance with their contractual commitments,
- Incorporating ESMPs and LMPs into tender documents,
- Contractually requiring contractor to apply relevant aspects of sub-project specific ESMPs, and including relevant non-compliance remedies, and
- Monitoring of contractor compliance with their contractual commitments.

## 6.13 Typical Budget for ESMF/ESMP Implementation

For construction of subprojects, ESMPs shall be integrated with the bid/construction contract in the form of technical specifications and environmental performance requirements. The costs to be incurred on implementation of ESMP shall be incidental to the civil works and therefore, no separate environment budget/cost will be provided to the contractor for implementation of ESMPs. The contractor will ensure effective implementation of ESMPs during pre-construction, construction and demobilization stages. The actual cost of implementation of ESMPs per subproject will vary depending on quantum of construction works, site conditions, environmental impacts and issues environmental mitigation measures required for implementation.

## 6.14 Stakeholder Engagement, Grievance Redressal Mechanism, and Information Disclosure

### 6.14.1Stakeholder Engagement

The Environment and Social Framework (ESF) of the World Bank enhances

requirements for transparency and stakeholder engagement. As per the requirements under ESS10, Stakeholder Engagement Plan (SEP) have been prepared and forms part of the environmental and social management framework and outlines the general principles and collaborative strategy to identify stakeholders for all components under the Project, identify their engagement needs, appropriate participatory modes of engaging with them and to guide the operationalization of this engagement strategy and meaningful consultation throughout the project cycle.

Aligned with the ESS10 guidance, SEP will act as a guiding tool and framework for managing outreach, communications and engagement between implementing agencies and stakeholders, including the project beneficiaries and local communities, especially the vulnerable and marginalized groups.

In the spirit of adaptive management, this SEP will remain a live document and additional measures, engagement strategies will be incorporated through the project cycle based on the experience gathered from different methods of engagement during implementation and also in light of any changes made to the project design or intervention strategies. The engagement strategy proposed in this SEP is informed by extensive field consultations conducted over a period of 4 months (August to November 2022). The SEP has been disclosed on the Website of TWD and implemented during project implementation.

### 6.14.2Grievance Redress Mechanism (GRM)

For TRESP, 4 tier grievance redress mechanism is proposed. At the State/ PMU Level the grievance system will be headed by the Project Director and will be responsible for the overall functionality of the Project GRM. The GRM's at the District and Block level will have District Program Manager TRESP and the Block Program Manager TRESP as the Grievance Redressal Officers. The lowest level of GRM will be located in the project villages and will be the responsibility of Cluster Coordinator. The concerned Grievance Redressal Officer will be responding to grievance/query through phone calls, meetings and letters, in order to resolve issues. If needed, site visits will be undertaken to appraise the exact nature of stakeholder concerns. The Complainant will be made part of the grievance resolution process and kept updated of the resolution process through phone calls and formal letters. Information material on GRM will also inform the stakeholders about grievance escalation hierarchy that would help the complainant to escalate any unresolved issues to higher level officers, as well as the existing state level GRM channels of government portal and grievance committee chaired by the district collectors. The grievance redress process will be a continuous, transparent and participatory process that would be an integral part of the project's accountability and governance agenda. The GRM mechanism will be notified within three months of project

effectiveness. The project website will be posting the status of the GRM status periodically.

The project level GRM will be headed by the Project Director (PMU) and will be assisted by a project level Grievance Redressal Committees (GRC) composed of line agencies, select PIU and PMU staff with Social Development Specialist at the PMU as its convenor. State level Social Development Specialist PMU shall assist the PD to monitor the overall Project GRM and co-ordinate with all the implementing units PIUs) in the state. The project website will also have a link where grievances can be filed by the citizens.

Village and block level GRO's will directly address all grievances related to the project affected persons (PAPs), project workers and community members. Grievance Registers will be maintained at District/Block levels and also at each worksite to record, track and report on the inflow of stakeholder grievances, enquiries and feedback. Status of Grievances received and resolved will be track through the project MIS as well as monthly progress reports from the Districts and Blocks. All unresolved grievances will be escalated to the PMU level GRM. The aggrieved will have the option to send their grievances to the project GRM or to the state level public GRMs.

In addition, separate site level grievance mechanism will also be created aimed at local communities and workers. These will include complaints and suggestion boxes, complaint registers at site for workers, site level display of contact numbers of local, nodal persons from the contractor and the implementing agency.

### 6.14.3Public Disclosure

The following documents shall be disclosed on website of TWD/Society of TRESP and kept in Office of the PMU/PIUs and/ or other project agencies as applicable.

a. ESMF for TRESP with summary in Local language (Bengali and Kokborok). RPF and LMP are included in this ESMF,
b. SEP and ESCP standalone document,
c. ESMPs,
d. Other plans mentioned in ESMF documents,
d. MPRs and QPRs, and
e. Final Reports of Annual E & S Audits.

# Annexure 1

# Screening Criteria

**Tripura Rural Economic Growth and Service Delivery Project (TRESP)**

Sub Project Name:

_____

Sub Project Type :

_____

Sub Project Location/s:

_____

Name of Person / Agency Carried out Screening :

_____

## Part A: General Information About the Sub-project

| **Project Details:** | | |
|---|---|---|
| Sub Project Id | **:** | |
| Type of proposed sub-project activity | **:** | |
| Location of the subproject activity | **:** | |
| District | **:** | |
| Block | **:** | |
| Gram Panchayat | **:** | |
| Village | **:** | |
| | | |
| **1. Information About Tribals in the Sub-project Area** | | |
| Is the project site or area in a schedule VI area (Y or N) | | |
| **For Rural Road** | | |
| Latitude and Longitude | **:** | Starting End. |
| Sub Project components | **:** | |
| Details of Alignment / Components | **:** | |
| Rural Road Alignment Length (Km) | **:** | |
| Existing width of carriageway (m) | **:** | |
| Is the rural road existing since pre-1980 (as per Forest Department) | **:** | |
| Type of Existing Rural Road | **:** | (Block Top/Brick Sole/Earthen) |
| Does rural road required upgrading of existing physical facilities? | **:** | |
| Type of Additional Interventions required? | **:** | |
| | | |
| **For Schools** | | |
| Latitude and Longitude | | |
| Sub Project components | | |
| Total School Area (Sqm) | | |
| Area to be constructed (Sqm) | | |

| | | |
|---|---|---|
| Source of Water | | |
| Disposal of Treated Waste Water | | |
| | | |
| **For Agriculture and Allied Activities** | | |
| Latitude and Longitude | | |
| Sub Project Components | | |
| Activities Proposed under the Subproject | | |
| Total Area (Sqm) | | |
| Area to be constructed (Sqm) | | |
| Source of Water | | |
| | | |

## Part B: Environmental Screening

| **1.** | **Is the sub-project located in whole or part within a distance of 1 km from the nearest edge of any of the following *notified* environmentally sensitive areas? (Provide distance to these features in meters/kilometres)** | **Yes** | **No** | **Details** |
|---|---|---|---|---|
| a. | Natural or Critical Eco-sensitive Areas | | | |
| b. | Ecological Protected Areas | | | |
| c. | Biosphere Reserve | | | |
| d. | National Park | | | |
| e. | Wildlife Sanctuary | | | |
| f. | Tiger Reserve/Elephant Reserve | | | |
| g. | Elephant Corridor | | | |
| h. | Wetlands | | | |
| i. | Natural Lake | | | |
| j. | Swamps/Mudflats | | | |
| k. | World Heritage Sites | | | |
| l. | Archaeological monuments/sites (under ASI's central/state list) | | | |
| m. | Reservoirs/Dams | | | |
| | | | | |
| **2.** | **Is the sub-project located in whole or part within a radius of 500 m from the following features?** | | | |
| a. | Reserved/Protected /other Forest | | | |
| b. | Migratory Route of Wild Animals/Birds | | | |
| c. | Area with threatened/rare/ endangered fauna (outside protected areas) | | | |
| d. | Area with threatened/rare/ endangered flora (outside protected areas) | | | |
| e. | Habitat of migratory birds (outside protected areas) | | | |
| f. | Historic Places (not listed under ASI – central or state list) | | | |
| g. | Regionally Important Religious Places | | | |

| | | | | |
|---|---|---|---|---|
| **3.** | **Will the construction, operation or decommissioning of this sub-project cause changes to or have impacts on the following?** | | | |
| a. | Land Use | | | |
| b. | Water | | | |
| c. | Air | | | |

| | | | | |
|---|---|---|---|---|
| **4.** | **Will the construction, operation or decommissioning of this sub-project generate, cause or release any of the following?** | | | |
| a. | Construction and Demolition Wastes | | | |
| b. | Solid Wastes | | | |
| c. | Waste Water | | | |
| d. | Accidents | | | |
| | | | | |
| **5.** | **Any other impacts?** | | | |
| a. | Nos. of Trees likely to felled | | | |
| b. | Forest Land Diversion Required (sqm) | | | |
| c. | Other Environmental Impacts | | | |
| | | | | |

| **6. Result/ Outcome of Environmental Screening Exercise** | | |
|---|---|---|
| 1. | EA Required | |
| 2. | Regulatory Clearance Required | |
| 3. | Forest Clearance Required | |
| 4. | Environmental Management Plan required | |
| 5. | Other | |

## Part C: Social Screening

| **1.** | **Does the proposed sub-project activity require any land? (provide area of land )** | **Details** |
|---|---|---|
| a. | Private Land | |
| b. | Government Land | |
| c. | Community land | |
| | | |
| **2.** | **Will the project result in impacts on** | |
| a. | private structures, if so, type | |
| b. | public structures/buildings, if so type | |
| c. | common property resources (Such as religious/cultural/ drinking water/wells/etc) | |
| d. | Grazing/pastureland, burial ground and others (specify) | |
| e. | Fishing activity or usage by fisherman/boat operators | |
| f. | Trees or crops | |
| g. | Loss of social forest on which nearby | |

| | | |
|---|---|---|
| | residents/local population are dependent for fuelwood/grazing etc. | |
| h. | Existing land uses on and around the project area (e.g., community facilities, agriculture, tourism, private property) will be affected | |
| i. | The approximate number of households to be affected (likely to experience impacts on land, structures, or livelihoods) | |
| j. | Approx. Number of scheduled tribe households | |
| k. | Is the site chosen for this work free from encumbrances? | |
| l. | What are the required modalities of land acquisition? | |
| | | |
| **3. Information about tribals in the sub-project area** | | |
| a. | Is the project site or area in a schedule VI area | |
| b. | If not, does the area have tribal groups? | |
| c. | If yes, what are the tribal groups? | |
| d. | Does the group have traditional cultural, economic, social, or political institutions different from the mainstream society? | |
| e. | Does the group have a minority language different from the official language of the country or region? | |
| f. | The potential impact of (preconstruction or construction stage) any?<br>➢ Land belonging to these tribals<br>➢ Likely to cause displacement and resettlement.<br>➢ Impact their cultural heritage. | |
| **4** | **Labour and construction activities** | |
| a. | ➢ Will the sub-project activities require labor from outside the area?<br>➢ Will the project involve dangerous construction activities which may be a safety concern to workers<br>➢ Will the project result in construction workers moving into the area | |
| | | |
| **5. Engagement with stakeholders in the sub-project area** | | |
| a. | Who are the likely stakeholders in the planning, execution of these sub-project activities? | |
| b. | Are there any existing CBOs and SHGs, if so, what are they engaged in | |
| | | |
| **6. Resource Consumption and Pollution Generation from Proposed Activities** | | |
| a. | Potential impact due to storage of materials, wastes or pollution due to releases during various project activities. | |
| b. | Potential Health & Safety Risks in the neighborhood | |

| | | |
|---|---|---|
| | including the release of toxic gases, accident risks due to subproject components | |
| c. | The potential impact of the activities leading to emitting of air pollution etc. | |
| d. | Potential noise pollution or disturbance to surrounding habitats/communities | |
| e. | Will the project cause water pollution?<br>(of water bodies/ groundwater) | |
| f. | Will the project cause odour nuisance? | |
| g. | Will the project produce solid or liquid?<br>wastes; including construction/demolition wastes (including dredging, de- weeding wastes, muck/silt, dust); polluted liquids? | |
| h. | Accident risks ? | |
| **7.** | **Community Health & Safety** | |
| a. | Will there be any potential safety concerns to construction workers/ host communities | |
| b. | Potential disruption to common property, accessibility, traffic disruptions, conflicts, or disruption to the local community within the subproject area | |
| c. | Are there likely to be female workers working in close proximity to male workers | |
| d. | Will project construction take place at or near the school or pedestrian access that women and girls use for their daily activities | |
| | . | |
| **8.** | **Impact on Biodiversity** | |
| a. | Does the site preparation require the cutting of trees? If yes, please furnish the following details:<br>✓ How many trees are to be cut?<br>✓ Species of the above trees<br>Are there any protected/endangered species? If yes, provide details. | |
| b. | Potential noise and or disturbance to surrounding habitats/ communities | |
| c. | Does the proposed project site involve any breeding or ground?<br>If yes, provide the following details.<br>-Name of the Aquatic Organism<br>-Type of Habitat<br>- The year in which the activity takes place | |
| d. | The potential risk of habitat fragmentation due to the clearing activities (e.g., Hindrance to the local biodiversity like disturbing the migratory path of animals/birds etc. | |
| e. | Will the intervention result in the permanent or temporary loss of the following-Crops, Fruit trees, Petty shops, Markets, Shops, grazing lands, any | |

| | | |
|---|---|---|
| | other please specify? | |
| f. | Will the project contribute to any long-term significant adverse (negative), large scale, irreversible, sensitive impact at a regional scale or area broader than the project sites? | |
| g. | Will the project cause any degradation of land / eco-systems expected due to the project? | |
| h. | Will the project cause physical changes in the project area (e.g., changes to the topography) due to earth filling, excavation, earthwork or any other activity? | |
| i. | Will the activities have proposed at the site(s) impact water quality (surface or underground) and water resource availability and use? Will this sub-project involve the dredging of water bodies, canals, etc. | |
| j. | Will the project result in the stagnation of water flow or pondage or weed growth? | |
| k. | Where does the project plan to get its primary materials? Will that have an impact on biodiversity? | |
| | | |
| **9.** | **Impact on Cultural Heritage** | |
| | **Is the sub-project located in whole or in part within 100 meters from the;** | |
| a. | Protected limits of notified archaeological sites or monuments. | |
| b. | Historic places that are regionally or locally important | |
| c. | Religious Places | |
| d. | Any impact on intangible | |
| | | |
| **10.** | **Stakeholder Engagement** | |
| a. | Who are the likely stakeholders in the planning, execution of these sub-project activities? | |
| b. | How do the communities prefer to interact with project authorities? Meetings, FGDs, etc and through what mode; on what topics and at what frequency | |
| c. | Were the probable environmental impacts discussed with stakeholders? | |

| **11. Result/ Outcome of Social Screening Exercise** | | |
|---|---|---|
| 1. | SIA Required | |
| 2. | Land Required (sqm) | |
| 3. | NTH Structures likely to affected | |
| 4. | RAP is required | |
| 5. | Other | |

**Environmental and Social Screening Declaration**

| | **Environmental Expert** | **Social Expert** |
|---|---|---|
| Date | | |
| Name | | |
| Designation | | |
| Signatures | | |

Annexure 2

# Generic ESMP for Construction and Upgradation of Schools under TRESP

- ✓ Design Stage
- ✓ Preconstruction Stage
- ✓ Construction Stage
- ✓ Demobilisation Stage

## Standard Environmental and Social Management Plan (ESMP) for Rural Roads Under TRESP

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning & Execution | Supervision/ Monitoring |
| **I.** | **Design and Preconstruction Stage** | | | | |
| 1. | Planning and Design of Rural Roads | • For the planning and design of rural roads, ECOP-1.0: Project Planning and Design shall be followed. | ESS 1 and ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| 2. | Transect walk for identification of environmental issues | • Before design of rural roads, proper Transect walk should be carried by involving local people. The method of Transect Walk should be followed as given in "ECOP-20.0 Consultations for Environmental Aspects". | ESS 1 and ESS 10 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| 3. | Design of Culverts/CD Structures | • Hydrological calculations shall be carried out for designing of culverts. "ECOP-12.0 Drainage" shall be followed while designing culverts. | ESS 1 and ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| 4. | Hydrology and Drainage | • Provision of adequate cross drainage structure shall be made to ensure smooth passage of water and maintaining natural drainage pattern of the area.<br>• The discharge capacity of the cross-drainage structure shall be designed accordingly.<br>• Provision of adequate drainage structures shall be made in water stagnant/logging areas.<br>• The construction work near water body shall be planned preferably in dry season so that water quality of the water channel is not affected due to siltation and rain water | ESS 1 and ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning & Execution | Supervision/ Monitoring |
| | | runoff.<br>• Provision of additional cross drainage structure shall be made in the areas where nearby land is sloping towards road alignment on both the sides.<br>• Provision of concrete road construction in habitat area with drainage of both side of the road shall be made as per the design provision and with adequate slope to prevent any water logging.<br>• "ECOP 12.0 Drainage" will be followed for design of cross drainage structures. | | | |
| 5. | Design and Planning of Embankment Construction. | • The alignment design shall consider options to minimize excessive cuts and fills.<br>• The design shall be as per relevant IRC provisions for cut and fill, slope protection and drainage.<br>• The top soil of the cut and fill area shall be used for embankment slope protection. | ESS 1 and ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| 6. | Protection/toe walls near ponds and water bodies. | • Protection/toe walls will be designed and provided DPR. | ESS 1, ESS 3 and ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| 7. | Retaining and breast walls | • At required places in hilly areas, which are prone to landslide or valley side erosion breast walls, retaining walls and/or protection shall be provided. | ESS 1, ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| 8. | Road side drain | • In plain areas, both sides of road drain shall | ESS 1, ESS 3 | DPR Consultant | PIU (PWD), |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning & Execution | Supervision/ Monitoring |
| | and its outfall | be provided.<br>• In hilly area, road side drain shall be constructed hill side.<br>• Proper out fall will be constructed for road side drain to control erosion. | | | PMU, Society for TRESP |
| 9. | Alternate Materials and new technologies for rural road construction | • Use of alternate materials for construction (if available) and reuse of waste materials will ensured at DPR level.<br>• In the 15 % of rural roads, innovative road construction technologies namely Nano Technologies, Reclaimed Asphalt Pavement (RAP), Full Depth Reclamation (FDR), etc, waste will be used.<br>• Waste bricks from brick sole road shall be used for brick aggregate, which will also used in road construction | ESS 1 and ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| 10. | Climate Change Consideration and Vulnerability screening | • Climate change vulnerability will be taken into consideration. Necessary mitigative and resilient measures will be adopted during design of rural roads.<br>• Efforts shall be made to plant trees with help of PRI (Panchayati Raj Institution) for increasing the carbon sink. | ESS 1 and ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| 11. | Forest Clearance | • In case in any rural road subproject, forest clearance are required, same shall be obtained by PIU.<br>• No construction activities will be undertaken | ESS 1 and ESS6 | PIU (PWD) | PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning & Execution | Supervision/ Monitoring |
| | | in such roads till Forest Clearance is obtained. | | | |
| **II.** | **Preconstruction Stage** | | | | |
| 12 | Regulatory Permissions | • Contractors will obtain necessary regulatory permissions.<br>• In case construction materials are procured from third party, contractor will collect copy of regulatory permission and submit to PIU | ESS 1, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |
| 13. | Shifting of utilities and common property resources | • The road land width shall be clearly demarcated on the ground.<br>• All efforts will be made to minimize shifting of utilities and common property resources.<br>• Utility and community structure shifting shall be planned in consultations and concurrence of the community.<br>• Required permissions and necessary actions will be taken on a timely basis for removing and shifting utility structures and common property resources before road construction activities begin.<br>• While shifting | ESS 1, ESS 3, ESS 4, ESS10 | Contractor | PIU (PWD), PMU, Society for TRESP |
| 14. | Clearing of vegetation and removing trees | • All efforts shall be taken to avoid tree cutting wherever possible.<br>• Requisite permission from Forest Department shall be obtained for cutting of roadside trees.<br>• Provision of Compensatory Afforestation shall | ESS 1, ESS 3 and ESS 6 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | be made on 1:3.ratio basis. | | | |
| 15. | Establishment of construction camp and construction materials storage area | • Construction camp sites shall be located away from any local human settlements and preferably located on lands, which are not productive (barren/waste lands presently).<br>• Similarly temporary construction materials storage area shall be located away from human settlement areas and forested areas (minimum 0.5 km).<br>• The construction camps and materials storage areas shall have provision of adequate water supply, sanitation and all requisite infrastructure facilities.<br>• The construction camps and materials storage areas shall have provision of septic tank followed by soak pit of adequate capacity so that it can function properly for the entire duration of its use.<br>• Construction camps shall have provision of rationing facilities particularly for kerosene/LPG so that dependence on firewood for cooking is avoided to the extent possible.<br>• Personal Protective Equipment (PPEs) like helmet, boots, earplugs for workers, first aid and firefighting equipment shall be available at construction sites before start of | ESS 1, ESS 2, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning & Execution | Supervision/ Monitoring |
| | | construction.<br>• An emergency plan shall be prepared to fight with any emergency like fire, COVID-19, flood, etc.<br>• Provision shall be made for domestic solid waste disposal in environmentally sound manner. The recyclable waste shall be sold off and non-saleable and biodegradable waste shall be disposed through secured land filling.<br>• Provision of paved surface area for storage of fuel oil, lubricant oil, away from storm water drainage.<br>• Accommodation, drinking water facility for workers engaged in construction as per The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 | | | |
| 16. | Traffic Management and Road Safety | • Identify the areas where temporary traffic diversion (for culverts and bridges construction) may be required.<br>• Prepare appropriate traffic movement plan approved by respective PIU for ensuring continued safe flow of traffic, pedestrians and all road users during construction.<br>• Wherever, cross drainage structure work require longer construction time and road is | ESS 1, ESS 3 and ESS 4 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning & Execution | Supervision/ Monitoring |
| | | to be blocked for longer duration, the PIU/DPR consultant shall define appropriate measures for traffic diversion before the start of the construction.<br>• Adequate signboards shall be placed much ahead of diversion site to caution the road users. The road signs should be bold and retro reflective in nature for good visibility both during the day and night. | | | |
| 17. | Appointment of Environment & Safety Officer | • The contractor shall appoint qualified and experienced Environment & Safety Officer (ESO), who will dedicatedly work and ensure implementation of EMP including occupational health and safety issues at the camp, plant and construction work sites. | ESS 1, ESS 3 | DPR Consultant | PIU (PWD), PMU, Society for TRESP |
| **III.** | **Construction Stage** | | | | |
| 18. | Display of project Information Board | Project Information Board with important phone number will be displayed prominently at the both end of road. | ESS 1, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |
| 19. | Sourcing and Transportation of Construction Materials (Borrow Earth and Aggregate) | **Borrow Earth:**<br>• Borrowing of earth shall not be carried from road sides in any circumstances.<br>• The borrow earth shall be obtained from identified legal and approved locations and with prior permission of landowner and clear understanding for its rehabilitation.<br>• The re-habilitation plan may include the | ESS 1, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | following:<br>1. Borrow pits shall be backfilled with rejected construction wastes and will be given a vegetative cover. If this is not possible, then excavation sloped will be smoothed and depression will be filled in such a way that it looks more or less like the original ground surface.<br>2. Borrow areas might be used for aquaculture/fish pond in case landowner wants such development.<br>• The Indian Road Congress (IRC):36-2010 guideline should be used for selection of borrow pits and amount that can be borrowed.<br>• Borrowing earth from agricultural land shall be minimized to the extent possible. Further, no earth shall be borrowed from already low-lying areas.<br>• A 15 cm topsoil will be stripped off from the borrow pit and this will be stored in stockpiles in a designated area for height not exceeding 2m and side slopes not steeper than 1:2 (Vertical: Horizontal).<br>• Borrowing of earth will not be done continuously throughout the stretch.<br>• Ridges of not less than 8m widths will be left | | | |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | at intervals not exceeding 300m.<br>• Small drains will be cut through the ridges, if necessary, to facilitate drainage.<br>• The slope of the edges will be maintained not steeper than 1:4 (vertical: Horizontal).<br>• The depth of borrow pits will not be more than 30 cm after stripping the 15 cm topsoil aside.<br>• Fly ash will be used in road embankment as per IRC guidelines wherever thermal power plant is located within 100 km of the road alignment.<br>**Aggregate:**<br>• The stone aggregate shall be sourced from existing licensed quarries only.<br>• Copies of consent from TSPCB for stone crusher / environmental clearance for stone quarries for the existing third-party sources will be submitted to PIU.<br><br>**Transportation of Construction Materials:**<br>• Existing roads are to be used for hauling of materials to the extent possible.<br>• The vehicles deployed for material transportation shall be spillage proof to avoid or minimize the spillage of the material during transportation. | | | |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | • Construction materials shall be transported by covering through tarpaulin. | | | |
| 20. | Drainage | • Cross drainage structures shall be constructed based on hydrological study, and discharge capacities of drainage structures shall be designed to facilitate smooth passage of water and heading up or flooding is avoided even in rainy season.<br>• Irrigation pipes shall be laid as per requirement of local farmers.<br>• In the habitation areas, road side drain shall be constructed with proper outfalls.<br>• Around the hand pumps located adjacent to road, platform will be constructed and waste water channel shall be connected to road side drains to avoid flooding on the road. | ESS 1, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |
| 21. | Compaction and Contamination of Soil | • To prevent soil compaction in the adjoining productive lands beyond the ROW, the movement of construction vehicles, machinery and equipment shall be restricted to the designated haulage route.<br>• The productive land shall be reclaimed after construction activity.<br>• Fuel and lubricants shall be stored at the predefined storage locations only.<br>• The construction materials storage area shall be paved with gentle slope to a corner and | ESS 1, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning & Execution | Supervision/ Monitoring |
| | | connected with a chamber to collect any spills of the oils.<br>• All efforts shall be made to minimise the waste generation. Unavoidable wastes shall be stored at the designated place prior to disposal.<br>• To avoid soil contamination at the wash-down and re-fuelling areas, "oil interceptors" shall be provided. Oil and grease spill and oil-soaked materials are to be collected and stored in labelled containers (Labelled: USED OIL; and hazardous sign be displayed) and disposed off to TSPCB/ MoEF&CC authorized used oil recyclers. | | | |
| 22. | Construction Debris and Wastes | • Construction and demolition wastes generated from dismantling of old culverts and bridges shall be disposed off as per Construction and Demolition Waste Management Rule 2016.<br>• Excavated materials from existing brick sole road, shoulders, verges, drains, cross drainage will be used for backfilling embankments, etc.<br>• The bituminous wastes shall be disposed in secure manner at designated landfill sites only in an environmentally accepted manner. | ESS 1, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| 23. | Air and Noise Quality | • Vehicles delivering loose and fine materials like sand and aggregates shall be covered.<br>• Dust suppression measures like water sprinkling, shall be applied in all dust prone locations such as earthworks, stockpiles, etc.<br>• Asphalt (hot mix) plants shall be located at least 0.25 km away and in downwind direction of the settlements/villages.<br>• DG set will be provided a chimney with vertical opening having adequate height as per CPCB guidelines (Height of stack in meter = Height of the building + 0.2 √KVA).<br>• Construction materials storage areas shall also be located downwind of the habitation area.<br>• Diesel Generating (DG) sets shall also be fitted with stack of adequate height as per CPCB guidelines.<br>• Only acoustic enclosure fitted DG sets shall be used (if required).<br>• Vehicles and engaged construction activities shall have valid Pollution Under Control Certificate (PUC).<br>• Regular maintenance of machinery and equipment will be carried and vehicular pollution check should be made mandatory.<br>• Engine will be switched-off when not in use | ESS 1, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning & Execution | Supervision/ Monitoring |
| | | to save fuel, prevent accidents and unnecessary noise and air pollution.<br>• All vehicles and equipment used in construction work will be fitted with muffler or silencers.<br>• Servicing of construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective, these shall be replaced.<br>• The plants and equipment used in construction (including those of sub-Contractors) shall strictly conform to the MoEF&CC/CPCB noise standards and shall have latest noise suppression mountings. | | | |
| 24. | Public and Worker's Safety | • All measures required for ensuring safety and health of the workers shall be taken up by the Contractor. This includes provision and enforcement of appropriate personal protective equipment; first aid facilities at camp, plant, quarries and work zones; emergency response; fire, electrical and mechanical safety arrangements.<br>• The Contractor must provide personal protective equipment (PPE) and safety | ESS 1, ESS 2 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning & Execution | Supervision/ Monitoring |
| | | equipment *i.e.* gumboots and gloves to the workers while handling hot bitumen.<br>• Caution and safety signboards shall be provided at road construction work sites especially near habitation and schools<br>• The contractor must ensure that during the construction of road, road materials are stored at a location such that they do not create any risk to road users.<br>• The contractor shall give preference to local labours/local tribal people in road construction activities and payment of wages shall be strictly as per applicable regulations. | | | |
| 25. | Prevention of spread of HIV/AIDs | • Necessary HIV/AIDS prevention awareness measures will be taken at the labour camp by the contractor.<br>• Time to time HIV/AIDS awareness training/programme will be organized by the Environment & Safety Officers of the contractor. | ESS 2 and ESS 4 | Contractor | PIU (PWD), PMU, Society for TRESP |
| 26. | Ground Water and Surface Water Quality and Availability | • The Contractor shall arrange for water required during construction in such a way that the water availability and supply to nearby communities remains unaffected.<br>• Provision shall be made to link side drains with the nearby ponds for facilitating water harvesting if feasible. | ESS 1, ESS 3 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | • Where ponds are not available, the water harvesting pits shall be constructed as per the requirement and rainfall intensity.<br>• Preventive measures like slope stabilization, etc shall be taken for prevention of siltation in water bodies. | | | |
| 27. | Safety of Road Users and Work Zone Safety | • Necessary measures for ensuring work zone safety will be taken by the Contractor during road & culverts construction works.<br>• This will include barricading of work zone, display of diversion boards, informatory, caution & signages with retro reflective tapes; use of delineators and safety cones, PPEs and high visibility safety vests for workers; no parking of construction equipments & machineries on the road; use of retro-reflective tapes on signage, construction vehicles & machineries; induction training for workers & supervisors to enhance work zone safety; availability first aid box and a vehicle which can be used as ambulance during injury or accidents (if any). | ESS 1, ESS 3, ESS 4 | Contractor | PIU (PWD), PMU, Society for TRESP |
| 28. | Occupational Health and Safety | • The requisite PPE (helmet, mask, boot, hand gloves, earplugs) shall be provided to the construction workers.<br>• Children (less than 18 years) and pregnant | ESS 1, ESS 3, ESS 4 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | women shall not be allowed to work under any circumstances.<br>• Deployment of Child Labour shall be strictly prohibited.<br>• The contractor will also provide potable water facilities within the precincts of every workplace in an accessible place, as per standards set by the Building and other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.<br>• First Aid Box shall be kept at the work place and camp site.<br>• Workforce, likely to be exposed to noise levels beyond regulatory stipulated limits, shall be provided with protective gears like hear plugs etc.<br>• Dust suppression measures like sprinkling of water shall be ensured on the earth work on the road.<br>• Fixed or mobile toilets shall be provided for workers. Open defecation shall be strictly prohibited.<br>• Toilets will be fitted with septic tank followed by soak pits. | | | |
| 29. | Chance Found Archaeological | • All fossils, coins, articles of value of antiquity, structures and other remains or things of | ESS 1, ESS 8 | Contractor | PIU (PWD), PMU, Society |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning & Execution | Supervision/ Monitoring |
| | Property | geological or archaeological interest discovered on the construction sites shall be the property of the Government and shall be dealt with as per provisions of the relevant legislation.<br>• The contractor will take reasonable precautions to prevent his workmen or any other persons from removing and damaging any such article or thing. He/She will, immediately upon discovery thereof and before removal inform the Environmental Expert of the PIU/PMU of such discovery and carry out the PIU/PMU's instructions for dealing with the same, waiting which all work shall be stopped.<br>• The PIU will seek direction from the Archaeological Survey of India (ASI) before instructing the Contractor to recommence the work in the site. | | | for TRESP |
| 30. | Impacts Cultural Properties | • All necessary and adequate care shall be taken to minimize impact on cultural properties which includes cultural sites and remains, religious places, monuments and any other important structures as identified during construction stage.<br>• Relocation and enhancement measures shall be taken up as per design and in consultation | ESS 1, ESS 8 | Contractor | PIU (PWD), PMU, Society for TRESP |

| Sr. No. | Environmental and Social Issues | Environmental And Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning & Execution | Supervision/ Monitoring |
| | | with local community.<br>• Access to such properties from the road shall be maintained clear and clean. | | | |
| **IV** | **Post Construction and Maintenance Stage** | | | | |
| 31. | Site restoration | • Construction debris from culvert construction sites and from the road sides shall be collected and disposed in environmental sound manner.<br>• All construction camp/temporary office/materials storage areas are to be restored to its original conditions.<br>• The borrow areas rehabilitation will be ensured as per the agreed plan with the landowner. | ESS 1, ESS 3, ESS 4 | Contractor | PIU (PWD), PMU, Society for TRESP |
| 32. | Drainage | • Regular removal/cleaning of deposited silt shall be done from drainage channels, road drains & outlet points and culverts before the monsoon season.<br>• Rejuvenation of the drainage system by removing encroachments/ congestions shall be regularly conducted. | ESS 1, ESS 4 | Contractor | PIU (PWD), PMU, Society for TRESP |
| 33. | Clearing of natural vegetation coming on the carriageway and shoulders. | • Regular removal/cleaning of natural vegetation coming on the carriageway and shoulders shall be done after monsoon and winter season.<br>• | ESS 1, ESS 4 | Contractor | PIU (PWD), PMU, Society for TRESP |

Annexure 3

# Generic ESMP for Construction and Upgradation of Schools under TRESP

- ✓ Design Stage
- ✓ Preconstruction Stage
- ✓ Construction Stage
- ✓ Demobilisation Stage

## Generic Environmental and Social Management Plan (ESMP) for Construction and Upgradation of Schools under TRESP

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| **I.** | **Design Stage** | | | | |
| 1. | Schools Building Orientation | • Adopt the concept of passive solar design of buildings using architecture design approaches that minimise energy consumption in buildings by integrating conventional energy -efficient devices such as fans, lighting fixtures with the passive design elements such as building orientation, landscaping efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass.<br>• The school buildings should be oriented optimally based on Sun-Path and engineering analysis to curtail excessive solar radiations. | ESS 1, ESS 3 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 2. | Winter Solar Access and Summer Ventilation | • Proportion of open spaces and built-up edges should be designed such that it ensures winter solar access and summer ventilation. | ESS 1, ESS 3 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 3. | Energy Conservation | • Appropriate technologies and | ESS 1, ESS 3 | DPR | PMU, Society for |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | Measures during design | materials to be used to encourage reduction in carbon foot print.<br>• Lighting should solar/LED in the buildings and outside areas.<br>• Fly ash and fly ash bricks should be used as building materials (if available) as per the provision of Fly Ash Notification 2009.<br>• Recycled materials having low embodied energy be used up to possible extant.<br>• Use of light coloured, reflective roofs having Solar Reflective Index (SRI) of 50% or more should be promoted. | | Consultant | TRESP/PIU, Department of Education |
| 4. | Green Belt/Green Cover in School Premises | • Provide minimum 1 tree for every 80 sqm of plot area. More trees should be planted if open space is available.<br>• Native species of trees should be planted. | ESS 1, ESS 3, ESS 6 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 5. | Access for Differently Able | • At least the minimum level of accessibility for persons with disabilities should be provided through the ramps having proper slope.<br>• Ensure accessibility tactile and | ESS 1, ESS 4 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | usability of facilities in the school buildings by student, parents, teachers and visitors with disabilities.<br>• Ensure access to facilities and services by adopting appropriate site planning to eliminate barriers as per the recommended standards (NBC 2016). | | | |
| 6. | Storm Water Management | • Storm water management should be ensured during design.<br>• Natural flow of existing storm water channel should not be altered or diverted for construction of new buildings.<br>• Storm water channel will be designed based National Building Code of India 2016.<br>• Stagnation of water and flooding within school premises will be avoided. | ESS 1, ESS 4 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 7. | Rain Water Harvesting | Based on hydrogeological investigations, rain water harvesting structures should be designed as per CGWA guidelines. | ESS 1, ESS 3 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 8. | Identification of source of water | Source of water should be identified. | ESS 1 | DPR Consultant | PMU, Society for TRESP/ PIU, |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| 9. | Permission of ground water withdrawal | • Permission of ground water withdrawal from Ground Water Authority will be obtained as applicable regulations. | ESS 1, ESS 3 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 10. | Water treatment measures and quality of Potable Water | • Water treatment measures such as filtration, RO, etc should be provided.<br>• It should be ensured that water quality at school premises meets Indian standards for drinking water (IS:10500-2012). | ESS 1, ESS 3 and ESS4 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 11. | Water Conservation | Low flow fixtures /sensors to be used for water conservation. | ESS 1, ESS 3 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 12. | Toilets for Students | Nos of toilets for students and teachers & staff will be as per BaLA guidelines and/or NBC 2016 | ESS 1, ESS 3 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| 13. | Disposal of Sewage | Properly designed septic tanks and soak pits will be constructed for treatment and disposal of sewage. | ESS 1, ESS 3 and ESS4 | DPR Consultant | PMU, Society for TRESP/ PIU, Department of Education |
| | Provision of Solid Wastes Composting | Organic waste composter (OWC) or vermiculture pits shall be constructed | ESS 1, ESS 3 and ESS4 | DPR Consultant | PMU, Society for TRESP/ PIU, |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | at the schools for biodegradable wastes treatment. The manure generated from composter will be used for landscaping. | | | Department of Education |
| **II.** | **Pre-Construction Stage** | | | | |
| **A.** | **Pre-construction Activities By the Contractor** | | | | |
| A.1 | Display of project Information Board | • Project Information Board with important phone number will be displayed prominently at the site. | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| A.2 | Consent for batching plant | • Consent to Establish and Consent to Operate will be obtained from TSPCB, if contractor establishes batching plant.<br>• In the event of procuring, aggregate and sand from third party, the contractor shall ensure that these stone and sand quarries are legal and have valid clearances. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| A.3 | Collection and Disposal of Demolition Wastes | • If demotion of the existing structure at schools is required before construction, demolition wastes will be collected, reused and disposed as per Construction and Demolition Waste Management Rules, 2016. | ESS 1, ESS 3 and ESS4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| A.4 | Collection and Disposal e-wastes from existing school. | • E-wastes generated from demolition of existing structures/buildings will be collected and disposed to TSPCB/ CPCB authorised e-waste recyclers as per E-waste management Rules, 2016. | ESS 1, ESS 3 and ESS4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| A.5 | Labour facilities | • At labour camp, the contractor shall provide well ventilated accommodations, bath rooms, food cooking facilities, toilets, etc as per The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| A.6 | Other Construction Vehicles, Equipment and Machineries | • All vehicles, equipment and machinery to be procured for construction work will conform to the relevant Bureau of Indian Standard (BIS) norms/CPCB standards. The discharge standards promulgated under the Environment Protection Act, 1986 and Motor Vehicles Act, 2019 will be strictly adhered to.<br>• Acoustic enclosure fitted DG set will be used at the project site as | ESS 1, ESS 3 and ESS4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | per regulations.<br>• The contractor shall maintain records of Pollution Under Control (PUC) certificates for all vehicles used during the contract period, which will be produced to PIU for verification whenever required. | | | |
| A.7 | Labour Requirement | • The contractor preferably will use unskilled/ semiskilled/ skilled labour from local area to give the maximum benefit to the local community. | ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| A.8 | Appointment of Environment & Safety Officer | • The contractor shall appoint qualified and experienced Environment & Safety Officer (ESO), who will dedicatedly work and ensure implementation of EMP including occupational health and safety issues at the camp, plant and construction work sites. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| **III.** | **Construction Stage** | | | | |
| **B** | **Construction Work** | | | | |
| B.1 | Top Soil from construction area | Top soil from construction area will be preserved and to be later used for landscaping. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| B.2 | Disposal of Surplus | Earth excavated at construction site | ESS 1, ESS 3 | Contractor | PMU, Society for |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | Earth | will be used for filling at the site. Surplus earth will be collected and transported to pre identified disposal area. | | | TRESP/ PIU, Department of Education |
| B.3 | Barricading of construction zone | The construction site will be barricaded by tin sheets with safety sign boards. | ESS 1, ESS2, | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| B.4 | Transportation of Construction Materials | • All vehicles delivering construction materials to the site shall be covered to avoid spillage of materials and air pollution.<br>• The unloading of construction materials at the construction sites will be limited to day time only to avoid accidents.<br>• Screens of hessian cloth, agro-net and such other barricading materials are to be erected around stock piling sites, so that generation of the dust in the vicinity of construction site can be minimised to a great extent. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| B.5 | Paint and White Washing | • Lead containing paints will not be used at the site.<br>• Paint and solvents should be used with the lowest possible VOC | ESS 1, ESS 3, ESS4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | content.<br>• Oil based paints and paints containing metals should be avoided.<br>• Keep all paint and solvent containers closed when not in use to minimize evaporation and prevent spills.<br>• Limit use of thinner to the maximum extent possible.<br>• Use cleaning solvent the maximum numbers of times before disposal. | | | |
| B.6 | Safety of Workers | The contractor will make sure that during the construction works all relevant provisions of the Building and Other construction workers (regulation of employment and conditions of services) Act 1996 and Labour Management Procedures are adhered to.<br><br>The contractor will comply with all the precautions as required for ensuring the safety of the workers as per the country' labour regulations and International Labour Organisation (ILO) Convention No-62 | ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | as far as those are applicable to this contract. | | | |
| B.7 | Risk From Electrical Equipment(s) | The contractor shall take all required precautions to prevent danger from electrical cables, wires and equipment and ensure that:<br><br>a) All electrical installations and wirings shall be barricaded in manner that ensure safety of workers, equipment.<br>b) Necessary fencing, illumination and proper insulation of the electrical lines shall be ensured by the contractor for safety workers.<br>c) All electrical equipment/cables/ wires to be used in the construction shall have to confirm to the relevant BIS specifications/ codes.<br>d) The contractor will ensure that electrical equipment/ cables/ wires are free from manufacturer defect and maintained in good | ESS 1, ESS 2, ESS 4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | working order through regular supervision, monitoring and repair/replacement from time to time.<br>e) Insulation mat and canopy will be provided to electrical panels in open area.<br>f) Bone skull danger sign will be provided at all 440-volt electrical equipment and panels. | | | |
| B.8 | Occupational Health and Safety at the Work Sites. | a) Required Personal Protective Equipment (PPE) will be provided by the contractor to the workers engaged in construction works.<br>b) Required warning signs, barricades, etc will be provided by the contractors.<br>c) Proper barricading will be provided along the construction site. | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| B.9 | Water Conservation During Concrete Curing and Construction | • Keeping in view the use of large quantities of water in curing, measures for reducing water demand during construction should be followed.<br>• Curing water should be sprayed on concrete structures, free flow water should not be allowed for | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | curing. After liberal curing on the first day, all concrete structures may be painted with curing chemical to save water.<br>• Concrete structures should be covered with thick cloth /gunny bags and then water should be sprayed on them. This will avoid water rebound and will ensure sustained and complete curing. Ponds should be made using cement and sand mortar to avoid water flowing away from the flat surface while curing.<br>• Use of potable water during construction should be minimized. | | | |
| **C.** | **Pollution Control** | | | | |
| **C.1** | **Water Pollution** | | | | |
| C.1.1 | Water Pollution from Construction Wastes | • The contractor shall take all precautionary measures to collect and dispose-off construction wastes/debris generated from construction site.<br>• All solid or hazardous wastes (if any) will be collected and disposed in environmental sound manner.<br>• Sewage generated from the | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | construction site should be disposed in septic tank followed by soak pit. | | | |
| C.1.2 | Waste Water from Labour Camp | • Waste water generated from the sanitary facilities of labour camp and work sites will be treated in septic tank followed by soak pit.<br>• Proper mobile or fixed toilets fitted with septic tank will be provided at camp and construction sites. | ESS 1,ESS 2 ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| **C.2** | **Air Pollution** | | | | |
| C.2.1 | Dust and Gaseous Pollution | • Mitigation measures would principally include storing of materials/earth stockpiles at designated places, sprinkling of water into the materials stockpiles and limited period of storage at each construction zone.<br>• Watering frequency during periods of high risk (*e.g.* high winds) shall be increased.<br>• The contractor will procure the construction plant and machinery, which will conform to the pollution control norms specified by the MoEFCC/CPCB/TSPCB.<br>• Regular maintenance of machinery | ESS 1,ESS 2 ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | and equipment will be carried out and vehicular pollution check will be made mandatory.<br>• LPG will be used as fuel for cooking of food at construction labour camp instead of used of fuel wood.<br>• Vehicles transporting garbage & demolition wastes, earth, sand, aggregate, etc will be covered with tarpaulin sheets to control windblown dust from vehicles. | | | |
| C.2.2 | Emissions from Construction Vehicles, Equipment and Machineries | • The contractor will ensure that all vehicles, equipment and machineries to be used for construction works are regularly maintained and confirm that pollution emissions levels comply with the relevant emissions requirements of CPCB and/Motor Vehicles Rules. The contractor will submit PUC certificates for all vehicles used for the sub project.<br>• DG set will be provided a chimney with vertical opening having adequate height as per CPCB guidelines (Height of stack in | ESS 1,ESS 2 ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | meter = Height of the building + 0.2 √KVA). | | | |
| **C.3** | **Noise Pollution** | | | | |
| C.3.1 | Noise Levels from Vehicles, Plant and Equipments | The contractor will ensure the following:<br>a) All construction activities shall be restricted to day time hours only.<br>b) The plants and equipment used in construction (including those of sub-Contractors) shall strictly conform to the MoEF&CC/CPCB noise standards and shall have latest noise suppression mountings.<br>c) All vehicles and equipment used in construction work will be fitted with muffler or silencers.<br>d) Servicing of construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective, these shall be replaced.<br>e) Only acoustic enclosures fitted | ESS 1,ESS 2 ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | DG set will be allowed at the construction site and camp site.<br>f) Construction activities shall not be carried during night (10.00 P.M to 06.00 A.M) | | | |
| **C.4** | **Waste Generation & Disposal** | | | | |
| C.4.1 | Excavated Soil | Excavated soil shall be used for plantation or land scaping purposes. Lower layers of excavated soil shall be re-used within the site for filling purpose or other construction activities. If any extra soil is left, then it should be disposed of in environmentally sound manner. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| C.4.2 | Demolition Waste | Demolition waste will comprise of wastes from removal of existing structures and may be reused for constructional related filling purposes These wastes' disposal must comply with the Construction and Demolition | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | Waste Management Rules 2016 requirement for its disposal. | | | |
| C.4.3 | Construction Debris | Construction wastes will comprise of broken bricks, dry cement, discarded timber, metal pieces, empty cement bags, glass, paint/varnishes containers, electrical wastes, used oil, etc. These wastes should be segregated into recyclable and non-recyclable waste.<br><br>Recyclable waste shall be stored in the covered area and shall be sold to authorized vendors regularly. Non-recyclable waste shall be disposed at approved debris site in covered vehicles or reuse for land filling purposes. These wastes' disposal must comply with the Construction and Demolition Waste Management Rules 2016 requirement for its disposal. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| C.4.4 | Hazardous Wastes | Used oil generated from maintenance of construction machines and DG sets shall be disposed through use oil recyclers. Any hazardous wastes generated from the school | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | construction site will be disposed as per Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016. | | | |
| C.4.5 | e-wastes | e- wastes generated during school construction works will be disposed through e-waste recyclers as per e-waste Management Rules, 2016. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| C.4.6 | Solid Waste (Municipal and other Waste) | Municipal solid wastes will be generated from labour camp and construction site. These solid wastes will be disposed as per Solid Waste Management Rules 2016. Dustbins for recyclable and non-recyclable wastes shall be provided in labour camp areas. Recyclable wastes shall be sold to authorized vendors. Biodegradable wastes shall preferably be composted. Concept of reduce, re-use and recycle shall be followed at site. The non-recyclable, nonsalable and nonbiodegradable wastes shall preferably be disposed at a marked landfill site. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| C.4.7 | Asbestos Containing Wastes | During demolition of existing school buildings, if Asbestos containing waste is found, it will be collected | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | and disposed to nearest TSDF site through waste collection and disposal agency authorized by TSPCB. | | | Education |
| **D.** | **Personnel Safety** | | | | |
| D.1 | Personal Safety Measures for Labours and Staff | The contractor shall provide necessary personnel protective equipment and take suitable personal safety measures for labours and staff:<br><br>a) Full body protection clothing, protective footwear, hand gloves and goggles to workers employed handling cement concrete,<br>b) Construction workers will be provided high visibility vests,<br>c) Ear plugs to workers exposed to high noise levels,<br>d) Hard hat or helmets to workers, where there is danger of falling objects from height,<br>e) Hand gloves, helmets, protective footwear/safety shoes, protective goggles, nose masks, high | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | visibility vests etc (as required) will be provided to the workers employed in construction works,<br>f) Safety belts will be used by workers while working at height,<br><br>The contractor will comply with all the precautions as required for ensuring the safety of the workmen as far as those are applicable to this contract.<br><br>The contractor will make sure that during the construction work all relevant provisions of The Building and other Construction Workers (regulation of Employment and Conditions of Services) Act, 1996 are adhered to. | | | |
| D.2 | First Aid and Emergency Management | • Emergency numbers will be displayed at the camp and construction sites,<br>• First Aid boxes will be made available at the camp and construction sites,<br>• Designated vehicles, which can be used as ambulance during | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | emergency, which will be available at construction sites as per requirement. | | | |
| **E.** | **Labour Camp Management** | | | | |
| E.1 | Facilities for Labourers | • The contractors will follow all relevant provisions of The Building and the other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 for construction and labour camp.<br>• The location, layout and basic facility provision of labour camp will be submitted to PIU prior to their construction.<br>• The Contractor will maintain well ventilated living accommodation and sanitation facilities to workers in functional and hygienic manner.<br>• Workers will be provided with beds/bunk beds with mosquito nets and no worker will be allowed to sleep on the ground.<br>• Fans and proper ventilation (turbine type ventilators) will be provided in labour accommodation | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | rooms.<br>• Regular cleaning and sweeping will be ensured at the labour camp site.<br>• Fuel wood will not be allowed for cooking at the labour camps. LPG cylinders with gas fire box will be provided at labour camp by the contractor.<br>• Clean and cool drinking water will be made available for workers by the contractors.<br>• If required, check water quality and undertake necessary measures as applicable to correct anomalies in water quality that may be indicated in the water quality tests. Drinking water quality should meet Drinking Water Standard IS: 10500-2012.<br>• Ensure drainage arrangements are adequate and fully functional and no stagnation of water takes place.<br>• Necessary medical facilities will be provided to workers by the contractors.<br>• Separate toilets/bathrooms, | | | |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | wherever required, will be provided for male and female, marked in vernacular. | | | |
| E.2 | HIV/AIDS Prevention Measures | • Necessary HIV/AIDS prevention awareness measures will be taken at the labour camp by the contractor.<br>• Time to time HIV/AIDS awareness training/programme will be organized by the Environment & Safety Officers of the contractor. | ESS 1, ESS 2, ESS4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| E.3 | Sanitation and Sewage System at Labour Camp | The Contractor will ensure that:<br>• The sewage disposal arrangement for the camp will be designed, built and operated in such a fashion that no health hazard and pollution occur at the camp site or nearby areas,<br>• Adequate water supply will be ensured in bath rooms, toilets and urinals,<br>• Ensure adequate number of toilets/urinals are available and they are fully functional<br>• Separate toilets should be available for men, women and | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | physically challenged.<br>• Night soil will be disposed of with the help of local municipal extractor.<br>• Ensure adequate drainage and sewerage arrangements (including soak pits and septic tanks, if present) are available and fully functional<br>• All taps and plumbing fittings in toilets should be functional and leakage-free<br>• Water stagnation or waterlogging should not be allowed to take place. | | | |
| E.4 | Wastes Collection and Disposal from labour camp | • The contractor will provide garbage bins in the camp and construction sites. It will be ensured that these are regularly emptied and disposed off in a hygienic manner as the Solid Waste Management Rule 2016.<br>• Burning of any kind of wastes will not be allowed at the camp and construction sites.<br>• Solid (paper, plastic, polyethylene, | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | etc) wastes generated at the construction site, plant & camp sites, will be collected in covered waste bins and segregated as biodegradable (food waste, paper, etc) and non-biodegradable (plastic, polyethylene bag, etc) wastes. Polyethylene/plastic wastes will be stored in empty cement bags and to be sent for recycling through scrap dealer. Biodegradable (food waste, paper, etc) solid waste will be disposed in compost pit.<br>• Vermicompost pit will be provided for disposal for biodegradable wastes. | | | |
| F. | Fire Safety and Emergency Response Measures | • At the construction site, necessary fire extinguishers will be provided at especially for electrical fire and general fire.<br>• Emergency phone numbers will be displayed prominently at the construction site.<br>• Cardiopulmonary resuscitation (CPR) chart will be displayed and training will be provided for the | ESS 1, ESS 2, ESS 4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | same.<br>• For emergency, vehicle will be available at the site, which can be used as ambulance to carry injured person to hospital. | | | |
| G. | COVID Protection | • Latest Government COVID guidelines (Central, State as well as local) as are in force from time to time should be adhered to.<br>• Sanitizer and masks will be provided to workers.<br>• Body temperature will be monitored at the site.<br>• Arrangement to check body temperatures of all participants<br>• Masks should be used if mandatory<br>• Social distancing practiced, if mandatory<br>• Collection and compilation of vaccination status of all participants (Workers & staffs).<br>• Details of nearest COVID isolation facilities and COVID medical facilities should be available at the site. | ESS 1, ESS 2, ESS 4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |
| **H.** | **Contractor's Demobilization** | | | | |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| H.1 | Clean-up Operations, Restoration and Rehabilitation | • On completion of construction works, the contractors will prepare site restoration and demobilization plan. The clean-up and restoration operation will be implemented by the contractors prior to demobilization. The Contractors will clear all temporary structures; dispose all garbage, night soils and POL (Petroleum, Oil and Lubricants) wastes in environmental sound manner.<br>• All construction area including camp, and any other area used or affected due to the construction work will be left clean and tidy at the contractor's expense to the entire satisfaction to the PIU. | ESS 1, ESS 3, ESS 4 | Contractor | PMU, Society for TRESP/ PIU, Department of Education |

Annexure 4

# Generic ESMP for Construction of Post-Harvest Infrastructure under TRESP

- ✓ Preconstruction Stage
- ✓ Construction Stage
- ✓ Demobilisation Stage

## Generic ESMP for Construction of Post-Harvest Infrastructure under TRESP

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| **I.** | **Pre-Construction Stage** | | | | |
| **A.** | **Pre-construction Activities By the Contractor** | | | | |
| A.1 | Display of project Information Board | • Project Information Board with important phone number will be displayed prominently at the site. | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| A.2 | Barricading Around the site | • Proper barricading will be provided by tin sheets around the construction site. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| A.3 | Labour facilities | • At labour camp, the contractor shall provide well ventilated accommodations, bath rooms, food cooking facilities, toilets, etc as per The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| A.4 | Other Construction Vehicles, Equipment and Machineries | • All vehicles, equipment and machinery to be procured for construction work will conform to the relevant Bureau of Indian Standard (BIS) norms/CPCB standards. The discharge standards promulgated under the Environment Protection Act, 1986 and Motor Vehicles Act, 2019 will be strictly adhered to. | ESS 1, ESS 3 and ESS4 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | • Acoustic enclosure fitted DG set will be used at the project site as per regulations.<br>• The contractor shall maintain records of Pollution Under Control (PUC) certificates for all vehicles used during the contract period, which will be produced to PIU for verification whenever required. | | | |
| A.5 | Labour Requirement | • The contractor preferably will use unskilled/semiskilled/skilled labour from local area to give the maximum benefit to the local community. | ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| A.6 | Appointment of Environment & Safety Officer | • The contractor shall appoint qualified and experienced Environment & Safety Officer (ESO), who will dedicatedly work and ensure implementation of EMP including occupational health and safety issues at the construction work sites. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| **II.** | **Construction Stage** | | | | |
| **B** | **Construction Work** | | | | |
| B.1 | Disposal of Surplus Earth | Earth excavated at construction site will be used for filling at the site. Surplus earth will be collected and transported to pre identified disposal area. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| B.2 | Transportation of | • All vehicles delivering construction | ESS 1, ESS 3 | Contractor | PMU, Society for |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | Construction Materials | materials to the site shall be covered to avoid spillage of materials and air pollution.<br>• The unloading of construction materials at the construction sites will be limited to day time only to avoid accidents.<br>• Screens of hessian cloth, agro-net and such other barricading materials are to be erected around stock piling sites, so that generation of the dust in the vicinity of construction site can be minimised to a great extent. | | | TRESP/ PIU, Department of Agriculture |
| B.3 | Paint and White Washing | • Lead containing paints will not be used at the site,<br>• Paint and solvents should be used with the lowest possible VOC content,<br>• Oil based paints and paints containing metals should be avoided,<br>• Keep all paint and solvent containers closed when not in use to minimize evaporation and prevent spills,<br>• Limit use of thinner to the maximum extent possible,<br>• Use cleaning solvent the maximum numbers of times before disposal. | ESS 1, ESS 3, ESS4 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| B.4 | Safety of Workers | The contractor will make sure that | ESS 2 | Contractor | PMU, Society for |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | during the construction works all relevant provisions of the Building and Other construction workers (regulation of employment and conditions of services) Act 1996 and Labour Management Procedures are adhered to.<br><br>The contractor will comply with all the precautions as required for ensuring the safety of the workers as per the country' labour regulations and International Labour Organisation (ILO) Convention No-62 as far as those are applicable to this contract. | | | TRESP/ PIU, Department of Agriculture |
| B.5 | Risk From Electrical Equipment(s) | The contractor shall take all required precautions to prevent danger from electrical cables, wires and equipment and ensure that:<br><br>g) All electrical installations and wirings shall be barricaded in manner that ensure safety of workers, equipment,<br>h) Necessary fencing, illumination and | ESS 1, ESS 2, ESS 4 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | proper insulation of the electrical lines shall be ensured by the contractor for safety workers,<br>i) All electrical equipment/cables/ wires to be used in the construction shall have to confirm to the relevant BIS specifications/ codes,<br>j) The contractor will ensure that electrical equipment/ cables/ wires are free from manufacturer defect and maintained in good working order through regular supervision, monitoring and repair/replacement from time to time,<br>k) Insulation mat and canopy will be provided to electrical panels in open area,<br>l) Bone skull danger sign will be provided at all 440-volt electrical equipment and panels. | | | |
| B.6 | Occupational Health and Safety at the Work Sites. | d) Required Personal Protective Equipment (PPE) will be provided by the contractor to the workers engaged in construction works,<br>e) Required warning signs, barricades, etc will be provided by the contractors, | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
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| | | | | Planning and Execution | Supervision/ Monitoring |
| | | f) Proper barricading will be provided along the construction site. | | | |
| B.7 | Water Conservation During Concrete Curing and Construction | • Keeping in view the use of large quantities of water in curing, measures for reducing water demand during construction should be followed,<br>• Curing water should be sprayed on concrete structures, free flow water should not be allowed for curing. After liberal curing on the first day, all concrete structures may be painted with curing chemical to save water,<br>• Concrete structures should be covered with thick cloth /gunny bags and then water should be sprayed on them. This will avoid water rebound and will ensure sustained and complete curing. Ponds should be made using cement and sand mortar to avoid water flowing away from the flat surface while curing,<br>• Use of potable water during construction should be minimized. | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| **C.** | **Pollution Control** | | | | |
| **C.1** | **Water Pollution** | | | | |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| C.1.1 | Water Pollution from Construction Wastes | • The contractor shall take all precautionary measures to collect and dispose-off construction wastes/debris generated from construction site,<br>• All solid or hazardous wastes (if any) will be collected and disposed in environmental sound manner,<br>• Sewage generated from the construction site should be disposed in septic tank followed by soak pit. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| C.1.2 | Waste Water from Labour Camp | • Waste water generated from the sanitary facilities of labour camp and work sites will be treated in septic tank followed by soak pit,<br>• Proper mobile or fixed toilets fitted with septic tank will be provided at camp and construction sites. | ESS 1,ESS 2 ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| **C.2** | **Air Pollution** | | | | |
| C.2.1 | Dust and Gaseous Pollution | • Mitigation measures would principally include storing of materials/earth stockpiles at designated places, sprinkling of water into the materials stockpiles and limited period of storage at each construction zone,<br>• Watering frequency during periods of high risk (*e.g.* high winds) shall be | ESS 1,ESS 2 ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | increased,<br>• Regular maintenance of machinery and equipment will be carried out and vehicular pollution check will be made mandatory,<br>• LPG will be used as fuel for cooking of food at construction labour camp instead of used of fuel wood,<br>• Vehicles transporting garbage & earth, sand, aggregate, etc will be covered with tarpaulin sheets to control windblown dust from vehicles. | | | |
| C.2.2 | Emissions from Construction Vehicles, Equipment and Machineries | • The contractor will ensure that all vehicles, equipment and machineries to be used for construction works are regularly maintained and confirm that pollution emissions levels comply with the relevant emissions requirements of CPCB and/Motor Vehicles Rules. The contractor will submit PUC certificates for all vehicles used for the sub project,<br>• DG set will be provided a chimney with vertical opening having adequate height as per CPCB guidelines (Height of stack in meter | ESS 1, ESS 2 ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | = Height of the building + 0.2 √KVA). | | | |
| **C.3** | **Noise Pollution** | | | | |
| C.3.1 | Noise Levels from Vehicles, Plant and Equipment | The contractor will ensure the following:<br>g) All construction activities shall be restricted to day time hours only,<br>h) The plants and equipment used in construction (including those of sub-Contractors) shall strictly conform to the MoEF&CC/CPCB noise standards and shall have latest noise suppression mountings,<br>i) All vehicles and equipment used in construction work will be fitted with muffler or silencers,<br>j) Servicing of construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective, these shall be replaced,<br>k) Only acoustic enclosures fitted DG set will be allowed at the construction site and camp site. | ESS 1,ESS 2 ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | l) Construction activities shall not be carried during night (10.00 P.M to 06.00 A.M). | | | |
| **C.4** | **Waste Generation & Disposal** | | | | |
| C.4.1 | Excavated Soil | Excavated soil shall be used for plantation or land scaping purposes. Lower layers of excavated soil shall be re-used within the site for filling purpose or other construction activities. If any extra soil is left, then it should be disposed of in environmentally sound manner. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| C.4.2 | Construction Debris | Construction wastes will comprise of broken bricks, dry cement, discarded timber, metal pieces, empty cement bags, glass, paint/varnishes containers, electrical wastes, used oil, etc. These wastes should be segregated into recyclable and non-recyclable waste.<br><br>Recyclable waste shall be stored in the covered area and shall be sold to authorized vendors regularly. Non-recyclable waste shall be disposed at approved debris site in covered vehicles or reuse for land filling purposes. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| C.4.3 | Hazardous Wastes | Used oil generated from maintenance of | ESS 1, ESS 3 | Contractor | PMU, Society for |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | construction machines and DG sets shall be disposed through use oil recyclers. Any hazardous wastes generated from the construction site will be disposed as per Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016. | | | TRESP/ PIU, Department of Agriculture |
| C.4.4 | Solid Waste (Municipal and other Waste) | Municipal solid wastes will be generated from labour camp and construction site. These solid wastes will be disposed as per Solid Waste Management Rules 2016. Dustbins for recyclable and non-recyclable wastes shall be provided in labour camp areas. Recyclable wastes shall be sold to authorized vendors. Biodegradable wastes shall preferably be composted. Concept of reduce, re-use and recycle shall be followed at site. The non-recyclable, nonsalable and nonbiodegradable wastes shall preferably be disposed at a marked landfill site. | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| **D.** | **Personnel Safety** | | | | |
| D.1 | Personal Safety Measures for Labours and Staff | The contractor shall provide necessary personnel protective equipment and take suitable personal safety measures for labours and staff: | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | g) Full body protection clothing, protective footwear, hand gloves and goggles to workers employed handling cement concrete,<br>h) Construction workers will be provided high visibility vests,<br>i) Ear plugs to workers exposed to high noise levels,<br>j) Hard hat or helmets to workers, where there is danger of falling objects from height,<br>k) Hand gloves, helmets, protective footwear/safety shoes, protective goggles, nose masks, high visibility vests etc (as required) will be provided to the workers employed in construction works,<br>l) Safety belts will be used by workers while working at height,<br><br>The contractor will comply with all the precautions as required for ensuring the safety of the workmen as far as those are applicable to this contract.<br>The contractor will make sure that during the construction work all relevant provisions of The Building and | | | |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | other Construction Workers (regulation of Employment and Conditions of Services) Act, 1996 are adhered to. | | | |
| D.2 | First Aid and Emergency Management | • Emergency numbers will be displayed at the camp and construction sites,<br>• First Aid boxes will be made available at the camp and construction sites,<br>• Designated vehicles, which can be used as ambulance during emergency, which will be available at construction sites as per requirement. | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |
| **E.** | **Labour Camp Management** | | | | |
| E.1 | Facilities for Labourers | • The contractors will follow all relevant provisions of The Building and the other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 for construction and labour camp.<br>• The Contractor will maintain well ventilated living accommodation and sanitation facilities to workers in functional and hygienic manner.<br>• Workers will be provided with beds/bunk beds with mosquito nets and no worker will be allowed to sleep on the ground. | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | • Fans and proper ventilation (turbine type ventilators) will be provided in labour accommodation rooms.<br>• Regular cleaning and sweeping will be ensured at the labour camp site.<br>• Fuel wood will not be allowed for cooking at the labour camps. LPG cylinders with gas fire box will be provided at labour camp by the contractor.<br>• Clean and cool drinking water will be made available for workers by the contractors.<br>• Ensure drainage arrangements are adequate and fully functional and no stagnation of water takes place.<br>• Necessary medical facilities will be provided to workers by the contractors.<br>• Separate toilets/bathrooms, wherever required, will be provided for male and female, marked in vernacular. | | | |
| E.2 | HIV/AIDS Prevention Measures | • Necessary HIV/AIDS prevention awareness measures will be taken at the labour camp by the contractor.<br>• Time to time HIV/AIDS awareness | ESS 1, ESS 2, ESS4 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | training/programme will be organized by the Environment & Safety Officers of the contractor. | | | |
| E.3 | Sanitation and Sewage System at Labour Camp | The contractor will ensure that:<br>• The sewage disposal arrangement for the camp will be designed, built and operated in such a fashion that no health hazard and pollution occur at the camp site or nearby areas,<br>• Adequate water supply will be ensured in bath rooms, toilets and urinals,<br>• Ensure adequate number of toilets/urinals are available and they are fully functional<br>• Separate toilets should be available for men, women and physically challenged.<br>• Night soil will be disposed of with the help of local municipal extractor.<br>• Ensure adequate drainage and sewerage arrangements (including soak pits and septic tanks, if present) are available and fully functional<br>• All taps and plumbing fittings in toilets should be functional and | ESS 1, ESS 2 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | leakage-free<br>• Water stagnation or waterlogging should not be allowed to take place. | | | |
| E.4 | Wastes Collection and Disposal from labour camp | • The contractor will provide garbage bins in the camp and construction sites. It will be ensured that these are regularly emptied and disposed off in a hygienic manner as the Solid Waste Management Rule 2016.<br>• Burning of any kind of wastes will not be allowed at the camp and construction sites.<br>• Solid (paper, plastic, polyethylene, etc) wastes generated at the construction site, plant & camp sites, will be collected in covered waste bins and segregated as biodegradable (food waste, paper, etc) and non-biodegradable (plastic, polyethylene bag, etc) wastes. Polyethylene/plastic wastes will be stored in empty cement bags and to be sent for recycling through scrap dealer. Biodegradable (food waste, paper, etc) solid waste will be disposed in compost pit.<br>• Vermicompost pit will be provided for | ESS 1, ESS 3 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | disposal for biodegradable wastes. | | | |
| F. | Fire Safety and Emergency Response Measures | • At the construction site, necessary fire extinguishers will be provided at especially for electrical fire and general fire.<br>• Emergency phone numbers will be displayed prominently at the construction site.<br>• Cardiopulmonary resuscitation (CPR) chart will be displayed and training will be provided for the same.<br>• For emergency, vehicle will be available at the site, which can be used as ambulance to carry injured person to hospital. | ESS 1, ESS 2, ESS 4 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture Department of Education |
| G. | COVID Protection | • Latest Government COVID guidelines (Central, State as well as local) as are in force from time to time should be adhered to.<br>• Sanitizer and masks will be provided to workers.<br>• Body temperature will be monitored at the site.<br>• Arrangement to check body temperatures of all participants<br>• Masks should be used if mandatory | ESS 1, ESS 2, ESS 4 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

| Sr. No. | Environmental and Social Issues | Environmental and Social Mitigation Measures | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | • Social distancing practiced, if mandatory<br>• Collection and compilation of vaccination status of all participants (Workers & staffs).<br>• Details of nearest COVID isolation facilities and COVID medical facilities should be available at the site. | | | |
| **H.** | **Contractor's Demobilization** | | | | |
| H.1 | Clean-up Operations, Restoration and Rehabilitation | • On completion of construction works, the contractors will prepare site restoration and demobilization plan. The clean-up and restoration operation will be implemented by the contractors prior to demobilization. The contractor will clear all temporary structures; dispose all garbage, night soils and POL (Petroleum, Oil and Lubricants) wastes in environmental sound manner.<br>• All construction area including camp, and any other area used or affected due to the construction work will be left clean and tidy at the contractor's expense to the entire satisfaction to the PIU. | ESS 1, ESS 3, ESS 4 | Contractor | PMU, Society for TRESP/ PIU, Department of Agriculture |

**Annexure 5**

## Environmental and Social Management Plan (ESMP) for Agri Horticulture Activities

| Sr. No. | Environmental Impacts And Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| **A. Specific Agri-horticulture** | | | | | |
| A.1 | Improper selection of crops for diversification resulting excess use of groundwater. | • Proper selection of crop will be ensured based on availability of ground water resources and geographical conditions.<br>• Propagate use of sprinkler system to reduce water demand.<br>• Work with Farmer Association for encouraging market based non-water intensive crops where possible and for promoting conjunctive use of water resources. | ESS1, ESS2, ESS3 & ESS4 | Farmers and Farmer Association | PMU, Society TRESP and PIU Agriculture Department |
| A.2 | Community Health Issues associated with chronic and acute exposure to pesticides | • Prepare and implement Pest Management Plan (PMP) and spread awareness among the farmers and public for optimal use of insecticides and agrochemicals.<br>• Adopt, apply and monitor the implementation of Pest Management Plan.<br>• Develop printed materials in local language for generating | ESS1, ESS2, ESS3 & ESS4 | Farmers and Farmer Association | PMU, Society TRESP and PIU Agriculture Department |

| Sr. No. | Environmental Impacts And Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | awareness regarding safe use of pesticides. | | | |
| A.3 | Bioaccumulation or bio-concentration of pesticides in food chain through the excess use of pesticides and agrochemicals. | • Prior assessment of pests and crop diseases should be carried out and suitable measures shall be taken.<br>• Prepare and implement Pest Management Plan (PMP) and spread awareness among the farmers.<br>• Regular monitor of implementation of Pest Management Plan.<br>• Nutrient management plan should be prepared and implement to maintain health of soil of crop field.<br>• Encourage wide application of safe and bio-pesticides, wherever possible.<br>• Promote wide use of organic inputs, such as bio-manure, farm yard manure and bio-fertilizers and provide training on production and use of these alternatives.<br>• Farmers should be trained in Pest Management (IPM) to reduce | ESS1, ESS2, ESS3 & ESS4 | Farmers and Farmer Association | PMU, Society TRESP and PIU Agriculture Department |

| Sr. No. | Environmental Impacts And Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | chemicals/ pesticides use. Training will include safe handling, application and disposal of pesticides | | | |
| A.4 | Agri-horticulture crop diversification resulting in change of land use. | • Balanced approach should be considered for crop diversification to avoid massive changes in land use patten in the area. | ESS1, ESS2, ESS3 & ESS4 | Farmers and Farmer Association | PMU, Society TRESP and PIU Agriculture Department |
| A.5 | Air pollution due to increased use of agro-chemicals, particularly insecticides, weedicides, pesticides, etc. | • Pesticide application should be done using proper equipment, PPEs and in accordance with the available guidelines in pest management plan. | ESS1, ESS2, ESS3 & ESS4 | Farmers and Farmer Association | PMU, Society TRESP and PIU Agriculture Department |
| A.6 | Air pollution due to stubble burning in crop field | • Awareness should be propagated among the farmers for disadvantages of crop stubble burning in crop field. | ESS1, ESS2, ESS3 & ESS4 | Farmers and Farmer Association | PMU, Society TRESP and PIU Agriculture Department |
| A.7 | Bringing new areas under horticulture also pose risk of increased use of pesticides. | • Use services for soil testing followed with right dosage of agrochemicals and fertilizers.<br>• Nutrient management plan should be prepared and implement to maintain health of soil of crop field. | ESS1, ESS2, ESS3 & ESS4 | Farmers and Farmer Association | PMU, Society TRESP and PIU Agriculture Department |
| A.8 | Use of short-duration | • Propagate use of sprinkler system | ESS1, ESS2, | Farmers and | PMU, Society |

| Sr. No. | Environmental Impacts And Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | high yielding varieties that generally result in increased use of fertilizers, agro-chemicals such as insecticides, weedicides, pesticides, etc. | to reduce water demand.<br>• Work with Farmer Association for encouraging market based non-water intensive crops where possible and for promoting conjunctive use of water resources.<br>• Prepare and implement Pest Management Plan (PMP) and spread awareness among the farmers.<br>• Nutrient management plan should be prepared and implement to maintain health of soil of crop field. | ESS3 & ESS4 | Farmer Association | TRESP and PIU Agriculture Department |
| **B. Agriculture Related Infrastructure and Marketing** | | | | | |
| B.1 | • Lack of civic amenities like drinking water, toilet, parking, etc in post harvest infrastructure for crops produce sellers and customers.<br>• Lack of transparency in weighing and paying systems. | • Post harvest infrastructure design should have adequate public facilities (drinking water toilets with septic tanks or connected with sewage system, parking for vehicles, tractors, trucks, etc.)<br>• Waste bins should be placed at market areas.<br>• solid waste collection and disposal system should be provided. | ESS1, ESS3 & ESS4 | Farmer Associations | PMU, Society TRESP and PIU Agriculture Department |

| Sr. No. | Environmental Impacts And Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | • Issues with respect to wastes disposal at market places. | | | | |
| **C. Value Chains and Postharvest Management including Infrastructure** | | | | | |
| C.1 | • Generation of waste materials – organic waste due to grading and sorting; plastic and other wastes due to packaging and marketing.<br>• Use of artificial chemicals for ripening and wax for polishing especially fruits.<br>• Farmer Producer Organizations with little or no representation of poor and marginal farmers – risk of exclusion.<br>• Warehouse construction and increased use of energy/electricity, including promotion of cold storage facilities. | • Organic wastes should be collected and disposed for vermi composting;<br>• Plastic and other packaging wastes will be disposed as per existing Solid Wastes Management Rules 2016.<br>• Vehicles used for transportation of crop produce will have PUC.<br>• Suitable potable testing kits will be kept available to detect artificial chemicals for ripening and wax for polishing especially on fruits.<br>• Representation of small and marginal farmers should be ensured Producer Organizations.<br>• Warehouse and cold storage should be constructed and operated with energy saving consideration.<br>• In cold storage energy can be | ESS1, ESS3 | Farmer Associations | PMU, Society TRESP and PIU Agriculture Department |

| Sr. No. | Environmental Impacts And Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | saved through high–efficiency compressors, electronically commutated evaporator-fan motors, Electronically commutated condenser-fan motors, variable speed drive (VSD) fitted to the compressors, etc.<br>• Regular maintenance can save about 5% of the energy costs and can ensure a longer service life of the equipment, reduce ongoing service costs, and lower the risks of breakdowns. | | | |

## Annexure 6

**Environmental and Social Management Plan for Goatery**

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| 1. | • Odour from urine of goats in Goatery.<br>• Community health issues due to odour from goatery<br>• Degradation of water quality due to improper disposal of solid and liquid wastes from goatery.<br>• Depletion of vegetation and forage resources on common property lands resulting in increased soil erosion.<br>• Breeding of mosquitos due to improper management of goatery causing diseases and subsequently health issues. | • Display of project information board.<br>• Regular cleaning and sweeping of goatery.<br>• Proper ventilation in goatery should be ensured.<br>• Waste water channels should be constructed for collection and disposal of urine in dung compost pits for manure production.<br>• Involve veterinary expert for various technical inputs for keeping of goatery.<br>• Livestock | ESS 1, ESS 3 and ESS 4 | Beneficiaries / Goatery Owner | PMU, Society for TRESP and PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | beneficiaries should be trained at the veterinary institutions for proper maintaining goats.<br>• Prepare of 'Do and Don't' in vernacular and provide it to goatery beneficiaries.<br>• Provide goatery management training to a wide range of goatery owners, particularly women who tend to keep animals – make training available at doorstep as women are often not able to leave | | | |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | homes for offsite training for long duration.<br>• Promote stall feeding and provide technical support for developing low-cost animal sheds.<br>• Work with communities for revival of common pastures and prevent encroaching of common lands.<br>• Construct properly designed dung pits to produce manure.<br>• Proper grading of goatery floor to avoid stagnation water and | | | |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | mud formation. | | | |

**Annexure 7**

**Environmental and Social Management Plan for Poultry**

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| 1. | Siting Criteria for New Poultry Farms | • 500 m from residential zone in order to avoid nuisance caused due to odour& flies.<br>• 100 m from major water course like river, lakes, canals and drinking water source like wells, summer storage tanks, in order to avoid contamination due to leakages/spillages, if any.<br>• 100 m from National Highway (NH) and 50 m from State Highway (SH)in order to avoid nuisance caused due to odour& flies.<br>• 10-15 m from rural roads/internal roads/village Pagdandies (foot path).<br>• The poultry sheds should | ESS 1, ESS 3 and ESS 4 | Poultry Farm Owners/ Beneficiaries | Society for TRESP/ PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | not be located within 10 m from farm boundary for cross ventilation and odour dispersion. | | | |
| 2. | Regulatory/ Monitoring Mechanism for Poultry Farms | • Poultry farms handling birds above 25,000 at single location will have to obtain Consent to Establish (CTE) and Consent for Operate (CTO) under the Water Act, 1974 & Air Act 1981 from Tripura State Pollution Control Board (TSPCB).<br>• The poultry farms are categorized under "Green" Category, therefore validity of consent will be 15 years.<br>• Animal Husbandry Department of the State/Districts to assist the poultry farms for | ESS 1, ESS 2, ESS 3 and ESS 4 | Poultry Farm Owner/ Beneficiaries | Society for TRESP/ PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | implementation of Environmental Guidelines CPCB for Poultry. | | | |
| 3. | Gaseous emissions *viz* Ammonia ($NH_3$) and Hydrogen Sulphide (H2S) emanated from the excreta generated from the poultry causes odour. | • Proper ventilation and free flow of air over manure collection points to keep it dry by conveying ventilation air through the manure pit shall be ensured to prevent obnoxious odour in the area.<br>• Poultry housing shall be ventilated allowing sufficient supply of fresh air to remove humidity, dissipate heat and prevent build-up of gases such as methane, carbon dioxide, ammonia, etc. | ESS 1, ESS 2, ESS 3 and ESS 4 | Poultry Farm Owners/ Beneficiaries | Society for TRESP/ PIU ARDD |
| 4. | Solid waste from poultry droppings manure/ litter and dead | • Excreta shall be scratched at least once in two days as needed for | ESS 1, ESS 2, ESS 3 and ESS 4 | Poultry Farm Owners/ Beneficiaries | Society for TRESP/ PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | birds | mixing of litter and to keep bedding material (rice husk, saw dust, wood shavings etc.) dry. This waste shall be utilised for composting after completion of the cycle.<br>• The litter /manure storage facilities shall be minimum 2 m above the water table and of adequate size based on type and number of birds handled. It's base should be constructed with stone slabs or concrete or impermeable compacted clay. | | | |
| 6. | Waste water generation from cleaning operation | • Manure should be protected from run-off water and from unwanted pests/insects.<br>• Well-designed storage | ESS 1, ESS 2, ESS 3 and ESS 4 | Poultry Farm Owners/ Beneficiaries | Society for TRESP/ PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | facilities should be provided to contain manure /litter.<br>• Manure shall be protected from runoff water and covered to avoid dust and odours in storage pits.<br>• The dry manure dump shall be covered with permanent roof or with plastic / similar material to prevent air emissions and the precipitation falling on it. | | | |
| 7. | Breeding of flies and Rodents, etc. are the other issues in poultry farms | • Proper treatment and disposal of manure, ventilation of sheds, control of temperature, good sanitation, swift repairs of leaks, avoidance of feed spills, prompt removal of broken eggs and dead birds | ESS 1, ESS 2, ESS 3 and ESS 4 | Poultry Farm Owners/ Beneficiaries | Society for TRESP/ PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | shall be ensured for control of flies in the poultry farms.<br>• The farm should have provisions of wire nettings, traps, fly-repellents, insecticides etc.<br>• Methods for the control of rodents may include: i) exclusion ii) trapping glue boards iii) tracking powder iv) rodent proof doors and windows to eliminate rodents/pest infestation. | | | |
| 8. | Carcasses of Dead Birds | • Carcasses of dead birds shall be promptly collected on regular basis and disposed appropriately without damaging the environment as per CPCB guidelines.<br>• Mortalities on poultry farm | ESS 1, ESS 2, ESS 3 and ESS 4 | Poultry Farm Owners/ Beneficiaries | Society for TRESP/ PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | by proper animal care and disease prevention program shall be reduced.<br>• Proper facilities (burial pit) shall be provided for collection, storage, transport and disposal of dead birds. | | | |
| 9. | Generation of Domestic Hazardous Wastes | • Domestic hazardous wastes (vaccines, vails, medicines, syringes, etc.) shall be disposed as per provisions of "Solid Waste Management Rules, 2016". | ESS 1, ESS 2, ESS 3 and ESS 4 | Poultry Farm Owners/ Beneficiaries | Society for TRESP/ PIU ARDD |
| 10. | Use of Antibiotics | • As per Bureau of Indian Standards 1374: 2007 on poultry feed specifies that the use of antibiotic growth promoters is not recommended in poultry feed, hence use of antibiotics | ESS 1, ESS 2, ESS 3 and ESS 4 | Poultry Farm Owners/ Beneficiaries | Society for TRESP/ PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision/ Monitoring |
| | | should not be mixed with feed or administered for non-therapeutic purposes without prescription for diseased birds.<br>• Regulation for use of antibiotics shall be followed as per the advisory/directions issued by Department of Animal Husbandry, Dairying and Fisheries and Ministry of Health and the Drug Controller General of India. | | | |

## Annexure 8

**Environmental and Social Management Plan for Piggery**

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| 1. | • Obnoxious odour from piggery.<br>• Community health issues | • Display of project information board.<br>• Regular | ESS 1, ESS 3 and ESS 4 | Beneficiaries / Piggery Owner | PMU, Society for TRESP and PIU ARDD |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | due to odour from piggery.<br>• Degradation of water quality due to improper disposal of solid and liquid wastes from piggery.<br>• Breeding of mosquitos due to improper management of piggery causing diseases and subsequently health issues. | cleaning and sweeping of piggery.<br>• Proper ventilation in piggery shed should be ensured.<br>• Waste water channels should be constructed for collection and disposal of urine and waste water.<br>• Involve veterinary expert for various technical inputs for keeping of piggery.<br>• Piggery beneficiaries should be trained at the veterinary institutions for proper maintaining pigs. | | | |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | • Prepare 'Do and Don't' in vernacular and provide it to piggery beneficiaries.<br>• Provide piggery management training to a wide range of owners, particularly women who tend to keep pigs – make training available at doorstep as women are often not able to leave homes for offsite training for long duration.<br>• Construct properly designed compost pit to produce | | | |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | manure.<br>• Proper grading of piggery to avoid stagnation water and mud formation. | | | |

**Annexure 9**

**Environmental and Social Management Plan for Fisheries**

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| **A.** | **Selection of Fish Species** | | | | |
| 1. | Exotic Fish Species may impact biodiversity of indigenous fish species. | • Indigenous species have greater climatic adaptability; therefore, indigenous species should be promoted through hatcheries.<br>• The selected fish species should reduce external inputs and maintenance costs. | ESS 1, ESS 3, ESS 4, ESS 6 | | |
| **B.** | **Management of Fisheries Ponds** | | | | |
| 2. | • Odour due poor management of fish ponds.<br>• Chemical control of aquatic weeds and reduce thermal stratification.<br>• Fatality of fishes in pond | • Display of project information board with depth.<br>• Provide training for proper management of fish ponds.<br>• Design the pond depth to reduce the need for chemical control of aquatic weeds | ESS 1, ESS 3 and ESS 4 | Beneficiaries | Society of TRESP and Department of Fisheries |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | and reduce thermal stratification;<br>• Dead fishes should be deep buried in ground.<br>• Prohibit use of unwanted and lethal chemicals without proper awareness and lack of knowledge of related hazards. | | | |
| **C.** | **Management of Cage Fisheries** | | | | |
| 3. | Deterioration of water quality of water body due to the increase in suspended particles from the aquaculture wastes.<br><br>Due to this, there may be raise in the nutrient concentration which leads to the turbidity resulting in depletion of Dissolved | • Cage should be cleaned at 15-days interval to avoid net clogging.<br>• Regularly monitoring of feeding materials, used in the cage fisheries. Feed shall be calculated based on fish density and the same amount should be let into the system.<br>• Cage size should be as | ESS 1, ESS 3 and ESS 4 | | |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | Oxygen (DO). | per Guideline for Cage Culture 2016, GOI.<br>• Monitoring of fish stock health is essential to reduce the unwanted outbreak/infection of any disease.<br>• Training should be provided for cage fisheries to beneficiaries. | | | |
| **D.** | **Electrical Shock Risk** | | | | |
| 4. | Electrical devices typically used in aquaculture include manifold and cover water pumps, paddlewheels, and lighting installations.<br><br>The risk of electrical shock is therefore present for workers during aeration of fish ponds. | • Electrical installations/cable should waterproof;<br>• Ensure that fuses are used and that there is an appropriate connection to the ground;<br>• Ensure that all cables are intact, waterproof and without joints;<br>• Provide training for correct handling of | ESS 1, ESS 3 and ESS 4 | Beneficiaries | Society of TRESP and Department of Fisheries |

| Sr. No. | Environmental and Social Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | electric equipment to avoid the risk of short circuits and electrocute.<br>• Provide first aid box for electrical burn. | | | |
| **E.** | **Risk of Drowning** | | | | |
| 5. | Risk of drowning of children in fish pond | • Provide barricading around fish pond.<br>• Display signage of drowning mentioning depth of fish pond.<br>• Provide lifejackets and lifebuoy rings near the fish ponds. | ESS 1 and ESS 4 | Beneficiaries | Society of TRESP and Department of Fisheries |
| **F.** | **Solid Wastes** | | | | |
| 6. | Generation of solid wastes in form of plastic bags of fish feed, packing of chemicals, etc at fishery ponds | • Collection of empty bags of fish feed and packing of chemicals, etc and disposal for recycling as per Solid Waste Management Rules 2016 | ESS 1, ESS 3 and ESS 4 | Beneficiaries | Society of TRESP and Department of Fisheries |

**Annexure 10**

## Environmental and Social Management Plan (ESMP) for Natural Rubber Processing

| Sr. No. | Environmental Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| 1. | Use of formic acid for rubber milk coagulation | • Substitution of formic acid as coagulant with organic coagulant for example liquid smoke from biomass, which is more environment friendly. | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |
| 2. | Occupational hazards during use of rubber milk, formic acid and rubber processing. | • PPEs like hand gloves, gumboots and mask should be used by the workers engaged in natural rubber processing.<br>• During the collection of rubber milk from rubber plantation, gum boots should be used.<br>• MSDS should be made available and displayed in | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |

| Sr. No. | Environmental Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | vernacular. | | | |
| 3. | Hazards due to storage and handling of Formic Acid | • Formic acid should be stored in store room having proper ventilation and air circulation.<br>• Formic acid containers should be levelled and MSDS should be displayed outside the storeroom.<br>• Formic Acid is a combustible liquid, therefore fire extinguishers should be placed at the storage. | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |
| 4. | Air pollution from wood burning of heating of rubber drying chamber. | • Fire box for wood burning for drying chamber should designed in such manner that less fume/air emissions should be generated. | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |

| Sr. No. | Environmental Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | • Suitable stack should be provided to vent out air pollutants into the atmosphere. | | | |
| 5. | Uncontrolled use of water when washing during rubber processing. | • Possibility should be explored for reuse of water from rubber processing. | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |
| 6. | Accumulation of unprocessed rubber cause bad smell. | • Accumulation of unprocessed rubber should be avoided by increasing processing of rubber milk faster and optimisation of drying time by increasing partition in fumigation chamber. | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |
| 7. | Rubber sheet drying time is for many days in fumigation chamber. | • In fumigation chamber more partition should be added for optimisation of drying time. It will | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |

| Sr. No. | Environmental Impacts and Issues | Mitigation Measures and/or Safeguards | Applicability of ESS of WB | Responsibilities | |
|---|---|---|---|---|---|
| | | | | Planning and Execution | Supervision / Monitoring |
| | | faster drying time and more product will be produced. | | | |
| 8. | Use of synthetic fertilizer in rubber plantation contribute to green house gas emissions | • Use of organic fertilizer and fungicide should be promoted. | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |
| 9. | Generation of effluent from rubber processing | • Effluent should be treated and disposed in environmentally should manner. | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |
| 10. | Fire hazards at storage of processed rubber. | • Processed rubber is combustible, therefore fire extinguishers should be placed at storage of processed rubber sheets | ESS 1, ESS2, ESS 3 & ESS 4 | Beneficiaries | Society for TRESP/PIU |

**Annexure 11**

# Tripura Rural Economic Growth and Service Delivery Project (TRESP)

# LABOR MANAGEMENT PROCEDURE (LMP)

**November 2022**

**Tripura Tribal Welfare Department, Government of Tripura**
**PN Complex, Gurkhabasti, Agartala**

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## Abbreviations and Acronyms

| | |
|---|---|
| COVID-19 | CoronavirusDisease2019 |
| EA | Environmental Assessment |
| ESIA | Environmental and Social Impact Assessment |
| ESA | Environmental and Social Assessment |
| ESMF | Environmental Social Management Framework |
| ESF | Environmental and Social Framework |
| ESHS | Environment Social Health and Safety |
| ESRS | Environmental and Social Review Summary |
| GoI | Government of India |
| GRM | Grievances Redress Mechanism |
| GBV | Gender Based Violence |
| LA | Land Acquisition |
| LARR | Land Acquisition Resettlement and Rehabilitation |
| M&E | Monitoring and Evaluation |
| PAP | Project Affected Person |
| SEP | Stakeholder Engagement Plan |
| WB | The World Bank |

# Executive Summary

1. The Government of Tripura with support from the World Bank is preparing a tribal focused, multi-sectoral project "Tripura Rural Economic Growth and Service Delivery Project (TRESP)". The overall objective of the TRESP is to expedite socio-economic development of Scheduled Tribes through a multi sectoral approach of sustainable livelihood and infrastructure development. While the project is covering 23 blocks for improving economic opportunity through connectivity for rural populations in identified aspirational blocks. Transport connectivity will be improved through a state-wide rural road improvement program in support of rural road efficiency and accessibility to social and economic amenities such as markets, schools, and other services. As a direct contribution to rural economic opportunity and enhanced inclusivity, the project will improve rural livelihoods via diversified production clusters and agriculture logistics including aggregation, storage facilities, and supply chain markets. In addition, quality education facility through teaching learning system will also be providing to 882 schools under this project across the 23 blocks as well as school infrastructural support for 16 schools across 12 aspirational blocks.

2. The project has four components. **Component 1:** Strengthening Foundations for Economic Development focuses on improving rural livelihoods via strategic investments in the agriculture and allied sector complemented with investments in improving connectivity through road construction and rehabilitation. **Component 2:** Investing in Human Capital Development focuses on improving the learning levels of students from aspirational tribal blocks, helping to increase the average number of years of educational attainment for students, and enhancing their preparedness to transition to the labour market whilst factoring in the changing nature of work. **Component 3:** Strengthening Institutions for Service Delivery and Economic Development, the objective of this component is to strengthen capacity of local institutions so they can deliver on the activities outlined under components 1 and 2 of TRESP and contribute to the goal of improved service delivery and economic development in tribal blocks of Tripura by adopting a two-pronged approach. **Component 4:** contingent emergency response focusing on a natural disaster event. The GoT may request the Bank to re-allocate project funds to support response and reconstruction. This component could also be used to channel additional funds should they become available because of an emergency.

3. TRESP PIU will contract agencies to undertake civil works, agencies/firms to support core-functions; and other implementation support partners for implementation. These could be from anywhere within the State or other states within India. The scale of labour deployment in TRESP is estimated to be around 30 workers per 10-kilometer road stretch for an average duration of one year and 25-30 workers for every school complex for an average period of 2 years. Skilled and semi-skilled workers are expected to be around 25 per cent each of the total workforce.

4. Majority skilled workers are expected to be migrants, but only likely to constitute about 20-25 per cent of the overall deployment. It is important to understand that not all labour will be deployed at the same time, so peak labour requirement and not the overall labour usage over the project period will be an important consideration for a simple but effective labour management plan.

5. There are potential risks and impacts for the workers, who would be engaged for various construction works as well as risks on health and safety aspects of community around the project roads. Key ones are: occupational health and safety issues due to over exposure to dust, noise levels, chemicals and hazardous wastes, lack/inadequate or inappropriate personnel protective gear; non-payment and disparity of wages; denial of benefits (compensation, bonus, maternity benefits etc.); discrimination in employment (e.g. abrupt termination of the employment, working conditions, wages or benefits etc.; sexual harassment at work sites or workforce camps; safety and security of women workforce at work

sites and within workforce campsites; deployment of forced, bonded or child labour and absence of a grievance mechanism to redress workers grievances.

6. To manage and mitigate all such workers related risks and impacts, a Labour Management Procedure (LMP) for the Project workers has been prepared. The LMP sets out the approach to management of labour issues in the project and meeting requirements of State and National labour law/regulations, Occupational Safety, Health and Working Condition requirements as well as the objectives of the World Bank's ESF and objectives of ESS2 on Labour and Working Conditions. The project will conform to all key national and state legislations related to Occupational Safety, Health and Working Conditions Building and Other Construction Workers' Employment Child Labour, Wage Payment and Sexual Harassment at Workplace Existing State and National regulations are largely consistent with the ESS2 requirements except in case of primary supply workers and community workers, although community workers are not likely to be engaged in this project. In respect of COVID situation, the applicable SOPs/key guidelines issued by Government of India and Government of Tripura will be applicable.

7. The primary responsibility for project implementation lies with Society for TRESP under TWD and key line departments that will function as PIUs for their respective components. Specifically, on ESS, the PMU will be responsible for the implementation of all social and environmental issues. PMU headed by the Project Director will oversee the implementation of all construction packages, including the Labour Management Procedure (LMP) while at the site/ sub-project level, executive agencies of respective PIUs will be responsible for implementation. PIU of the implementing departments will contract agencies to undertake civil works and other implementation support agencies like the Project Management and Construction Supervision Consultants and other multi-disciplinary Consulting firms.

8. The contractors and sub-contractors, who will be primarily engaging the contract workers at field level will be overseen and managed by the PIU under the overall guidance of PMU. The details about engagement and management of Project Workers based on category, their role, responsible staff and locations are elaborated in the main report. It comprises Policies and Procedures relating to i) Incidents and Accident reporting; ii) Occupational Health and Safety; iii) GBV/SEA-SH and iv) COVID considerations – that will be embedded across different measures related to contracting of workers, their accommodation, work conditions, operating procedures at workplace/worksite for all categories of workers.

9. The Direct workers hired for TRESPP MU, PIU as well as district and block level teams will be technically qualified, with age ranging between a minimum of 18 years and maximum 60 years. The wages of consultants/personnel deployed through consultancy firms for various studies, agencies for RAP implementation will be determined through competitive bidding. The wages of contracted skilled, unskilled workers to be engaged by the Contractor will be subject to the provisions of Minimum Wages Act. PMU will ensure that under no circumstances, the contractors (including sub-contractors) working under TRESP will engage child labour and forced labour (all forms) including bonded labour (working against an impossible debt), excessive restrictions for freedom of movement, inordinately long notice periods. This will be ensured through i) inclusion of CoC (Code of Conduct) in the contract documents; ii) ESHS performance requirements on handling workers and iii) regular monitoring and reporting by the PIU and overall guidance and directions of Project Director-PMU.

10. In case of direct and contracted workers, the Project Director-PMU will be responsible for redressal of worker related grievances following the State Government, Government of India Rules and Regulations and LMP provisions. For contracted workers, the contractor is obligated under the contract to set up the site level GRM to redress complaints relating to workers deployed for construction works under TRESP. The GRM will have representatives of PIU, Contractor, Workers and women (either from PIU/contractor/workers) and function under respective PIU. The GRM for the Workers will be set up during mobilisation phase of the contractor. Information relating to availability of GRM without any retribution, its institutional set up, timings and procedure for receiving complaints, mechanism of

handling complaints, maximum time limits for redressal of complaints and escalation level for unresolved cases and resolution thereof will be disseminated to the workers on a regular basis.

11. The ESHS (Environment, Social, Health and Safety) requirements have been specified and incorporated as special conditions and performance requirements in all bid documents of contract packages under TRESP. Cost provisions for implementation of ESHS requirements will be built into item rates and during bid preparation the PMU will assess the need for creating a specific E&S Performance Security guarantee to ensure compliance with the LMP and ESHS measures outlined in the LMP and the contract documents. Further, the ESHS performance requirements incorporated in the bid documents obligate the contractor, upon mobilization, to prepare a Contractor's ESMP (C-ESMP), which will include mitigation and management plans for risks and impacts identified in ESMF and ESMP included in the bidding document. The C-ESMP will be reviewed and approved by the PIU and PMU, prior to commencement of construction works. The approved C-ESMP will be reviewed periodically and implemented by the contractor and will have specific responsibilities related to labour management. The monitoring of performance of contractors including the implementation of C-ESMP and meeting the ESHS performance requirements by the contractor will be overseen and managed by the PIU/DPMU under the overall guidance and direction of Project Director.

# 1. Project Description

12. The Tribal Welfare Department (TWD), Government of Tripura (GoT) is preparing the Tripura Rural Economic Growth and Service Delivery Project (TRESP) with the assistance of the World Bank. The project is envisaged as multi-sectoral in nature, involving multiple implementing agencies. As the nodal agency, implementation arrangements under the project will be coordinated by the Tribal Welfare Department through a Society for TRESP (PMU). The Departments of Education (DoE), Public Works Department (PWD), Department of Agriculture (integrated with Directorate of Horticulture), Department of Fisheries, Animal Resources Development Department (ARDD) and Tripura Rural Livelihood Mission (TRLM) will be the Project Management Unit (PIUs) implementing different components of the project. TRESP will involve construction of educational buildings, rural roads and other market and post- harvest infrastructure. Besides, it will involve and support analytical studies and implementation support to TWD, besides in capacity building activities of TWD and line departments.

13. The Project Development Objective is 'to enhance connectivity and access to improved services and economic opportunities for tribal areas in Tripura' that will be achieved through livelihood interventions in agri and allied activities, upgradation of rural roads, improved access to quality education. TRESP has four major components, (i) strengthening foundation for economic development, (ii) investing in human capital development, (iii) strengthening institutions for service delivery and economic development, and (iv) contingent emergency response.

14. TRESP aims at three broad pillars for physical intervention across its target region. First, the focus is on productivity improvement, better Package of Practices (PoPs) and selected expansion of post-harvest infrastructure and marketing-processing facilities. Secondly, increasing connectivity to villages in remote locations to ensure better access to services, entitlements and markets. Thirdly, improving access to quality education by creating better equipped school complexes, capacitating early school teachers and offering relevant vocational education. TRESP is to be implemented in 23 Tribal Blocks, including 12 aspirational Blocks. These are predominantly tribal blocks with tribal population of more than 85 percent and fall under the notified Scheduled VI Areas.

## 1.1. Nature of Proposed Project Interventions

15. The proposed TRESP will involve construction activities primarily related to construction & renovations of educational buildings, upgradation of rural roads and other related infrastructure. Majority of the road construction activities will be limited to road upgradation and widening and some roads will be of improvement and strengthening in nature on present dirt tracks. It would involve construction of road, embankment, drainage, culvert, black top treatment (removal of debris, cutting and filling, clearing of drain etc. that will proceed in the linear manner & in phases and for construction and renovations of buildings involve working at heights, deep excavations demolishing works earthwork, machinery handling and construction material movement, etc).

16. Construction and provision of basic school infrastructure and add-on facilities will cover 31 schools (including smart class provisions). Construction and renovation of schools in the existing school campuses will be carried out in 16 schools. Amongst the 16 schools, 14 schools will be having complete construction, and demolition and reconstruction of building structures in 2 schools. The averages built up area of the schools under renovations will be from 1500 to 2500 sqmt.

17. Such type of construction activities typically involve environment, occupational health and safety issues having potential impacts on labour working at height.

18. The different contract packages under TRESP will require an estimated 875 contract workers, comprising of project, supervision and construction managers and supervisors apart from skilled, semi-skilled and unskilled construction workers (labour) that will be deployed by the Contractors and sub-contractors of different packages.

19. Among these, skilled and unskilled workers or labour constitute nearly 75-80%, whereas skilled workers, supervisors and technicians will constitute less than 25%. Among the contract workers, the skilled construction workers(25% of total work force approximately) will be largely migrants, belonging to other states like Assam, West Bengal, Jharkhand and Bihar and will stay at labour camps/ rented accommodation organised by the contractors. The skilled and unskilled workers will be normally sourced through registered labour contractors, as a standard operating practice. About 15 % of the contract workers and 20 percent of the Direct Workers is expected to be women.

## 1.2. Purpose of Labour Management Procedure

20. Implementation of TRESP will generate potential risks and impacts on the project labour, who would be engaged for various construction works such as construction & operation workers directly engaged by the borrower (direct workers), EHS, workers engaged through third parties (contracted workers), as well as workers engaged by the client's primary suppliers & contractor (supply chain workers). The project will involve employment of direct and contracted workers during construction and operation phases.

21. In order to manage and mitigate all related occupational health risks and impacts, a Labour Management Procedure (LMP) is prepared for TRESP under the aegis of TWD. The LMP sets out the approach to meet all National requirements as well as the objectives of the World Bank's Environmental and Social Framework, specifically objectives of Environmental and Social Standard: Labour and Working Conditions (ESS2).

22. LMP is prepared with specific provisions for healthy working conditions, occupational health and safety, prohibit child and forced labour, gender-based violence, migrant and seasonal labour, management of labour influx, protection of vulnerable workers, possible accidents or emergencies as well as labour focused grievance redress mechanism to mitigate workers related risks and promote health and safety. LMP sets out the approach to management of labour issues (both local & migrant) in the project and meeting requirements of State and National labour law/regulations, Environmental, Health and Safety Guidelines (EHSGs). This will be part of Contractor's bid document

23. LMP have following key objectives to achieve.

- To promote safety and health at work.
- To promote the fair treatment, non-discrimination and equal opportunity of project workers.
- To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.
- To prevent the use of all forms of forced labour and child labour.
- To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.
- To provide project workers with accessible means to raise workplace concerns

# 2. OVERVIEW ON LABOUR USE IN THE PROJECT

**Number of Project Workers**

24. Based on past precedent and discussions with the implementing agencies, it is estimated that the scale of labour deployment at different sub-projects and sites under TRESP is estimated to be around 30 workers per 10-kilometer road stretch for an average duration of one year and 25-30 workers for every school complex for an average period of 2 years. The skilled and semi-skilled workers are expected to be around 25 per cent each of the total workforce and the remaining 50 percent will be unskilled workers. Majority skilled workers are expected to be migrants, but only likely to constitute about 20-25 per cent of the overall deployment. It is important to understand that not all labour will be deployed at the same time, so peak labour requirement and not the overall labour usage over the project period will be an important consideration for a simple but effective labour management. Table below gives a tentative number of workers under different categories, assuming that at least 50 percent of the sites will be operational at a given time.

**Table 2-1: Coverage under TRESP**

| Sl. No. | Type of Project Workers | Requirement in Numbers |
|---|---|---|
| 1 | **Direct Workers (full time at PMU, PIU, District and Block level teams)** | 232 |
| 2 | **Contracted Workers** | |
| 2a) | Peak labour demand in road and school works projects | 875 |
| 2b) | Project Management/ Construction Supervision Consultants | 10 |
| 2c) | Consultants for Project Preparation and other studies (e.g. DPR, ESIA, Institutional Strengthening/Re-Organization Studies, Road Safety Database Management Program etc) | 50 |
| | **TOTAL** | **1167** |

**Characteristics of Project Workers**

25. Characteristics are grouped into the three applicable categories – Direct Workers; Contracted Workers (Construction workers, Construction Supervision consultants and Consultants for various studies) and primary supply workers in various offices in Agartala and district/block offices. Ensuing paragraphs present details.

26. **Direct Workers:** The Direct Workers will be the staff hired by the project for staffing the positions in various project offices created for implementation, including in the participating departments and their PIUs (Project Implementation Unit).In addition, 5 District level PMUs and 23 Block level PMUs will be set up to support the implementation and monitoring of the project. These would be skilled and semi-skilled personnel, subject matter experts, technical and support staff who will be hired from the market based on agreed terms of reference.

**Contracted Workers:** This category constitute different sub-categories of Contract Workers as hereunder:

- **Construction Workers:** The different contract packages under TRESP will require an estimated 875 contract workers, comprising of project, supervision and construction managers and supervisors apart from skilled, semi-skilled and unskilled construction workers (labour) that will be deployed by the Contractors and sub-contractors of different packages. Among these, skilled and unskilled workers or labour constitute nearly 75-80%, whereas skilled workers, supervisors and technicians will constitute less than 25%.

- Among the contract workers, the skilled construction workers(25% of total work force approximately) will be largely migrants, belonging to other states like Assam, West Bengal, Jharkhand and Bihar and will stay at labour camps/ rented accommodation organised by the contractors. The skilled and unskilled workers will be normally sourced through registered labour contractors, as a

standard operating practice. About 15 % of the contract workers and 20 percent of the Direct Workers is expected to be women.

- **Construction Supervision Consultants (CSC):** TRESP will contract CSC or Project Management Consultants to assist PMU and PIUs in project implementation and construction supervision. These agencies are expected to deploy an estimated 10 consultants, constituting multidisciplinary consultants/professionals over the project implementation phase ranging between 24 to 36 months. These workers will be technically qualified professionals and will usually be from outside the state.

**Contracted Consultants:** TRESP will require different types of consultancy services for preparation of DPRs, studies, Institutional Strengthening/Capacity Building, IT/ Database Management among others. These contracted consultancy firms are expected to deploy an estimated 50 workers, comprising multidisciplinary consultants/professionals during project preparation as well as implementation phase ranging between 4 to 18 months. These contracted consultants (workers) will be technically qualified and will likely be a mix of locals as well as migrants.

27. **Primary Supply Workers:** TRESP envisages engagement of primary supply workers, especially those engaged in preparation and supply of material for rural roads and school construction. The project directly and through its contractors will make sure that all such primary supply workers do not engage child, forced or bonded labour and apply all preventive measures to ensure workers safety at their workplace.

28. **Community Workers:** The project does not envisage hiring community workers in any of the interventions planned under the project. The worker requirements in road and education construction will be entirely met through the contracted workers while in case of agriculture interventions most interventions will be beneficiary oriented and will not deploy farmers and farmer collectives to provide community labour.

## 2.1. Timing of Labour Requirements:

29. The direct workers engaged at the PMU and PIUs at Agartala as well as those in the District and Block level PMUs located in different project districts and blocks will be hired for the entire duration of the project.

30. The deployment of contracted workers, particularly skilled and unskilled category is directly linked to the working season (7-9 months in a year), type of project construction activities (manual or machinery based) under progress at any stretch of the project roads and school complexes. Of the estimated 875 skilled and unskilled construction workers for total of approx. 529 km roads and 16 school complexes located in different districts, at least 10-15% will be deployed at any given time with numbers peaking in the working season to around 50 percent of the total requirement, depending upon the stage of construction. These construction labours will be deployed for 7-9 months in a year at specific road and school construction locations across the project area and their overall deployment is not expected to be more than 24 months. However, where the same contractor or sub-contractor is executing a number of packages, these workers may be deployed at another package after completion of one package. At any given location or site, the maximum number of construction workers is not expected to be more than 25-30.

## 2.2. Information on Contracted Workers:

31. PMU and PIUs will maintain information on engagement of contracted workers of all categories. The contractors will be contractually obligated to maintain updated information on all categories of contracted workers, especially migrant construction workers and periodically share the same with respective PIUs, which in turn will be available with PMU at Agartala.

32. The format for submittal of information on all contract workers will be finalised during mobilization phase of the contractor. The information database on contracted workers to be maintained by the contractor will include not limited to the following:

- Name and Age (to be supported by AADHAR /Voter Card or any other recognized government document)
- Father's Name and Permanent Address
- Marital Status and Name of the Spouse (if married)
- Number of Children with Gender (as applicable)
- Place of Stay of Spouse and Children during work engagement under HPSRTP
- Address and Contact Number (in case of any emergency)
- Key Skills and Years of Experience
- Duration of Contract and Rotation Arrangements
- Facilities Arranged by Contractor including health check-ups prior to engagement, accommodation (onsite labour camps, rented with local community)transportation to work site and other facilities (to be specified by Contractor)
- Pre-Employment Check-ups, Fitness Tests and Health Awareness Campaign for workers

# 3. Assessment of Key Potential Labour Risks

## 3.1. Project Activities

33. Different packages are likely to construct and upgrade approximately 529 kms of rural roads in the project area apart from constructing and upgrading 16school complexes. These construction works will entail the following activities:

- Site clearance activities including clearing and grubbing
- Establishing of material stack yard, cold/hot mix plant, concrete batch mix plants, labour camps as per requirements
- Procurement of construction materials, stacking and transportation to work sites
- Hill side cutting and Valley side filling
- Construction of retaining walls, breast walls, parapets, longitudinal drains etc
- Levelling and consolidation of roadway formation widths
- Laying of bitumen pavement and construction of shoulders
- Construction of culverts, minor bridges (including those bridges of below 20 mtr., and located within the proposed upgradation road sections) of the proposed roads
- Demolishing of entire or part of the existing school building
- Construction and finishing of 2 storeyed school complexes with different facilities and amenities including laboratories, dining halls, school kitchens and toilets,
- Creation of internal paths in the school premises/ campus
- Collection, transportation and disposal of all construction debris at approved locations
- Restoration of borrow areas, campsites, material stack yard, hot mix plant, concrete batch mix plants, workforce camps, as per agreed upon site restoration plan

## 3.2. Key Labour Risks related to the Project Activities

- Lack of training/awareness/ orientation amongst workforce regarding safety at work
- Safety issues, while work at heights and working around moving equipment/machineries
- Lack/Inadequate or inappropriate personnel protective gear and or safety accessories
- Injuries/fatalities leading to even death, while at work during normal course, either due to negligence at work or inadequate experience/training
- Inadequate first-aid facilities at work sites and lack of emergency response mechanism
- Short and long-term effects on health due to over exposure to dust and noise
- Long term effects on health due to exposure to chemicals or hazardous wastes, if any
- Inadequate accommodation, safety or sanitation facilities at labour camps
- Lack of adequate sanitation and health facilities at site or camps
- Non-payment, delayed or disparity in wages

- Non-payment or denial of benefits (compensation, bonus, maternity benefits, overtime etc)
- Discrimination in employment (e.g. abrupt termination of the employment, working conditions, wages or benefits etc.)
- Engagement of child labour, forced or bonded labour
- Gender based violence, Sexual harassment at work sites or camps, including safety of women workers and families of workers
- Resource or other conflicts with local community, including those related to gender-based violence(GBV) and labour influx
- Health risks of labour relating to HIV/AIDS and other sexually transmitted diseases
- Absence of preparedness for emergency response during natural calamities, hazards and pandemics at operational sites and camps
- Unclear terms and conditions of employment (both for direct and contracted workers)
- Discrimination and denial of equal opportunity in hiring and promotions/incentives/training opportunities (direct workers)
- Restrictions on workers' rights to organise or form associations
- Absence of an effective mechanism for workers to seek redressal for their grievances

34. The labour risk mitigation and OHS management of contracted workers and related issues arising during construction works will be under direct control of contractors and thus have to be managed by contractors. Therefore, ensuring effective management of OHS plan for contract workers by contractor is core to the implementation of LMP. However the overall responsibility for labour management as per guidance provided in this LMP will lie with the Society for TRESP as the Principal Employer under the Project.

35. The ESHS (Environment, Social, Health and Safety) requirements under TRESP will be incorporated as special conditions and performance requirements in bid documents of all contract packages. Cost provisions for implementation of ESHS requirements will be built into the item rates, so that contractor can meet those requirements. In addition, during bid preparation the PMU will assess the need for creating a specific E&S Performance Security guarantee to ensure compliance with the measures outlined in the LMP, ESHS guidelines and the contract documents. Thus, the potential bidders (contractors) will be fully aware of ESHS performance requirements and accordingly cost works during the bidding stage. In respect of COVID -19: the contractors under the guidance of the IAs and the local project teams will follow all safety measures and precautions as provided by Government of India and the state at that time.

# 4. Brief Overview of Labour Legislation: Terms and Conditions

## 4.1. Regulatory Framework

36. The Government of India and Tripura State Labour related regulations, which are currently in force and applicable are summarised given in Table 7.1.

**Table 4-1: Applicable Labour Regulations to TRESP**

| S. No | GoI Regulations/Guidelines/ Orders & Govt. Of Tripura | Stipulations /Terms and Conditions |
|---|---|---|
| 1. | Building and Other construction Workers' (Regulation of employment and conditions of service) Act, 1996 and Rules 1998 and Tripura Building and Other construction Workers' (Regulation of employment and conditions of service) Act, 2008 | All the establishments, which carry on building or other construction work and employ 10 or more workers are covered under this Act. Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodation for workers near the workplace, among other benefits under the Rules. |
| 2. | Building and other construction workers Welfare Cess Act, 1996 | Provides for levy and collection of a cess on the cost of construction incurred by employers to augmenting the resources of the Building and Other construction Workers' welfare Board constituted under Building and Other construction workers (Regulation of employment and conditions of service) Act, 1996 |
| 3. | Payment of Wages Act, 1936 | Lays down as to by what date, wages are to be paid, when it will be paid and what deductions be made from the wages of the workers, if any |
| 4. | Payment of Gratuity Act, 1972 | Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation, if an employee has completed 5 years of service with employer |
| 5. | Employees Provident Fund and Miscellaneous Provision Act, 1952 | Provides for monthly contributions by the employer and as well as by workers with a provision as return of pension of a lump sum (principal and interest accrued) at the end of his/her service term). |
| 6. | Equal Remuneration Act, 1979 | Provides for payment of equal wages for equivalent work to male and female workers without any discrimination against women. |
| 7. | Payment of Bonus Act, 1965 | Provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages. |
| 8. | Minimum Wages Act, 1948 | The Act ensures payment of minimum wages as fixed by appropriate state Government as per provisions of the Act. All employers are to pay the wages not less than the fixed Minimum Wages for the state/region/union territory |
| 9. | Workmen's Compensation Act, 1923 (Amended 2009) | Provides for compensation in case of injury by accident arising out of and during the course of employment |
| 10. | The Employees Provident Fund Act and Miscellaneous Provisions act, 1952 | Every establishment, which engages in any industry specified under schedule 1 and in which 20 or more persons are employed are under the purview of this Act. |
| 11. | ESI Act, 1948 (Employees State Insurance Act, 1948) | Employees State Insurance Act provides for health care and hospitalization benefits for construction work force |
| 12. | Maternity Benefit Act, 1951 | Provides for maternity leave for women, during pregnancy and after giving birth and some other benefits to women employees, in case of medical recommendation of bed rest or miscarriage etc. |
| 13. | Paternity Leave Entitlement | Provides for paternity leave for men during wife's pregnancy and after giving birth and in case of medical recommendation of bed rest or miscarriage etc for wife. |
| 14. | The Child Labour (Prohibition and Regulation) Act, 1986 | This Act prohibits employment of children below 14 years of age in certain occupations and provides for regulation of employment of children in all other occupations and processes. Employment of child labour is prohibited in Building and construction industry |
| 15. | Contract Labour (Regulation and Abolition) Act, 1948 | Provides for certain welfare measures to be mandatorily provided by the contractor to the contract labour. |
| 16. | The Contract Labour (Regulation & Abolition) Act, 1970 and Rules | Applicable for every establishment in which 20 or more workmen are employed or were employed on any day of the preceding 12 months as |

| S. No | GoI Regulations/Guidelines/ Orders & Govt. Of Tripura | Stipulations /Terms and Conditions |
|---|---|---|
| | | contract labour. |
| 17. | The Bonded Labour (Abolition) Act 1976 | An Act to provide for the abolition of bonded labour system, with a view to prevent economic and physical exploitation of the weaker sections of the people and for all matters connected there with or incidental thereto |
| 18. | The Trade Union Act, 1926 | Lays down the procedure for registration of trade union of workers and employers. The trade unions registered under the Act have been given certain immunities for civil and criminal liabilities. |
| 19. | Inter-state Migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979 | The inter-state migrant workers, in an establishment to which the Act becomes applicable, are required to be provided with certain facilities such as housing, medical aid, traveling expenses from home to the establishment and back etc. |
| 20. | Sexual Harassment at the Workplace (Prevention, Prohibition and Redressal) Act, 2013 and amendments | The act provides for protection against sexual harassment of women at workplace and for the prevention and redressal of complaints of sexual harassment and for matters connected therewith or incidental thereto. |

# 5. Roles and Responsibilities related to Labour Management

37. The primary responsibility for project implementation lies with Society for TRESP. Society for TRESP will have a Project Director (preferably a dedicated government official from the Indian Civil Services) and a full time dedicated Chief Operating Officer who will be recruited as a senior management consultant with decision making powers. PMU with its E&S Team (an environmental specialist and a social development specialists) will oversee the overall implementation of Environment and Social Management Framework (ESMF), adherence to Labour Management Procedure (LMP), Environment and Social Commitment Plan (ESCP), and Stakeholder Engagement Plan (SEP). These activities will be undertaken by operational staff at PMU and by PIU, supported as necessary by consultants. TRESP will set up one PMU at its headquarters in Agartala and PIUs at field level. PIU and PMU will also have offices in districts and block level where sub projects will be taken up. The respective PIUs and their field staff will be responsible for the implementation of these procedures by the contractors and other responsible parties. However, the overall responsibility for the implementation will lie with the Principal Employer, which will be the Society for TRESP.

38. The PD, supported by the Social Development Specialist- PMU will ensure that all ESS2 provisions related to safety, health, fair treatment, non-discrimination, protection of project and vulnerable workers, prevention of child-forced- bonded labour as well as their right to pursue collective bargaining and raise workplace concerns are monitored and duly complied with and necessary support systems are in place for their fulfilment.

## 5.1. Engagement and Management of Project Workers

**The following categories of Project workers will be engaged by the Project:**

39. **Direct Workers:** All Direct Workers engaged at both PMU and PIU at various levels (State, Districts and Blocks) will be managed and over seen by the PMU under the overall guidance of Project Director and the COO. PMU and the PIUs will have senior and middle level Consultants, Subject Matter Specialists, technical, administrative as well as support staff All these Direct Workers will be managed and over seen by their respective PMU and PIU-in-Charge with overall responsibility for ensuring compliance with ESS2 requirements lying with the Project Director, supported by the Social Development Specialist at the PMU.

40. **Contracted Workers:** All the Workers engaged through third party, including contractors to perform the core functions of the project will include construction workers, employees of consultancy and support organisations. The Project Director of Society for TRESP will have the responsibility to ensure that they are employed or contracted in line with the requirements of ESS2. In case of civil works, these workers would be managed by a Project-In charge, representing the contractor for their respective construction packages. The Project -in- charge will also manage the contracted workers of sub-contractors as well as primary suppliers for respective packages. In case of consultancy services, the various consultancy teams would be managed by Team Leader of the consultancy firm under the directions of the Project Director.

41. **Primary Supply Workers:** The Primary Supply Workers associated with the project will need to adhere to the ESS2 requirements related to worker safety. The project will need to ensure that all workers of the primary supplies are provided safe working conditions and have been screened to ensure that there is no usage of forced, bonded or child labour in the organisation. The Project Director, through the respective PIUs, will need to ensure that ESS2 requirements related to primary supply workers mentioned above have been met and are regularly to ensure their sustained adherence. In case serious safety related risks are found, the concerned PIU will report, recommend and monitor completion of the suggested mitigation measures by the primary supplier.

**Table 5-1: Engagement and Management of Project Workers under TRESP**

| Category of Project Workers | Project Workers by role | Responsible Staff of Department | Assignment Location/ Package Level |
|---|---|---|---|
| **Direct Workers** | • All GoT staff engaged for TRESP at PMU, DPMUs and BPMUs<br>• All GoT staff engaged for TRESP at the PIU | Project Director and COO | PMU at Agartala |
| **Contracted Workers** | Other specialist Sector consultants supporting PIU/PMU | Project Director and COO, concerned PIUs or Support Agencies | PMU/PIUs, Agartala |
| | Supervision Consultant's Staff supporting PIU | PIU- in-Charge at the District (School and Agriculture) or Division Level (PWD) and reporting to Project Director at PMU | PIU at Field level for respective Package |
| | All Workers-construction workers, supervisors, manager deployed by Contractor | PIU- in-Charge at District (School and Agriculture) or Division Level (PWD) and reporting to Project Director at PMU | Package level |
| | Consultancy Agencies for various DPR preparation, studies and assignments | Project Director | PMU at Agartala |
| **Primary Supply Workers** | Employees of material or machine suppliers, | PIU- in-Charge at the Executive Engineer Level and reporting to Project Director at PMU | Package level |

## 5.2. Occupational Health and Safety (OHS)

42. The ESMF and ESMPs prepared for TRESP include measures to mitigate project's environmental and social risks and impacts and the institutional set-up in ESMPs outline the roles and responsibilities of different project stakeholders involved in implementation of ESMP and ESCP, including that of contractor's own Environmental Officer and one Health and Safety officer. The Environmental and Social Experts of PMU and DPMU and supervision Consultant will coordinate and enforce effective implementation of measures approved in C-ESMP.

43. The contractor's approved C-ESMP will be reviewed periodically (but not more than every three (3) years) and updated in a timely manner, to address changed requirements, if any during project implementation.

## 5.3. Training of Workers

44. The OHS plan, will be submitted by the contractor and approved by DPMU/PIU, prior to commencement of construction activities will have procedures and protocols for the training of workers at various stages as hereunder:

- Induction training of new workers on OHS Toolbox meet/briefings by work supervisors on daily basis, sensitisation of workers about safety procedures at work for the day
- Briefing on safety at work procedures, prior to commencement of any new activity/tasks
- Periodic tail gate sessions to review and refresh site protocols on safety procedures at work
- Response and reporting in case of injuries and/or incidents related to safety at work
- Periodic health check-ups and encourage to report occupational health issues
- Create awareness and report unsafe incidents at work, injuries including minor ones
- Awareness and mock drills about emergency response plan at worksite and reporting protocols
- Awareness and briefing on community safety, while at work
- Awareness and briefing on the GRM, specially set up redressing Grievances, without any retribution
- Mandatory use of PPEs at work and replacement of PPEs
- Sensitisation on and undertaking by all Contractors Personnel on the Code of Conduct and consequences of its violation

- Worker's orientation on behaviours that constitute SEA and SH

45. The contractors will be encouraged to deploy EHS officers and work supervisors, who have undergone professional training or certified courses in OHS at workplaces from accredited institutions. In addition, the contractors supervisors and manager will also be provided copies of the SEA- SH declaration signed by their employers, list of responsibilities and required conduct.

## 5.4. Addressing Worker's Grievances

46. The contractor of respective construction packages will be obligated to set up a GRM, specially to redress complaints relating to workers deployed for construction works under TRESP. The GRM will have due representation of PIU, Project Management or Construction Supervision Consultant, Contractor, Workers and women (either from PIU/contractor/workers) and function under the PIU. The mandate for GRM, Institutional arrangements, procedure for receiving complaints, time limits for redressal of complaints and escalation level for unresolved cases and resolution thereof will be finalised during the approval of C-ESMP by PIU. PMU will have an oversight of this labour GRM. The GRM for the Workers will be set up during mobilisation phase of the contractor. The minimum requirement for this GRM will include:

- Setting up complaint and suggestion boxes at work and camp sites
- Constituting a local grievance committee with representation from the PIU and workers, including women
- Making available grievance registers at the camp and work sites
- Making a helpline number available (of PIU or DPMU/ BPMU representative)available for workers to file grievances, including anonymous complaints
- Creating awareness among workers on their right to seek redressal to grievances without retribution
- Ensure closure of worker complaints only after they have been verified by the concerned PIU/ BPMU representative

# 6. Policies and Procedures for Ensuring Workers Safety

47. Policies and Procedures are listed under the following sub-headings: i) Incidents and Accident related; ii) Occupational Health and Safety related; iii) GBV/SEAH related.

i) **Incidents and Accident Reporting:** The contractor will promptly notify to the PIU within 24 hours any incident or accident related or having an impact on the Project which has, or is likely to have, a significant adverse effect on the environment, tangible cultural heritage, the affected communities, the public or workers. They will provide sufficient details regarding the incident or accident, its cause, indicating immediate measures taken to address it and prevent future occurrence, including information provided by any contractor and supervising entity. Further, the PIU will appraise to the PMU, which will then share the details with the World Bank within stipulated timeframe. The implementing agency will ensure intimation to the labour welfare officer and conduct a root cause analysis of the incident through the Safety Officer of the contractor.

ii) **GBV related:** About 80-85% of the contract workers are anticipated to be men, and women's participation (about 15-20%) will be largely be limited to unskilled and semi-skilled categories. Contractors will maintain harmonious relations with local communities by ensuring workers adhere to Code of conduct (CoC). The CoC commits all persons engaged by the contractor, including sub-contractors and suppliers, to acceptable standards of behaviour. The CoC will include sanctions for non-compliance, including non-compliance with specific policies related to gender-based violence, sexual exploitation and sexual harassment (e.g., termination). It will be the contractors responsibility to ensure that the CoC is written in plain language, understandable to both the local and migrant workers and signed by each worker to indicate that they have:

- Received a copy of the CoC as part of their contract;
- CoC has been explained to them as part of induction process;
- Acknowledged that adherence to CoC is a mandatory condition of employment;
- Understood that violations of the CoC can result in serious consequences, up to and including dismissal, or referral to legal authorities.

48. To mitigate potential risks related to on-site safety and GBV, the Contractor/Main contractor will undertake actions as given below:

**Table 6-1: Actions for Contractor for On-site Safety and GBV Risk Mitigation**

| S.No. | Action | Timelines |
|---|---|---|
| 1 | Separate, safe and easily accessible facilities for women and men in the place of work and the labour camps. (e.g. toilets and washing facilities should be located in separate areas, well-lit) | oughout construction period |
| 2 | lay signs that the project site is an area where SEA/SH is prohibited. | oughout construction period |
| 3 | Ensure Codes of Conduct are clearly understood and signed by those with a physical presence at the project site; | n induction of each batch of workers |
| 4 | n project staff on the behaviour obligations under the CoCs and Disseminate CoCs (including visual illustrations) and discuss with employees and local communities. | iodic; every six months |
| 5 | ning of Direct Workers (at PMU. PIUs) on thePOSH Act and constitution of an Internal Complaints Committee, where female workers are employed | n completion of recruitment to PMU- PIUs |

### iii) Occupational Health and Safety

The construction of rural roads in forested and undulating terrains, as found in the project area, have their own difficulties and add to the OHS challenges during construction stage. The significance

of OHS concern for workers and community would increase due to site conditions, workers or communities' awareness on OHS preventive measures, lack of safety, supervision and monitoring by the contractors and implementing agency. The ESMF identified some OHS challenges that may be posed during implementation of the project.

**Table 6-2: Potential OHS Risks, Sources/Causes during Project Activities**

| Potential OHS Risk | Sources/causes |
|---|---|
| Earth Slips/ Collapse | ▪ Earthwork excavation<br>▪ Scaffoldings<br>▪ Slope failure<br>▪ Landslide |
| Fall, Slips (Men and Material) | ▪ Work at Height (bridge, slope protection)<br>▪ Slips (Watery surfaces due to rain)<br>▪ Rock fall |
| Health injuries | ▪ Hot Mix Plant, Concrete Batching Plant, Crusher sites, and operation of Roller, Graders, Loader, Cranes etc.<br>▪ Inadequate/poor accommodation, waste management, basic amenities, and hygiene |
| Bulk spillage | ▪ Hazardous substance / inflammable liquid storage<br>▪ Vehicular movement on highway |
| Fire and explosion | ▪ Inflammable Storage Areas<br>▪ Gas Cylinder Storage Areas<br>▪ Electrical Circuits<br>▪ Welding / Gas Cutting Activity<br>▪ Inappropriate handling of Oxy Acetylene gas cylinders (LPG/DA) |
| Electrical Shock | ▪ HT line<br>▪ LT distribution<br>▪ Electrically Operated Machines / Equipment / Hand Tools / Electrical Cables |
| Gaseous Leakage | ▪ Gas Cylinder Storage Areas<br>▪ Gas Cylinder used in Gas Cutting / Welding Purposes |
| Accidents due to use of heavy machinery and vehicle movement Vehicles | ▪ Roller, Graders, Loader, Cranes, Trucks<br>▪ Workman Transport Vehicles (cars / scooters / motorcycles / cycles)<br>▪ Collapse, toppling or collision of transport equipment |
| Other Hazards | ▪ Cuts &Wounds<br>▪ Confined Space (under & inside machinery etc.)<br>▪ Hot Burns |
| Accidents and injuries | ▪ Unprotected work sites at narrow road, bridges and culverts sites, material storage or stockpile locations |

49. These OHS related risks and impacts arising during implementation will be managed through implementation of the ESMP through the contractors and the LMP. The OHS of workers during construction will be under control of contractors/ sub-contractors, who will be directly responsible and liable for safety of site equipment, labours and daily workers attending to the construction site and safety of citizens for each work site. The requirement for the preparation of an OHS plan by Contractor, as part of C-ESMP will be integrated in the contract documents and is one of TWD, GoT commitment in the ESCP. Further, the ESMP will be updated including management measures and contractor's responsibility to response to COVID risk. The Contractor shall be obligated to include Emergency Response and Management measures in OHS plan that will be part of the C-ESMP submitted for TRESP approval.

50. In order to manage the OHS risks, the contractor is required to prepare an OHS plan, Water and Waste Management Plan, Workers camp management plan, CHS Plan, Transport (or road safety) management Plan, Quarry/borrow area management plan, Site restoration Plan and establish GRM for labour among others. All such plans prepared by contractor will be part of Contractor ESMP (Environmental and Social Management Plan) that will be reviewed and approved by the PMU/PIU/Supervision consultant, prior to commencement of construction works. The approved C-ESMP

will be reviewed periodically and if required updated, to address changed requirements during project implementation.

51. The ESHS (Environment, Social, Health and Safety) requirements will be specified and incorporated as special conditions and performance requirements in all bid documents of the contract packages. Adequate cost provisions for implementation of ESHS requirements will be included in the item rates, so that contractor can perform requirements in a fair manner..

52. Under no circumstances, the contractors (including sub-contractors) working under TRESP will engage forced labour(all forms) including bonded labour (working against an impossible debt), excessive restrictions for freedom of movement, inordinately long notice periods, forceful keeping/ retaining worker's identity or any government issued documents or personal belongings, imposition of recruitment fee or commission payable either directly or indirectly at the commencement of employment, loss or delay of wages that impede the workers' right to end employment within their legal rights, substantial or inappropriate fines, physical punishment, use of security or other bouncers to force or extract work from project workers, or other restrictions that compel a project worker to work on a non-voluntary basis.

53. This will be ensured through i) inclusion of code of conduct in the contract documents; ii) ESHS performance requirements, which include code of conduct on handling workers and iii) regular monitoring and reporting by the ESMU functionaries under PIU and overall guidance and directions of Project Director. However, ensuring that all labour requirements outlined in this LMP are complied with by the contractors (including sub-contractors) will be the responsibility of the Society for TRESP.

# 7. Age of Employment

54. The Direct workers will be technically qualified, with the minimum age at the time of hiring not being less than 18 years.

55. The age of the technically qualified and or skilled contract workers can be range between a minimum of 18 years and maximum 60 years, whereas the age of unskilled workers can range between 18 to 60 years. For all workers above 65 years, it will be ensured that such contract workers are not deployed in areas requiring heavy, strenuous physical work

56. The age of the personnel deployed by Contractor could be verified by the PIUs through validation documents like AADHAR Card /Voter Card/Passport/Valid Driving License. In cases where the unskilled worker(s) are unable to produce valid age proof documents for whatsoever reason, the age could be ascertained through medical examination by competent medical authority at Government hospital at the expense of Contractor. However, in case of doubt about the minimum age of a worker, clinical/ anthropometric measurements will be taken to ascertain their minimum age.

57. Under no circumstance, children less than 14 years of age will be engaged for any kind of work and is a prohibited activity as per GoI and State Government norms. Children (non-adult i.e. those aged between 14 and 18 years) can be engaged for non-hazardous activities (as defined by Hon'ble Supreme Court of India in Tamil Nadu Firecracker Factory Case). The same is in accordance with the Child Labour Prohibition Act, 1986 and Child Labour (Prohibition and Regulation) Amendment Rules 2017 framed thereunder.

58. In case, it is detected by PMU/PIU officials that child labour is engaged, the contractor will be immediately issued show cause notice for termination of contract and matter will be duly reported to the district labour officer.

# 8. Terms and Conditions

## 8.1. Specific Wages

**Specific wages of Direct Workers and Conditions of Work**

59. The Direct workers, engaged for TRESP are consultant and specialists hired for the PMU and PIU, whose salary and other emoluments will be as per the prevailing market rates based on expertise and experience. It would be ensured that all direct workers are provided clear terms of reference and contracts outlining their roles, responsibilities and conditions of work, emoluments, work hours, leaves, allowances and notice periods for dissociation/ termination.

**Specific wages of Contracted Workers and Conditions of Work**

60. The wages of consultants deployed through the Contractors and other Third Parties that will be contracted services and determined through a competitive bidding process (technical and financial) and determined by prevalent market rates. The employing agencies- contractors (including sub-contractors) and other third parties will have to ensure that all workers engaged by them or on their payrolls are provided minimum wages as specified by the State's Minimum wage notifications (as notified from time to time), based on their employment category- skilled, semi-skilled or unskilled, subject to the provisions of Minimum Wages Act, 1948 and all other applicable national labour laws related to wage payment, insurance, employee benefits, provident fund, etc. The Society for TRESP will ensure, through the implementing agencies that there is no gender discrimination in wages paid to male and female workers and same wages will be paid for equivalent work to all workers in conformity with the Provisions of Equal Remuneration Act, 1976. The work hours for direct and contracted workers will not be more than 48 hours per week or 9 hours per day. Any contracted workers, made to work in excess of the same will be entitled to overtime at double the ordinary rates of wages in accordance with Building and Other Construction Workers (Regulation of Employment and Conditions of Services) Rules, 2008 and subject to willingness of the worker to work for those additional hours and only in special circumstances.

## 8.2. Specific Terms and Conditions

- No worker will be required or allowed to work continuously for more than five hours unless he had an interval of rest of not less than half an hour.
- The working day of workers will be so arranged that inclusive of the intervals of rest, if any, will not spread over more than twelve hours on any day
- Every worker will be allowed a day rest every week, which will ordinarily be Sunday, but the contractor will fix any other day of week as the rest day, in consultation with the workers or any association/ union negotiating on their behalf
- No worker will be made to work on any day, which has been notified by Central or State Government in the official Gazette as a National Holiday.
- All categories of contract workers particularly unskilled workers can be directly engaged by the contractor or sourced through labour contractors. In such cases, the labour contractor shall have valid registration with the competent authority in Tripura. However, it will be the responsibility of the Main Contractor to ensure that all committed labour provisions are in place and are being adhered to in accordance with the national laws and the requirements of the ESS2 as outlined in this LMP.

- All wages to contracted workers, especially for unskilled workers are to be paid directly by the Contractor, even if the unskilled workers are engaged through labour contractors or any sub-contractors, and the contractor will be required to keep proof of periodic wage payments for review by the PIU/ PMU and ESHS monitoring agencies
- Any denial in and/or untimely payment of wages to workers will render the contractor liable to an action before the relevant Labour court/Industrial Tribunals under the legislations mentioned above.
- Conditions of employment for skilled and unskilled workers will conform to Building and Other Construction Workers (Regulation of Employment and Conditions of Services) Act, 1996.
- Under no circumstances, child labour or forced labour (in any form) shall be engaged, as these are prohibited under National labour laws.
- Contractor will also be liable to be prosecuted in his personal capacity under the provisions of Indian Penal Code 1860 and other Penal legislations before criminal courts in case of gross negligence and dereliction of duty or contraventions of any such statute resulting in death or injury of the workers. The contractor will be responsible for ensuring adequate compensation to the affected workers in accordance with law and provide all necessary support in accessing entitlements and benefits available to workers and their families under government schemes.

# 9. Grievance Mechanism

61. The Project Director and COO will be responsible for providing guidance and advice on all worker related grievances and their redressal, in line with the State Government, Government of India Rules and Regulations and the LMP provisions.

62. The contractor of respective construction packages will be obligated to set up a GRM, specially to redress complaints relating to workers deployed for construction works. The GRM will have due representation of PIU, Contractor, Workers and women (either from PIU/contractor/workers) and will function under the concerned PIU. The mandate for GRM, Institutional arrangements, procedure for receiving complaints, time limits for redressal of complaints and escalation level for unresolved cases and resolution thereof will be finalised in C-ESMP and will be as per the requirements specified in Section 7.4 of this LMP. PMU will have an oversight of this labour GRM and will be operationalised during the mobilisation phase by the contractor. The contractor will also be responsible for tracking and resolving workers grievances and maintain detailed records on grievances/complaints received, minutes of GRM meetings, recommendations and resolutions made thereof and intimation of resolution of grievance to the complainant.

63. Information relating to availability of GRM without any retribution, its institutional set up, timings and procedure for receiving complaints, mechanism of handling complaints, maximum time limits for redressal of complaints and escalation level for unresolved cases and resolution thereof will be disseminated to the workers on a regular basis. The contractor will be responsible for ensuring adequate awareness among the workers about all GRMs available under the project, including the labour GRM, Projects dedicated GRM as well as the state-wide GRMs like the State Public Grievance Portal and CM Helpline, as well as through the local labour welfare officer. The contractor will be expected to orient all fresh batch of workers on how each of these GRMs could be accessed to register their work and safety related complaints.

64. Some of the GRM dissemination avenues are:

- Induction training for new workers
- Toolbox meet/briefings by work supervisors
- During periodic Tail Gate Sessions, to review and refresh site protocols on safety procedures
- Pictorial illustrations and posters in local language installed at prominent places like entry/exit points, canteen, labour camps sites etc
- During awareness campaigns for safety at work and response to Emergency Response Plans
- Awareness and briefing on community health and safety, while at work

Overall, the Social Development Specialist in PMU will support the Project Director to provide implementation and capacity building support on labour Management, including procedures for resolving workers grievances and will guide the PIU in this regard. S/he will also include workers grievance status in the Quarterly progress report submitted to the World Bank.

# 10. Contractor Management

65. The environmental, social risks and impacts including labour management and OHS issues arising from implementation of TRESP has been identified and will be managed through implementation of ESMP and LMP by the contractors. The labour management and OHS of workers and related issues arising during construction works will be under direct control of contractors and will be managed by contractors. Therefore, ensuring effective management of OHS plan for contract workers by contractor(s) is core to implementation.

66. The ESHS (Environment, Social, Health and Safety) requirements will be specified and incorporated as special conditions and performance requirements in all bid documents of contract packages. Adequate cost provisions for implementation of ESHS requirements have included in the item rates, so that contractor can perform requirements in a fair and objective manner.

67. The ESHS performance requirements incorporated in the bid documents, obligate the contractor, upon mobilization, to prepare a Contractor's ESMP (C-ESMP), which will include impacts mitigation and management plan, environmental enhancement plan, OHS plan, labour management plan, workers' campsite management plan, traffic management and road safety management plan, GRM for workers' in accordance with the requirements. The C-ESMP will be reviewed and approved by the PMU, prior to commencement of construction works. The approved C-ESMP will be reviewed periodically updated in a timely manner, to address changed requirements, if any during project implementation.

## 10.1. Monitoring Performance of Contractors

68. The monitoring of performance of contractors related to labour management, including the implementation of C-ESMP and meeting the ESHS performance requirements will be managed by the PIU under the overall guidance and direction of Project Director PMU.

69. All key provisions related to labour management, will be part of the qualification criteria for contractors and the bidding procedures. The contractor responsibilities outlined in this LMP will be part of the Employers Requirements (General and Particular Conditions of Contract) in the contract and will clearly spell their responsibilities related to labour, their working conditions, health and safety, including the worker's health and safety performance of their sub-contractors and primary suppliers.

**Annexure 12**

# Tripura Rural Economic Growth and Service Delivery Project (TRESP)

# Resettlement Policy Framework (RPF)

***November 2022***

**Tripura Tribal Welfare Department, Government of Tripura**
**PN Complex, Gurkhabasti, Agartala**

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# LIST OF ABBREVIATIONS

| | | |
|---|---|---|
| ARDD | : | Animal Resources Development Department |
| CBO | : | Community Based Organization |
| CP GRAMS | : | Centralised Public Grievance Redress and Monitoring System |
| DoE | : | Departments of Education |
| ESF | : | Environment and Social Framework |
| ESMF | : | Environment and Social Management Framework |
| ESS | : | Environment and Social Standards |
| GoT | : | Government of Tripura |
| GRC | : | Grievance Redress Committee |
| GRM | : | Grievance Redress Mechanism |
| LA | : | Land Acquisition |
| MoU | : | Memorandum of Understanding |
| NGO | : | Non-Governmental Organization |
| PAP | : | Project Affected People |
| PD | : | Project Director |
| PG | : | Public Grievance |
| PIU | : | Project Implementation Unit |
| PMGSY | : | Pradhan Mantri Gram Sadak Yojana |
| PMU | : | Project Management Unit |
| PWD | : | Public Works Department |
| RD | : | Rural Department |
| RoW | : | Right of Way |
| RPF | : | Resettlement Policy Framework |
| R&R | : | Resettlement and Rehabilitation |
| SC | : | Scheduled Caste |
| SEP | : | Stakeholder Engagement Plan |
| ST | : | Scheduled Tribe |
| TRESP | : | Tripura Rural Economic Growth and Service Delivery Project |
| TRLM | : | Tripura Rural Livelihood Mission |
| TTADC | : | Tripura Tribal Autonomous District Council |
| TWD | : | Tribal Welfare Department |
| VC | : | Village Committee |

# 1 INTRODUCTION

## 1.1 Background

1. The Tribal Welfare Department (TWD), Government of Tripura (GoT) is preparing the Tripura Rural Economic Growth and Service Delivery Project (TRESP) with the assistance of the World Bank. The project is envisaged as multi-sectoral in nature, involving multiple implementing agencies. As the nodal agency, implementation arrangements under the project will be coordinated by the Tribal Welfare Department through a Society for TRESP (PMU). The Departments of Education (DoE), Public Works Department (PWD), Department of Agriculture (integrated with Directorate of Horticulture), Department of Fisheries, Animal Resources Development Department (ARDD) and Tripura Rural Livelihood Mission (TRLM) will be the Project Management Unit (PIUs) implementing different components of the project. TRESP will involve construction of educational buildings, rural roads and other market and post-harvest infrastructure. Besides, it will involve and support analytical studies and implementation support to TWD, besides in capacity building activities of TWD and line departments.

## 1.2 Project Description

2. The Project Development Objective is 'to enhance connectivity and access to improved services and economic opportunities for tribal areas in Tripura' that will be achieved through livelihood interventions in agri and allied activities, upgradation of rural roads, improved access to quality education. TRESP has four major components, (i) strengthening foundation for economic development, (ii) investing in human capital development, (iii) strengthening institutions for service delivery and economic development, and (iv) contingent emergency response.

3. TRESP aims at three broad pillars for physical intervention across its target region. First, the focus is on productivity improvement, better Package of Practices (PoPs) and selected expansion of post-harvest infrastructure and marketing-processing facilities. Secondly, increasing connectivity to villages in remote locations to ensure better access to services, entitlements and markets. Thirdly, improving access to quality education by creating better equipped school complexes, capacitating early school teachers and offering relevant vocational education. TRESP is to be implemented in 23 Tribal Blocks, including 12 aspirational Blocks. These are predominantly tribal blocks with tribal population of more than 85 percent and fall under the notified Scheduled VI Areas.

# 2 NEED FOR RESETTLEMENT POLICY FRAMEWORK

## 2.1 Need and Purpose of Resettlement Policy Framework

4. The State has 58 blocks, out of which the geographic scope of the project is in 23 blocks comprising of 12 aspirational and 11 non aspirational blocks; spread across all 8 districts, namely, West Tripura, South Tripura, North Tripura, Khowai, Sipahijala, Unakoti, Gomati and Dhalai.

5. Two pillars of physical investments- related to rural roads and creation of post-harvest infrastructure- may require some additional land or may have impacts related to involuntary resettlement that may need to be managed. However, since specific sites and road alignments where these investments will take place are being identified, the resettlement impacts based on the exact land requirements and its location, including their likely effect on involuntary physical and economic resettlement, is to be determined.

6. As per assessment, the land related impacts of TRESP are expected to be localised, small scale and are not expected to lead to any land acquisition or physical relocation. Most land requirement under the project is expected to be under the rural roads component and the mode of land-take as per past precedent is likely to be through voluntary donation. Based on these assumptions this Resettlement Policy Framework (RPF) has been developed to provide guidance on the procedures and processes that need to be adopted for screening potential resettlement impacts in different sub-projects and for preparing the location and site-specific Abbreviated Resettlement Action Plans (RAPs) during implementation.

7. This RPF assesses the land requirements under the project and its potential adverse impacts, the ESS5 related requirements on involuntary resettlement and voluntary land donation, assesses the existing government procedures and policy and gaps related to land donation that need to be bridged to fulfil the ESF requirement. It also provides principles based on which all land-related social impacts will be addressed using the risk mitigation hierarchy as well as the process to be adopted for holding consultations with the community and project affected persons (PAPs), identifying vulnerabilities, impacts, responsibilities for mitigation or resettlement planning. The RPF also outlines how entitlement and compensation will be provided based on eligibilities and nature of direct or indirect impacts, grievance mechanism to be provided to PAPs. The RPF is consistent with World Bank ESS5 on 'Land Acquisition, Restrictions on Land and Involuntary Resettlement' as well as the National legislation on 'Right To Fair Compensation And Transparency In Land Acquisition, Rehabilitation And Resettlement Act, 2013'.

## 2.2 Principle of Resettlement Policy Framework

8. The Resettlement Policy Framework has been prepared considering the Land donation activities prevalent in the State; anticipated impacts in components' sub-project activities and from the review of applicable legal and policy framework discussed in chapter 3 of this Environment and Social Management Framework (ESMF). The framework bridges the gaps identified between national and state legal framework and provisions and requirements laid down in Environment and Social Standards (ESS) 5. It lays down the principles and procedures for management of social impacts caused by the project activities and guide the process of the social impact assessment and preparation of Resettlement Action Plans.

9. Based on the analysis of Government statutes and the World Bank Environment and Social Framework (ESF) presented in the chapter 3 on legal and regulatory framework, the following principles will be adopted to this project for identifying, finalizing and designing road construction and upgradation works:

- Screening and review of sub-projects at the identification stage to ensure that there are no adverse

environmental or social issues, including impacts on land, assets or structures.

- To apply the risk mitigation hierarchy to avoid, minimize such impacts, avoid any irreversible impacts and duly compensate those impacted by irreversible impacts;
- In case temporary or permanent economic displacement is unavoidable, propose measures to minimize adverse impacts and restore the livelihoods of those impacted to at least pre-project levels, through allowances, compensation, or livelihood restoration measures;
- To screen and identify those impacted, especially vulnerable households and non- titleholders and recommend any additional measures, if required
- To engage with communities/ households impacted/ to be resettled and other relevant stakeholders in meaningful consultations during preparation of the resettlement action plan in a way to ensure their ownership of the plan and their participation in its implementation and monitoring; and
- To engage with communities impacted and other relevant stakeholders in meaningful consultations during screening and preparation of resettlement action plan to ensure their ownership and participation;
- To create and provide the PAPs access to a grievance redress mechanism.

# 3 LAND REQUIREMENTS UNDER TRESP

10. TRESP requires three types of major interventions to be taken up. The requirement of land depends on the type and size of the intervention. The land requirements for this project will be related to:

- **Selected expansion of Post-harvest infrastructure and processing facilities:** This infrastructure expansion for processing and storage is most likely to happen within existing facilities, on land provided by Village Committee (VC) or leased by private landowner/ member of producer societies, who will directly benefit the individuals or their collectives. Under TRESP about 20 Integrated Rubber Processing Facilities are proposed to be set up. In Tripura rubber processing is largely undertaken by Rubber Production Societies (RPS) that operate small processing units with average production capacity of 200 sheets per day. These units require constructed sheds of approx. 760 square feet for sheeting and smoking of rubber. Any additional space available is used for storage and water harvesting, considering the large water requirement. Currently, the VC or Panchayat provides this land to the RPS and in case of its non-availability, one or more members lease their private land to the society. The same modality is expected to be adopted under TRESP.
- **Upgradation of existing School Buildings and Construction of Model School Complexes:** Most of this construction and upgradation work will take place within existing government school campuses and will not have any additional land requirement. No greenfield school complexes are proposed under the project.
- **Road construction under 3 categories, (A) existing roads upgraded to Black Top (290 kms), (B) existing brick-soled roads upgraded to black top (208 kms), and (C) earthen roads/ tracks upgraded to all weather roads (30 kms):** These roads would connect around 748 habitations in the project area and would have an average width of 3.0-3.75 meters or about 5.5 meters in case of intermediate rural roads. The average each chainage is currently expected to be between 3 to 5 kms long. All category A and category B roads will be constructed on existing alignments and RoW, within the existing width. Most category C roads will also be developed on existing alignments, but may require additional lands in some cases to create additional features for road safety, slope protection, altering cross-sections, expanding carriageway or altering alignment to create efficiency or minimize adverse impacts. In some alignments under Type B and C small parcels of additional land may be required along the alignment that could belong to local bodies or private landowners. As per past precedent, average width of land donated under PMGSY is between 2-3 feet, with length dependent on the alignment and landowner's frontage. On an average small land donations are requested from 8-10 persons per 5 kilometer of the section, mainly for Type B & C roads. In tribal areas, on an average 5 percent of the total roads/ routes require private land donation, although in non- tribal areas, owing to higher population density, the average is much higher, touching 70-80 percent in some cases. In case public land or land from private donation is available, 6 meter wide roads are designed, with 3.75 meter of carriageway and 1.125 meter of RoW on each side. However, if lesser width is available, especially in case of roads passing through habitations, then available width is considered while planning**.**

11. Likely adverse impacts related to land-take are the following:

- Direct, minor impact on asset ownership of landowners due to land donation,
- Partial loss of livelihood/ income on the landowners affected by land take,
- Impact on livelihoods of tenants, agricultural labourers and community members accessing the procured land,
- Resettlement impacts on squatters or encroachers along the alignment,

- Temporary or long-term restrictions on or lack of access to common properties and public utilities being impacted by the land take,
- Temporary livelihood loss and access related restrictions on hawkers/ street vendors operating along the alignment,
- Short to medium term restrictions during road and school construction phase on access to land, dwelling units or other assets adjoining them,
- Short to medium term impacts on productivity of agricultural lands adjoining the school or road alignments,
- Damage to properties/ structures and utilities during construction

12. It is envisaged that the project will lead to temporary economic displacement of individual and not physical displacement. This would impact the livelihood of the individuals. Therefore, the project will provide livelihood assistance to the affected people.

13. Any intervention leading to i) physical displacement of tribal households; ii) adverse impacts on customary tribal lands, natural resources or cultural properties, iii) attracting opposition from tribal leaders or community institutions, iv) leading to non-compliance with ESF, have been placed in the Exclusions List of the project.

# 4 POLICY AND LEGAL FRAMEWORK

## 4.1 Scope of World Bank's Environment Social Standards5

The World Bank Standard on Land Acquisition, Restrictions on Land and Involuntary Resettlement recognizes the adverse social impacts of permanent or temporary physical and economic displacement resulting from land acquisition, restrictions on land use or involuntary resettlement imposed by the project investments and aims to mitigate, avoid, miminise or compensate for impacts that may result from:

- Acquisition of Land rights or restrictions on land use rights through expropriation or other compulsory procedures in accordance with prevailing national laws;
- Acquisition of Land rights or restrictions on land use rights through negotiated settlements with property owners or those with legal rights to the land, if failure to reach a mutually amicable settlement would have resulted in expropriation or other compulsory measures.
- Project induced acquisition of land or restricted land use that may lead to the relocation of people without formal, traditional, or recognizable usage rights, who are occupying or using land and related resources prior to cut-off date;
- Restrictions on land use or on access to natural resources/common property that may cause a community to lose traditional/ customary access to resources, or recognizable usufruct rights, especially in protected areas, national parks, biodiversity hotspots, eco- sensitive zones impacted by the project;
- Restriction imposed on access to resources impacting livelihoods including common property and natural resources such as marine and aquatic resources, timber and non-timber forest products, fresh water, medicinal plants, traditional hunting and gathering grounds and pastures;
- Economic displacement of people due to project impacts that render their land unusable or inaccessible;
- Land rights or land use rights relinquished by individuals or communities without full payment of compensation; and
- Land acquisition or land use restrictions imposed in anticipation of the project as part of preparation.

## 4.2 ESS5 Provisions related to Voluntary Land Donation

14. As analysed above, most of the land requirement under the project is expected to be met through voluntary land donation, based on the experience of the implementing agency (PWD) of constructing similar roads under the rural roads program (PMGSY). Therefore it is important to assess the guidance provided under Environment and Social Standard (ESS) 5 related to it. ESS5 recognises the adoption of 'Voluntary Land Donation' as one of the procedures for procuring land for the World Bank supported projects. Voluntary land donation may involve partial monetary or no monetary benefits or incentives to the land donor. In both cases it is considered as "voluntary land donation," because the transfer of asset takes place without payment of compensation at full replacement value. Subject to certain preconditions being fulfilled and due process being followed, it keeps such transactions outside the purview of ESS5 and its requirements.

15. As per the standard, if the entire or part of land to be used by the project is voluntarily donated without payment of full compensation, then it may be acceptable to the bank to consider it as voluntary donation, and hence keep it outside the purview of ESS5, if it is demonstrated that:

- Potential Land donors have been fully informed and consulted about the project, including their benefits and impacts;
- They have been sufficiently informed about choices available to them, including the genuine option to seek compensation at full replacement cost or even refuse transaction before it is formalized (assuring that eminent domain will not be used in case of failure of such consultation/ negotiation)[3];
- The owner has been provided with sufficient time to consider his or her choices, and has knowingly and willingly taken the decision to donate the land and not seek compensation for the same, without any coercion or pressure;
- They have confirmed their willingness to donate the land in question in writing, through a formal process signed by the landowner providing consent to land transfer, confirming ownership and no encumbrances on the donated piece of land;
- Proportion of land being donated is minor, such that its removal will not have an adverse impact on the donors existing quality of life or his/ her livelihood;
- The donation does not involve any relocation or physical displacement of the family;
- Donor is expected to directly benefit from the project;
- In case of donation of community land, there is consent of individual/s using or occupying such land.
- All documentation regarding the consultations conducted and the agreements has been done and maintained in a transparent manner.
- A grievance redressal mechanism is available to handle any grievances raised by land donors (and other persons affected by the donation).

16. If the process of voluntary donation under TRESP leads to displacement of persons/ families who are either using or occupying or claim rights to the land in question, other than the legal landowner, then provisions of ESS5 will apply in order to ensure that:

- All tenurial, tenancy or usufruct claims (both traditional or informal) or privileges of those persons/ families related to that land are systematically and impartially identified;
- They (tenants, workers, right claimants) are duly consulted and informed about the project benefits and its impacts, as well as their rights and available choices;
- They have an opportunity to negotiate a fair value for such restrictions or denial (partial or full) of tenancy or usufruct claims imposed by the project;
- Suitable compensation, access /benefit sharing and grievance mechanisms are put in place for their rehabilitation;
- Fair, transparent and monitored processes for their transfer from those donated lands are in place and adopted for their transfer or settlement based on fair value and applicable conditions;
- Where women tenants/ users are involved, the consultation process should ensure that their perspectives are obtained and their interests are factored into the transaction;

It is important to note that land transactions are considered voluntary only when the seller has the right to refuse the transaction and retain her/ his land, and when the state would not exercise its authority under eminent domain if the negotiation does not lead to a mutually satisfying transaction;

## 4.3 Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013

The 2013 Act and Rules 2014, 2015 include the following key provisions related to land acquisition,

resettlement and rehabilitation:

a) mandatory social assessments to determine whether the said acquisition serves a larger public purpose or not;
b) requirement to ascertain the minimum land requirements for the purpose for which land is being acquired;
c) assessment of the impact of land acquisition on life, livelihoods, public infrastructure, common properties, customary rights and community assets of impacted communities and areas;
d) identification of steps to minimize any adverse or negative impacts of the acquisition;
e) social and economic cost-benefit analysis of the land acquisition to ascertain that benefits outweigh the costs;
f) livelihoods support for affected persons, including compensation and support for permanent or temporary relocation using realistic assessments;
g) detailed census and social impact assessment of affected families to map their socio-economic profile, potential losses or impacts;
h) special provisions for disadvantaged and vulnerable persons and households; mandatory settlement of compensation and assistance before actual land acquisition;
i) setting up of mechanisms for consultations, grievance redress and information disclosure.

## 4.4 Tripura Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015

The State Rules mirror the requirements under the national legislation and provides some additional provisions with respect to:

- Mandatory consent of the Gram Sabha, Panchayat or Autonomous District Council in all cases of land acquisition, whether for public purposes or for a private entity, in scheduled areas;
- Settlement of unsettled forest rights or land title claims before initiation of any resettlement or acquisition measure in scheduled areas;
- Preparation of a Development Plan for resettlement and rehabilitation of affected families under a time-bound program;
- Public hearing on the draft development plan in the affected areas to seek feedback;

## 4.5 Provisions of LARR Act, 2013 related to Scheduled Areas and Scheduled Tribes

17. Under the Land Acquisition, Resettlement and Rehabilitation Act, and the 2014 Rules notified under it, following provisions have been made for land acquisition in Scheduled Areas and in projects where ST families are impacted:

- Section 2- (2) of the Act states that while land may be acquired for various public or public private partnership projects, subject to consent from affected families, no land shall be transferred by way of acquisition in the Scheduled Areas in contravention of any law or court judgement relating to land transfer, prevailing in such Scheduled Areas and all consultations with the Gram Sabha in the Scheduled Areas will be in accordance with the provisions Panchayats (Extension to the Scheduled Areas) Act, 1996.

- Section 41 of the Act extends Special provisions for Scheduled Castes and Scheduled Tribes and states that as far as possible, no land acquisition should be made in the Scheduled Areas and should only be done as a 'demonstrable last resort'. It further states that the prior consent of the concerned Gram Sabha or the Panchayats or the autonomous District Councils, at the appropriate

level in Scheduled Areas shall be obtained, in all cases of land acquisition in such areas, including acquisition in case of urgency. In cases where Gram Sabha does not exist, consent of Gram Panchayats or the Autonomous Districts Councils shall be obtained.

- Section 41 (4) states that for projects involving land acquisition, which involves involuntary displacement of Scheduled Tribe families, a Development Plan shall be prepared, laying down the procedure for settling land rights, in case they have not been settled and restoring their titles on the alienated land. This plan shall outline a programme for development of alternate fuel, fodder and non-timber forest produce resources on non-forest lands within a period of five years, sufficient to meet the requirements of tribal communities. They shall also get free of cost land for community and social gatherings, as decided by appropriate Government.
- Section 41 (6) states that where land is being acquired from ST members, at least one-third of the compensation amount due shall be paid to the affected families initially as first instalment and the rest shall be paid after taking over of the possession of the land.
- Sections 41 (7) and 42 (1) state that the affected ST families shall be preferably resettled in the same Scheduled Area in a compact block so that they can retain their ethnic, linguistic, cultural identity and community life; all benefits, including reservation benefits available to them in the affected area shall continue in the resettlement area as well.
- Section 41 (9) states that any alienation of tribal lands in disregard of the prevailing laws and regulations shall be treated as null and void, and in case land has been already acquired all rehabilitation and resettlement benefits shall be made available to their original tribal landowners.
- Section 41 (11) and 42 (2) states that where affected ST families are relocated outside the district, an additional 25 percent rehabilitation and resettlement benefits to which they are entitled along with a one-time entitlement of fifty thousand rupees. In addition, in case the ST families residing in Scheduled Areas are relocated outside those areas then all statutory safeguards, entitlements and benefit that they enjoy shall be extended to those areas.

## 4.6 Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

Key provision under the Forest Rights Act 2006 related to Scheduled Tribes and other Forest dwellers are as follows:

18. In case community forest rights under Forest Rights Act- 2006 have been settled in the area, then the share of community right of the individuals or families who are displaced due to land acquisition shall be paid to compensate for loss of share in such community rights.

19. As per its Second Schedule, ST families losing land in a project shall be provided another land parcel equivalent to the land acquired or two and a one-half acres, whichever is lower. They will also be provided a subsistence grant equivalent to three thousand rupees per month for one year. Scheduled Tribes displaced from Scheduled Areas shall also receive an amount equivalent to fifty thousand rupees.

20. The 2014 Rules (Form IV) provide a list of entitlements to be provided to ST families as part of the Development Plan. These include-land up to 0.4 ha for agricultural/ horticultural/ cattle grazing, dwelling unit with drinking water facility & toilet, one time financial assistance, monthly subsistence grant for a year, employment support for the landless, skill development training for affected youth, compensation for cattle shed or petty shop lost, alternative arrangement for fuel, fodder and forest produce and continuation of their fishing rights.

## 4.7 Existing Procedures for Land-take under PMGSY (Rural Roads Program) through Donation

21. With the exception of Punjab (through land acquisition) and Uttarakhand (through direct purchase), all other participating states under PMGSY, including Tripura, adopted voluntary donation for land sourcing. With PWD as the implementing agency, Tripura has developed more than 4700Kms of rural roads in the state under PMGSY entirely using voluntary land donation as a mechanism for procuring land. The following operating principles have been applied for identifying, finalizing and designing road construction and upgradation works:

22.

a. Alignments chosen are either existing earthen roads/ tracks or brick-soled roads that require upgradation and/ or marginal widening. No green-field roads are chosen for construction.

b. Screening and review at the identification stage to ensure that there are no significant adverse environmental or social issues, including impacts on land, assets or structures falling along the alignment.

c. If some sections are assessed to require large private land-parcels, a fresh alignment is considered for construction or upgradation. Similarly, if land requirement from a single land donor is found to be high, the alignment is taken to the other side of the road to minimize impact on one donor.

d. Mandatory transect walks and site-level community consultations, including discussions with local stakeholders, especially landowners for mapping all potential social and environmental features/issues along the chain-age and if required, also exploring alternate routes.

e. Separate consultations with potential land donors to assess willingness to transfer land parcel for the rural road project.

f. Finalisation of road packages based on assessment of potential impacts and community willingness to offer land parcels (private, community or local government owned) that may be required.

g. Designing roads based on available space or width by restricting construction based on available width within settlements, shifting alignments or modifying cross-sections to avoid or minimize adverse impacts.

h. Ensuring completion of land transfer and other mitigation measures before initiation of the civil works.

i. In case of land take, formalised land donation/transfer, either through registered MoU and affidavits from landowner to the local government or implementing agency. This process is usually completed within a week of the Transect Walk. Ensuring ownership of local bodies and facilitation of the process either by them or credible civil society organisations operating in the area.

j. Cancellation of the alignment in case land or part of it is unavailable for the proposed chainage

k. In case of roads traversing multiple villages/ panchayats, NoC for those road taken from the Block Panchayats (non- Sch Areas) or Block Advisory Committee (Sch. VI areas).

The PIU facilitate enrolment of the Entitled Persons in Rural Development schemes with prior disclosure of information on the process, schedule and other details. For this purpose, socio-economic survey is conducted to identify project affected people. The disbursal of entitlements is the responsibility of the PIU and VC.

## 4.8 Gaps Assessment

23. The Assessment of Gaps with respect to ESS5 requirements on Voluntary Land Donation and Recommended Mitigation Measures is presented in **Table 4-1**.

**Table 4-1: Gaps with respect to ESS5 requirements on Voluntary Land Donation and Recommended Mitigation Measures**

| Provisions of ESS5 | Provisions under PMGSY National and Tripura | Gaps or Inadequacy | Recommended Mitigation Measures |
|---|---|---|---|
| Potential Land donors fully informed and consulted about project, benefits and impacts | • Need for transparent process for land transfer facilitated through interactions with the community and likely PAPs shall be adopted;<br>• Willingness of landowner for transfer of land shall be assessed during consultations;<br>• During Transect walks PIU representatives to provide adequate responses to communities on queries, including on process of land donation | Provisions exist, but there is absence of clarity on the process to be adopted | Documented procedures for informing and consulting the PAPs and the community, with timelines, responsibilities and verifiable measures of fulfilment; Separate, dedicated consultations with tribal households |
| Sufficient information about choices, including seeking full compensation, refuse transaction during negotiation; assurance that eminent domain will not apply | • Provides for public announcements on the need for additional land through voluntary donation;<br>• Consultation meetings during resettlement planning for creating awareness and clarify processes of land donation; | Does not lay down clear, accountable process by which potential donors are explained their choices including right to refuse | Consultation/ Discussion Checklist to include points on explaining available choices, withdrawal from negotiation and assurance that state will not use eminent domain in case of negotiation failure |
| Sufficient time provided to owner to consider choices to knowingly & willingly take the decision, without coercion, pressure or threat of eminent domain | • After identification of alignment a transect walk is undertaken involving communities and local bodies to initiate transfer of land/ assets, identify PAPs, ensure acceptance of project, alignment and land donations;<br>• If required, support of PRIs/VCs and community is to be taken to encourage landowners for their consent to donate the land or asset. | Not sufficient time provided. Discussion on land donation needs to be closed during transect walk/ alignment finalization | Procedures to lay down clear timelines ensuring sufficient time for potential donors to assess choices and take an informed decision.<br>Ensure local bodies play the role of a fair intermediary |
| Confirmation of willingness to donate through a formal or legal process, providing consent, confirming ownership and declaring no encumbrances on parcel donated | • Voluntary donation by landowners through a written Gift Deed/ MoU/ Affidavit) between landowner/s & PIU or Govt;<br>• PRIs/VCs made responsible to collect them from all landowners and submit them to PIU<br>• To ensure that donor is in legal possession of the land, copy of the proof of ownership shall be obtained by the PIU.<br>• In case of unclear titles or inability of donor to provide proof of ownership, help of PRIs/VC, Tehsildar/Kanungo and local community shall be taken to verify ownership. | Partially addressed. Sample draft of MoU/ Gift Deed provided and need to assess ownership.<br>No provisions by which to check if land is encumbrance free | Documented procedures to assess dependence of others on the land to be donated, including workers, tenant and leaseholders |
| Proportion of land donated will not adversely impact donors quality of life or livelihood | • A person becomes eligible for assistance if loss of land (not clear whether through donation or acquisition) is more than 10 percent of their total landholding | No clear provisions to assess scale of impact on income or livelihood | Create scale based on which to measure severity of adverse impact and permissible scale of land donation |
| Donation does not involve relocation or physical displacement | • Lists shifting of shops, houses, utilities and farming among the likely impacts of road construction | Not clear | Procedures to clearly lay down that land donation involving physical displacement is not permitted under the project |
| Donor is directly benefit from the project | • State governments are advised to lay guidelines in a manner that the process of making land available should sub-serve common good and be just & equitable | No provisions to check if land donor is directly benefitting | Consultation checklist to assess direct and attributable benefits for potential land donors |
| For donation of community land, there is consent of individuals | • No such provisions exist | Inadequate | Documented procedures to assess dependence of others on the land to be donated, including |

| Provisions of ESS5 | Provisions under PMGSY National and Tripura | Gaps or Inadequacy | Recommended Mitigation Measures |
|---|---|---|---|
| using or occupying such land | | | workers, tenant and leaseholders, identify them and seek their informed consent |
| All documentation related to consultations and agreements done and maintained transparently | • Voluntary donations should be documented through agreements, copy of which should be forwarded to local revenue officials for making necessary changes in ownership and possession record of the land. | Adequate | No action required |
| Mechanism available to handle any grievances raised by land donors (and other persons affected by donation) | • Land Management Committee to function as Village Level Grievance Committee till construction completion; unresolved and later grievances to be addressed through District Level GRC. | Partially addressed. | Project level Grievance Redress Mechanism (GRM) to also serve as first and second level grievance committee for land donors and PAPs, with clearly defined timelines for redressal |

Based on this gap assessment a step wise checklist on the process to be adopted under TRESP for seeking land donation for the rural roads component is provided as **Annex I(e)** of the RPF.

# 5 IMPACTED CATEGORIES AND ENTITLEMENTS

24. **DEFINITIONS**

- **Additional unforeseen impacts on shelter /livelihood during construction:** In addition to those PAPs identified as directly impacted, there are also people who get indirectly impacted. The contractor shall avoid the loss by providing adequate protection measures through construction of appropriate protection measures as breast walls/retaining walls etc. In the event of non-provision of these measures, it shall be the responsibility of the PIU, through the VC/TTADC to work out alternate shelter to offset the impact.
- **Assistance:** All support mechanisms such as R&R assistances to be given to the project affected people.
- **Encroacher:** Any person illegally occupying public property by extending their land boundary or a portion of their building onto the existing government land or RoW is an encroacher.
- **Entitled Person (EP):** Entitled Persons include all those who qualify for, or are entitled to any compensation or assistance as a result of being impacted by the project. The basis for identification of such Entitled Persons (EP) will be the date of the transect walk and finalisation of the alignment, in case of rural roads.
- **House and Shelter:** Design of proposed roads will be undertaken in a manner that avoids adverse impacts on structures. Loss of ramps, shelter of shops, kiosks and boundary wall will be compensated with assistance amount entitled in the matrix. In events where structures that do not involve physical relocation of the affected household, the preferred approach will be to assist people to move back and away from the RoW..
- **Kiosk:** A kiosk is a booth/stall/cabin/cubicle made of wood or iron or any other building material which could be shifted to another location as a single unit without much damage and is used for carrying out petty business/ commercial activities and has been in operation/existence prior to cut off date;
- **Land:** To the extent possible, the proposed works will be carried out within the available land width. In the event of inadequate road width, the project will aim at obtaining land through a process of land donation by the affected households.
- **Land Owner:** Person who is a legal recipient of the said land or grantee under any scheme of the Government under which such allotment provides title/ ownership and who has permanent rights and interest in land;
- **Land Dependencies:** All persons or households that are directly or indirectly dependent on the private or public land being taken for the purpose of the project. These could include tenants, leaseholders, farm workers and those accessing the commons for grazing, water, farming, etc. The impact on loss of livelihood and extent of dependence on these lands will be assessed through screening and consultations by the VC/TTADC. Any intervention which involves adverse impacts on customary tribal lands, natural resources or cultural properties will be excluded from project support..
- **Land Donor:** A person who has legal title/ ownership and has permanent rights and interest in the said piece of land and is willing to voluntarily provide a portion of the land for the project, for the purpose of larger social good, without receiving partial or full consideration for that piece of land.
- **Memorandum of Understanding (MoU):** MoU is a written confirmation or willingness to donate land and an agreement providing consent for upgradation of road on the impacted parcel of land. (Format of MoU is given in Anenx I(a), and format for assessing the impact on land is given in

Annex I(c) and the Checklist on procedure to be adopted for land-donation under TRESP is provided in Annex I(e).

- **Non-Titleholders:** Affected persons/families/ households with no legal title to the land, structures and other assets adversely affected by the project. The clearance of non-titleholders and squatters from the existing RoW shall be in accordance with the legal provisions. The VC/ADC hall serve an advance notice to the non-titleholders towards removal of assets/standing crops and subsequent clearance. If the affected non-titleholders belong to vulnerable categories, they will be assisted in enrolling into appropriate ongoing central/state Rural Development schemes.
- **Other Assets:** Though minimal, the project may involve minimal loss of other assets such as trees, standing crops or plantations. The VC in consultation with the PIU shall compensate the producer/ owner for the crop loss as well as potential economic loss (in case of perennial crops like fruit-bearing trees and plantations).
- **Temporary Impacts:** The temporary resettlement impacts during construction may include restricted access to residential units, road-side shops and establishments These would also include temporary loss of livelihoods due to closure of establishment during construction of a road section. Additional temporary impacts will include restrictions on access to cultural resources, public utilities like drinking water, electricity and damage to adjacent parcel of land due to construction and movement of heavy machineries. The contractor shall be responsible for regulating time of usage of heavy equipment, dust suppression, time-bound completion of construction in such areas. All temporary use of lands outside the proposed RoW shall be through written consent / approval of the landowner and the VC/TTADC. The contractor shall locate construction labour camps, storage sheds, disposal sites in consultation with the VC/TTADC to avoid any adverse impact on the local or host community. Consultations with the community shall be undertaken by the PIU and contractor to sensitise the community on the construction works and its probable impacts through the Village Committee.
- **Tenant:** A person who holds/occupies land-/structure of another person and would usually be liable to pay rent for that land/structure. This arrangement includes the predecessor and successor-in-interest of the tenant but does not include mortgage of the rights of a landowner or a person to whom holding has been transferred;
- **Transect walks:** transect walk is a tool for describing and showing the location and distribution. of resources, features, landscape, main land uses along a given transect/road. Transect walk shall involve communities and local bodies to initiate transfer of land/ assets, identify PAPs, ensure acceptance of project, alignment and land donations (the format for recording transect walk and consultations with Project Affected Persons, is given in Annex I(b). During transect walks, specific details of project affected people shall be collected in the format given in Annex I(d).
- **Vulnerable**: Vulnerable categories are Particular Vulnerable Tribal Groups, Person with Disabilities, Women Headed Households, single women/widows, old aged, BPL Households.

25. This Entitlement Matrix has been developed for disbursement of entitlements to different categories of PAPs in the project. This Matrix will be used as guidance for developing Resettlement Action Plans (if required during the preparation and implementation phase. The matrix for Impact Categories and Entitlements can be seen in the **Table 5-1**.

**Table 5-1: Impact Categories and Entitlements**

| Sl. No. | Category | Definitions | Entitlements | Details |
|---|---|---|---|---|
| **A.** | **Donation of Private Agricultural, Homestead & Commercial Land** | | | |
| 1 | Land | Legal Title holders and | No monetary consideration | • Gift Deed, or MoU, or Affidavit will be made between the land donor/s and PIU |

| Sl. No. | Category | Definitions | Entitlements | Details |
|---|---|---|---|---|
| | | Affected Parties with legal or traditional land rights | involved | in presence of a witness whose signature will be required. The VC/TTADC to actively participate in and facilitate this process<br>• The willingness of the land donor to transfer the land either through donation, purchased or compensated acquisition, shall be assessed through the consultation process and, the PIU and VC shall explain to the land donor the advantages of the proposed transaction.<br>• To ensure that the land donor is in legal possession of the land under consideration, a copy of the proof of ownership, as applicable, shall be obtained by the PIU. In the absence of such supporting evidence, the VC/TTADC shall vet the proof of ownership. The award of contract shall be only after the Gift Deed, MoU or Affidavit from the land donors are available with PIU.<br>• In case of land owners with unclear titles or unable to provide proof of ownership, the VC/TTADC and the village community shall be involved in establishing the ownership of the relevant land.<br>• The complete process shall be monitored by PMU<br>• All costs towards stamp duty and registration for the land transfer to be borne by the State |
| **B.** | **Impact on Structures (Residential/Commercial)** | | | |
| 2 | Structure | Owner of the affected structure (Title Holder/Owner | Compensation at market rate Resettlement & Rehabilitation Assistance | • Cash compensation for the affected portion of the building and assets (including reconstruction value) at market value determined u/s 29 (i) of RFCT-LARR, 2013. The compensation will be determined on the basis of latest PWD schedule of rate, without depreciation.<br>• 100% solatium on Compensation as calculated in (i) above.<br>• In case of tenants/lease holders, compensation, if the affected structure is erected by the tenant/lease holder.<br>• One-time resettlement allowance of Rs. 50,000/- if fully displaced<br>• Shifting allowance of Rs. 50,000/- if fully displaced<br>• Right to salvage material from the |

| Sl. No. | Category | Definitions | Entitlements | Details |
|---|---|---|---|---|
| | | | | demolished structures.<br>• Three months' notice to vacate structures. |
| **C.** | **Impact on Residential/Commercial Structures (Non-Title Holders)** | | | |
| 3 | Structures | Owners of affected structures | • Compensation at market rate<br>• Resettlement & Rehabilitation Assistance | • Cash compensation for the affected portion of the building and assets (including reconstruction value) at market value determined u/s 29 of RFCT-LARR, 2013. The compensation will be determined on the basis of latest PWD schedule of rate, without depreciation.<br>• 100% solatium on Compensation as calculated in (i) above.<br>• One-time resettlement allowance of Rs. 50,000/- if fully displaced<br>• Shifting allowance of Rs. 50,000/- if fully displaced<br>• Right to salvage material from the demolished structures.<br>• Three months' notice to vacate structures. |
| **D.** | **Additional assistance to Scheduled Tribe affected families in Scheduled Areas** | | | |
| 4 | Affected Scheduled Castes & Scheduled Tribes in Scheduled Area | Affected Family | Rehabilitation Assistance | All entitlements as per Sl. No. 2 or Sl .No. 3, of this Entitlement Matrix, and additionally, 25 % of resettlement assistance will be provided. |
| **E.** | **Impact on Community Infrastructure/Common Properties** | | | |
| 5 | Structures & other resources (eg. Religious structures, cultural properties) on impacted land | Affected communities and groups | Reconstruction of community structure and common property resources | Reconstruction of community structures and replacement of common property resources in consultation with the VC/TTADC/community as appropriate |
| **F.** | **Temporary/Permanent loss of livelihood** | | | |
| 6 | Permanent Loss of livelihood | Artisans, Small traders, others | One time financial assistance | One time financial assistance of amounts notified by the appropriate Government but not less than Rs. 25,000/- |
| 7 | Temporary loss of livelihood | Owners of shop, assets, workers in the shop | Resettlement & Rehabilitation Assistance | Assistance at the rate of their daily income for the days they are impacted. |
| **G.** | | | | |
| 8 | | Owners of land, assets | Compensation for temporary impact during construction like disruption of normal traffic, damage to adjacent | The contractor shall bear the compensation cost based on actual loss estimate, of any impact on structure or land due to movement of machinery during construction or establishment of construction plant. Location of construction camps to be decided by |

| Sl. No. | Category | Definitions | Entitlements | Details |
|---|---|---|---|---|
| | | | parcel of land/ assets due to movement of heavy machinery and plant site based on actual loss estimate.. | contractors in consultation with TWD. |
| **H.** | **Loss of Trees & Crops** | | | |
| 9 | Standing Trees, Crops on Project Right of Way | Owners | Compensation at market value | • 3 months' advance notice to affected parties to harvest fruits, standing crops and remove trees.<br>• Compensation to be paid at the rate estimated by:<br>○ Forest Department for timber trees<br>○ Department of Agriculture (integrated with Directorate of Horticulture)<br>○ Cash assistance to title holders and non-title holders for loss of trees, crops and perennials at market value |

# 6 IMPLEMENTATION ARRANGEMENT

26. The Project Management Unit (PMU) is headed by Director, TWD. The Project Director (PD) TRESP have responsibilities of overall implementation of the Project's Resettlement Framework through PIUs and other partners. PD will be assisted by the Social Development Specialist at the PMU. The Social Development expert at the PIU, especially the PWD will be responsible for getting the Abbreviated RAPs prepared and operationalised under the overall guidance of the PMU.

**Roles and responsibilities of Social Expert at PMU**

- Assist (PD) in the RPF implementation, Resettlement and Rehabilitation (R&R) activities.
- Co-ordinate with the district administration on land donation and R&R.
- Guide and coordinate the preparation of site specific Abbreviated RAPs by the PIUs
- Review of reports and documents submitted by the PIUs and District/ Block team.
- Training to PWD staff on social safeguards management and reporting, especially related to resettlement.
- Preparation of Social Safeguards Status Reports.
- Preparation of periodic progress reports for the WB and Government of Tripura.
- Preparation of reporting formats, checklists, guidelines on resettlement planning.
- Translate the RPF in Kokborok language and disseminate it among the project stakeholders and at important places along the project locations.
- Organize quarterly meetings with the district/block personnel to review the progress on R&R and report to PD.
- Monitor adherence to the RPF guidance and implementation of the ARAPs in the field as per plan

**Roles and responsibilities of Social Specialist at District Level**

- Participate in public consultations, transect walks, related to alignment identification and selection.
- Ensure due process outlined in the RPF is being followed.
- Ensure adherence to all requirements under ESS5 and the National legislation- LARR- 2013
- Ensure exclusion of all activities requiring physical relocation, adverse impacts on cultural and traditional resources.
- If required, liaison with district administration and concerned departments for dovetailing government social security schemes for the socio-economic wellbeing of the PAPs.
- Develop and maintain a PAP database including aspects related to land donated, average donation in the district, status of completion of due process for land take and transfer, disbursement of allowances or assistance based on eligibility and entitlement before initiation of civil works.
- Coordination with concerned divisions, including Revenue officials, regarding distribution of resettlement assistance/ allowances.
- Supervision of the socio-economic surveys of PAPs
- Ensure that concerned PIU's have obtain no-objection certificate for RoW from the concerned local body

## 6.1 Grievance Redressal Mechanism

27. The Project will establish a Grievance Redress Mechanism (GRM) with the aim to respond to queries or clarifications or complaints about the project and address complaints/concerns and grievances of the stakeholder, primarily the project affected people (PAP)s.

Under TRESP, a project level robust grievance redress mechanism has been prepared for implementation

during the project implementation. This GRM will be discussed in detail in following section. However, it is important to mention here that TRESP will also be helped by the already existing GRM at state level and the level of departments participating in TRESP. Described below is the whole mechanism for grievance redress under TRESP.

**Identifying grievances from state and department level and redress them through Project GRM**

28. Government of Tripura has public grievance redress mechanisms in place and it has established its own State Public Grievance Portal that is linked to the national level Centralized Public Grievance Redress and Monitoring System (CPGRAMS). This is an online web-enabled system over NICNET developed by NIC.

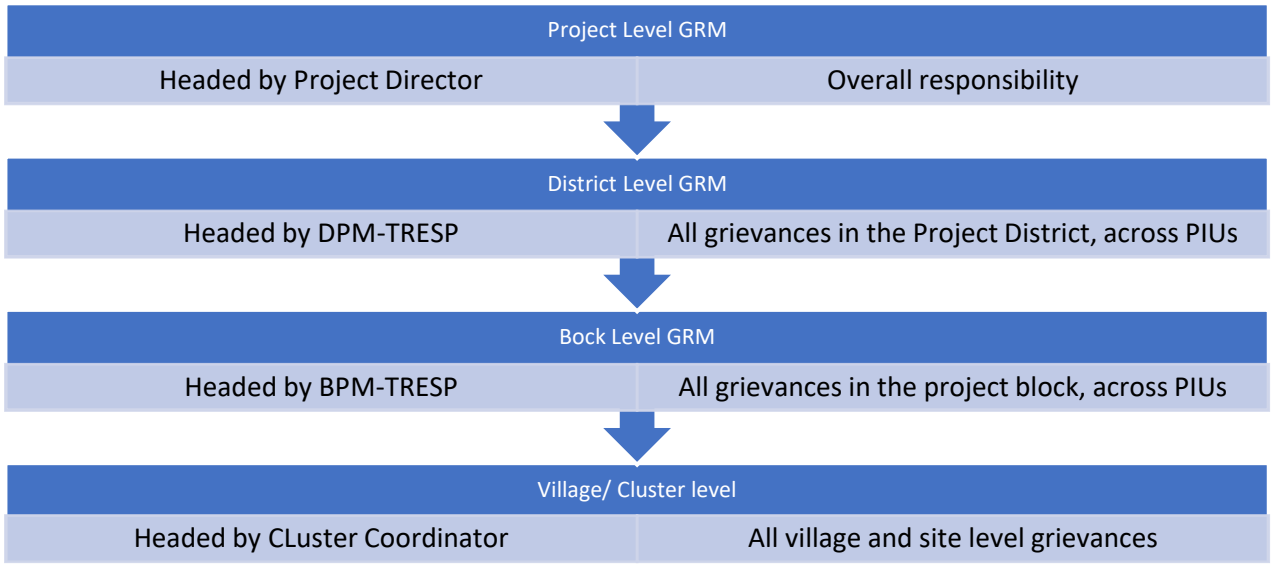
29. CPGRAMS enables submission of grievances by the aggrieved citizens from anywhere and anytime (24x7) basis to Departments/Organisations under Government of Tripura. The grievances received through this platform are scrutinized and taken action for speedy and favourable redress.

30. In addition, Tripura Government has already set up a system where people can lodge complaints through a State-wide toll-free number (1095) and get resolution through a time-bound redressal mechanism. The Project will strengthen this public grievance system, by making it more transparent, accessible and participatory as well as by linking such grievances to project grievance mechanism to capture all complaints and feedback related to the project interventions under a common dashboard. m.

31. Awareness will be spread in TRESP project areas regarding above already existing GRM in order to support PAPs and any other affected party in resolving their grievances.

**TRESP specific project level GRM:**

A project level GRM will also be set-up to specifically look at grievances of PAPs due to project investments. Implementation of this mechanism is pictorially presented and explained below.




32. For TRESP, a 4 tier grievance redress mechanism is proposed. At the State/ PMU Level the grievance system will be headed by the Project Director and will be responsible for the overall functionality of the Project GRM.

33. The GRM's at the District and Block level will have District Program Manager TRESP and the Block Program Manager TRESP as the Grievance Redressal Officers. Social safeguard expert with DPMU will also be part of the GRM process.

34. The lowest level of GRM will be located in the project villages and will be the responsibility of Village Council/Cluster/livelihood Coordinator.

35. A PAP can reach with complaints to any of such GRMs preferably starting with the lowest level for the ease of PAPs. PAPs can do the same by phone calls, letters or a direct meeting with the concerned Grievance Redressal Officer at each of this level. Officer will be responding to grievance/query through

phone calls, meetings and letters, in order to resolve issues, officer will also help PAPs in suggesting best GRM level for him or her in order to make it easy for PAP.. If needed, site visits will be undertaken to appraise the exact nature of stakeholder/PAP concerns. The Complainant will be made part of the grievance resolution process and kept updated of the resolution process through phone calls and formal letters and meetings if PAP approaches.

36. Information material on GRM will also inform the stakeholders about grievance escalation hierarchy that would help the complainant to escalate any unresolved issues to higher level officers, as well as the existing state level GRM channels of government portal and grievance committee chaired by the district collectors. The grievance redress process will be a continuous, transparent and participatory process that would be an integral part of the TRESP's accountability and governance agenda.

37. The GRM mechanism will be notified within three months of project effectiveness. The project website will be posting the status of the GRM status periodically.

**Implementation arrangement**

38. The project level GRM will be headed by the Project Director (PMU) and will be assisted by a project level Grievance Redressal Committees (GRC) composed of line agencies, select PIU and PMU staff with Social Development Specialist at the PMU as its convenor. State level Social Development Specialist with PMU shall assist the PD to monitor the overall Project GRM and co-ordinate with all the implementing units PIUs) in the state. The project website will also have a link where grievances can be filed by the citizens. .

39. Village and block level GRM's will directly address all grievances related to the project affected persons (PAPs), project workers and community members. Grievance Registers will be maintained at District/Block levels and also at each worksite to record, track and report on the inflow of stakeholder/PAP grievances, enquiries and feedback.

40. Status of Grievances received and resolved will be track through the project MIS as well as monthly progress reports from the Districts and Blocks. All unresolved grievances will be escalated to the PMU level GRM. The aggrieved will have the option to send their grievances to the project GRM or to the state level public GRMs.

41. In addition, separate site level grievance mechanism will also be created aimed at local communities and workers of contractors. These will include complaints and suggestion boxes, complaint registers at site for workers, site level display of contact numbers of local, nodal persons from the contractor and the implementing agency. Social and Environment safeguard expert at DMPU will work as Grievance Redress Officers in such cases.

**Roles of Grievance Redressal Officers (GRO) at different levels**

- Take steps to create awareness about the project and state wide GRMs that can be accessed by citizens and stakeholders.
- Organise trainings of all frontline staff on the GRM and measures to create public awareness about the same
- Responsible for monitoring all grievances submitted manually through drop box, online or physically (ear marked) and entering it in the GRM register with a reference number in a specific format.
- Addressing the grievances following detailed procedures within the stipulated service delivery time.
- Ensure the completion of monthly reporting on grievances in the project monitoring information system (PMIS).
- Ensure all grievances received from different sources are collated and reflected in the overall project GRM.
- Ensuring that all grievances received are closed within specified timeframes and the aggrieved informed about the action taken or reasons for delay/inaction.

- Time-bound escalation of all unresolved grievances.

**Nature of grievance**

42. Given the diverse typologies of grievances/beneficiary feedback, project will use the initial classification to reflect the components of the project including Procurement, Quality of Services, Construction, and Access to Services &Entitlements, Financial, Social & Environmental, Resettlement and Labour/Worker related. This will then be sub-classified according to the type of grievance: Comments/Suggestions, Queries, Non-performance of Project Obligations, Violations of Laws/Corruption and Complaints of Project Staff/Service Providers involved in project management.

**Conflict of Interest**

43. Grievances against district level implementing agencies or personnel will be forwarded to PMU to handle conflict of interest within stipulated working days of receipt of grievances. If the grievances require further investigation at district level, PMU will forward the grievance to the DPM-TRESS/District GRO for impartial investigation within three working days from the receipt of grievances. District GRO should send the report of the investigation to the PMU within stipulated working days. Based on the investigation report, PMU will prepare a reply and send to the aggrieved person within stipulated working days from the date of receipt of investigation report.

**Confidentiality**-

44. If any beneficiary or citizen seeks confidentiality, name and address of the person will not be disclosed. There will be an option for maintaining confidentiality in the design of the web based GRM.

**Accessibility of the aggrieved person**-

45. Any beneficiary or citizen who has successfully submitted a grievance can verify the status of their grievance(s) at any time by referencing the acknowledgement number/unique tracking ID code provided to them at time of submission. PMU/PIUs will ensure non-disclosure of all personal information, especially those related to workers or SEA/SH-GBV grievances. This will extend to additional arrangements for maintaining confidentiality at the request of the individual or where matters are sensitive.

**Awareness and Training on GRM**

**Training**

46. A comprehensive set of trainings on the GRM will be conducted covering the PMU and PIUs at the State and District, as well as at the project village level. The training will be as part of the Social Safeguards Training module to be given to all the implementers. The project will be developing and using newsletters and communication campaigns/products to create awareness on the GRM and SEP status. State Social Development Specialist shall ensure these trainings are designed and delivered to key stakeholders within 6(six) months of project effectiveness.

## 6.2 Monitoring and Evaluation

47. RPF implementation will have internal and external monitoring. Internal monitoring will be done by E&S specialists at PMU, who will receive assistance from respective personnel at village, block and district level with facilitation from PIUs. Monitoring indicators provided in the RPF will be assessed on monthly basis by the PMU; consolidated monitoring report will be prepared by PMU on quarterly basis, based on the monthly inputs as well as based on the incident-reporting. In addition to internal monitoring, independent third party consultant will carry out quarterly environmental and social safeguard monitoring and report on RPF related issues separately to PMU and the World Bank. The following indicators will be monitored.

- Land donated – private (sq.m)
- Land transferred – government (sq.m)
- Compensation for structure

- Preparation and dissemination of leaflets to various stakeholders
- Submission of monthly progress reports
- Resettlement assistance to PAPs, vulnerable groups
- Relocation of Community Assets

## 6.3 Disclosures, Consultations and Revisions

48. Once this draft RPF is approved and cleared by the World Bank it will be disclosed by TWD on its official website (along with other safeguard documents). The disclosure in the official website is intended to seek suggestions and feedback from stakeholders. A notification in this respect shall be issued by TWD an accordingly be placed in the local newspapers or other communication channels to facilitate wider reach. In addition, consultations shall be held with identified set of stakeholders:

- **Project Affected Parties:** (i) Road users, (ii) Land Donors, (iii) Street hawkers / vendors, owners of road side establishments, villagers accessing impacted utilities or cultural resources.
- **Other Interested Parties:** (i) Road construction contractors, (ii) Village Council and Autonomous District Council members, TTADC, (iii) Road Maintenance Committee, (iv) PMU-PIU staff, (v) Forest Department and State Pollution Control Board.
- **Vulnerable Groups:** Particular Vulnerable Tribal Groups (PVTG), Person with Disabilities, Women Headed Households, single women/widows, old aged, BPL Households.

49. The approved RPF will be made available in Kokborok and Bengali languages on these websites. Once finalized this RPF will be disclosed on the TWD as well as World Bank's website. The GoT shall issue a Government Order approving the RPF. Any changes in project design/ components, changes in the project context need to be reflected in subsequent revisions to this policy framework and shall be duly disclosed by TWD.

## 6.4 Resettlement Policy Budget

50. The resettlement budget comprise itemized estimate of compensation for affected structures, trees, crops, resettlement assistances, institutional cost, contingency, cost towards implementation, etc. The overall budget estimate is INR 13.4 million. The detail of the budget is provided in **Table 6-1**.

**Table 6-1: Budget**

| Category | Amount (INR) |
|---|---|
| Compensation for Structures (including private/community structures/ cultural properties, etc.) | 42,00,000 |
| Compensation for Assets within affected Property (trees/gates/fences/seating/water storage facilities, etc.) | 8,00,000 |
| R&R Assistance | 50,00,000 |
| RPF related Project Implementation Support (NGO/CBO) | 15,00,000 |
| Training/Administrative Expenses | 10,00,000 |
| Out of pocket expenses (revisit, corrective measures, grievance redress, un-anticipated works, etc.) | 5,00,000 |
| **Sub Total** | **1,30,00,000** |
| **Contingency@3%** | **3,90,000** |
| **Grand Total** | **1,33,90,000** |

**Note:** *(A) Assumptions: (i) Number of PAPs-40; number of common properties-10; about 6sq.m for an affected structure; @INR 14,000 per sq.m., as compensation, (ii) INR 10,000 per affected asset; Approx. 3 assets per affected property/PAP;*
*(B) Resettlement allowance @INR 50000; shifting allowance @INR 50000; 25% escalation to R&R assistance for SC/ST PAP in scheduled area*

51. Based on these estimates the TWD/PMU shall prepare a request for funds and submit the same through the Project Director to the Government of Tripura for release of funds for disbursal.

52. The cost towards resettlement has been budgeted as part of the overall project costs and shall be met with State Government funds. The World Bank's loan will be available for costs such as works, purchase of goods and consultancy, M&E services, if required.

**Annex I (a)**

**MEMORANDUM OF UNDERSTANDING (MoU)**

The memorandum of understanding is made on _____ day of _____ 2023____between the persons listed below on the one part (hereinafter collectively referred to as "the First Party") and the Governor of (State) through Sri/Srimati/_____(designation)_____(hereinafter referred to as "the Second Party).

1. That the First Party is the encroacher of Government land of the respective acres (OR OTHER UNITS AS APPLICABLE) of land a listed below in village _____, block_____ Tehsil_____ District_____
2. That the First Party has taken part in the transect walk conducted under the requirements of the Tripura Rural Economic Growth and Service Delivery Project (TRESP) and has been made to understand the benefits of obtaining a rural road for the village under TRESP.
3. That the First Party hereby willingly leaves their existing land as detailed in the list below for the construction and development of TRESP rural road in the village_____ under _____Panchayat, for the benefit of the villagers and the public at large on which they had encroached on to the Second Party.
4. The First Party would not claim any compensation in return since leaving their encroached land is not related to their existing livelihood.
5. That the Second Party agrees to clause 3.
6. That the Second Party shall construct and develop the TRESP road and take all possible precautions to avoid damage to land adjacent to TRESP road.
7. That the First Party also assures the Second party that the first party will not indulge in any wilful act of damaging the TRESP road or obstructing the movement of public and vehicles on the TRESP road.
8. That both the Parties hereto agree that the TRESP road so constructed/developed shall be public premises.
9. That the provisions of the MEMORANDUM OF UNDERSTANDING will come into force and effect from the date of signing of this deed.

| **Sr. no.** | Name | Area Encroached **(m2)/Acre** | Description of Land granted for TRESP rural roads |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

(add as many more who are giving up their claim on the above said land)

IN WITNESS WHEREOF the Parties hereto have singed this deed on the day and the year first above written.

Signatures of the First Party Signature for and on behalf of the Second Party

1. _____ _____
2. _____
3. _____

(all the signatures of the First Party should be obtained)

Witnesses:

1. _____ 3. _____
2. _____ 4. _____

(Signature, name and address) (Signature, name and address)

Note: The witnesses will include the panchayat head and the Junior Engineer conducting the transect walk. More witnesses can be added – including NGO's, village elders etc.

**Annex I (b)**

**Format for Recording Transect Walk & Consultations**

**1. Name of Road :**

**2. Villages :**

**3. Gram Panchayat :**

**4. Block :**

**5. District :**

**6. Date; Time :**

**7. Total Number of Participants in the Transect walk :**

**8. Numbers of Participants falling in the following categories:**

Female headed household :

Scheduled Caste :

Scheduled Tribe :

Disabled :

BPL :

Households Losing Structure :

Women in general :

**9. Name & Designation of the Key Participants:**

From Government :

From Panchayati Raj Institutions (PRI)/ Village Committee (VC) :

**10. Issues and suggestions raised by the Participants:**

(i) **Road alignment and design in general :**

(ii) **Road width and land availability :**

(iii) **BPL Households**

(iv) **Land owned/used by vulnerable groups of people**

(v) **Sensitive locations** (forests, cultural properties, etc)

| Chainage | Side | Particulars | Distance from Central Line DCL (m) |
|---|---|---|---|
| | | | |
| | | | |

| |
|---|
| |
| |

(vi) **Water-related issues** [drainage lines, rivers and water crossings, irrigation water courses, other water bodies, etc.]

| Chainage (in m) | Existing | Proposed |
|---|---|---|
| | | |

| | | |
|---|---|---|
| | | |
| | | |

| | | | |
|---|---|---|---|
| | | | |

| Chainage | Side | Particulars | DCL (m) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

(vii) **Road safety-related issues :**
[major junctions, curves, bends, etc.]

(viii) **Other suggestions** [such as regarding cattle crossing, borrow-pits, etc.] **:**

**11. Major outcomes of the Transect Walk:**

(i) Changes to be incorporated in the Design :

(ii) Extent of land take and willingness/unwillingness of land owner / users for donation

(iii) Environment issues to be resolved

| Chainage | Side | Particulars | DCL (m) | Remarks |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

(iv) Other issues :

| Chainage | Side | DCL (m) | Remarks |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

| | |
|---|---|
| | |

**12. Brief Summary of consultation held during transect walk :**

**13. Major Issues discussed during the Consultation :**

**14. Recommendations of the Social Safeguard Specialist :**

| | |
|---|---|
| | |
| | |

The road alignment will be finalized with the best efforts to address the above issues.

Countersigned

(Signature & name)
Sarpanch/Secretary, Gram Panchayat (Name)

(Signature & AE/JE, PIU (name)

## CHAINAGE WISE TRANSECT WALK FINDINGS

| Chainage | | Existing Land Width* | Additional Land Required | | Type of Loss | | Remarks/Suggestions |
|---|---|---|---|---|---|---|---|
| From | To | | LHS | RHS | LHS | RHS | |
| 0+000 | 0+200 | | | | | | • |
| 0+200 | 0+400 | | | | | | • |
| 0+400 | 0+600 | | | | | | • |
| 0+600 | 0+800 | | | | | | • |
| 0+800 | 1+000 | | | | | | • |
| 1+000 | 1+200 | | | | | | • |
| 1+200 | 1+400 | | | | | | • |
| 1+400 | 1+600 | | | | | | • |
| 1+600 | 1+800 | | | | | | • |
| 1+800 | 2+000 | | | | | | • |
| 2+000 | 2+200 | | | | | | • |
| 2+200 | 2+400 | | | | | | • |
| 2+400 | 2+600 | | | | | | • |
| 2+600 | 2+800 | | | | | | • |
| 2+800 | 3+000 | | | | | | • |

## STRIP PLAN

| Name of the Road: | | Chainage: |
|---|---|---|
| District: | Block: | Date: |

| Chainage | Description | | Description |
|---|---|---|---|
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**LEGENDS:**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Water Valve | **WV** | 7 | Stand post | **SP** | 13 | Under ground water pipe line | |
| 2 | Transformer | **TF** | 8 | House/Hut : | | 14 | Existing Road side earthen drain | |
| 3 | Temple/ Namghar, Church, Mosque: | **Mention structure type** | 9 | Hand pump | **HP** | 15 | School, Anganwadi Centre | |
| 4 | Electric Pole | **EP** | 10 | Tree : | **Mention trees name** | 16 | Boundary wall | |
| 5 | Telephone Pole | **TP** | 11 | Well, | | 17 | Fencing | |
| 6 | Clear Road Land | | 12 | Pond | | | | |

**Signature of official from PIU:**

**Annex I (c)**

**Format for Assessing Impact on Land**
**Verification of Ownership of Land**

**Name of Corridor Village**

| S.N. | Name of the land owner | Identification No./Khata No. | Type of land | Verified (Y/N) | remarks |
|---|---|---|---|---|---|
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| | | | | | |
| Total | | | | | |

*Note: Verification of Ownership of Land forms for each village by Regional PIU and compiled by PIU for each road and to be attached with the preliminary project design.*

*To be prepared by the Regional PIU*

Province: …….. Project ID:……

District/Village: ……

**Name of Corridor** **Name of the Village**

| **Types of Impacts** | **As per field Verification** | **Remarks** |
|---|---|---|
| **Impact on Land (sqm)** | | |
| Private Land (Agricultural land) (Land includes asset/structure) | | |
| Community | | |
| Government Land | | |
| **Total** | | |
| **Category of Impact** | | |
| Loss of land (No of PAPs) | | |
| Loss of structure (No of PAPs) | | |
| Loss of Common Property (No. of Structures) | | |
| Non-Title Holders (No of PAPs) | | |
| **Total PAP** | | |

*Note: Forms for each village by regional PIU and compiled by PIU for each corridor and to be attached with the PPD*

Province: …….. Project ID: ……

District/Village: ……

**Owners (PAPs/EPs) for Voluntary Donation**
**(After identification of PAPs & Donation of land)**

| | | |
|---|---|---|
| **Province:** | **District** | **Village:** |
| **Name of Project Corridor:** | | Total Length (km): |
| **Roadway Width (m):** | **Required:** | **Available:** |
| **Carriageway Width (m):** | **Required:** | **Available:** |
| **Road Land Width (m):** | **Required:** | **Available:** |

Responsible Agency/Person: PIU/ VC

| **Social Impact** | | | | |
|---|---|---|---|---|
| **S.N.** | **Nature of subproject** | **Significance of Social Impact** | | **Remark** |
| | | Insignificant | Significant | |
| 1 | Requirement for land width | | | |
| 2 | Impact on structures | | | |
| 3 | Loss of livelihood | | | |
| 4 | Acceptance of communities towards the process of land transfer for the project | Please Explain about this: | | Acceptance will be treated as having low(L) impact, else subproject will be treated as High Impact(H) |
| 5 | Impact on PAPs | | | |

**Checklist Filled Out by the Project Engineer:**

Name of Engineer: ……Signature: …….Dated:……

**Annex I(d)**

## Format for Documenting & Displaying Details of Project Affected People

**District:** **Tehsil:** **Block:**

**Name of Subproject Road:** **Road No.:** **Total length (in km):**

| S.No. | Village name | Name of the AP | Vulnerable Category | | | | | | | Land Availability | | | Type of Impact/Loss | | | | | | | | | | | Land (SQ M) | | | Ownership |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | (SQ M) | | | Land | | | Land (area) (SQ M) | | | Livelihood | Partial / Total | | | CPR, trees, crops (specify) | (Size of Residual Holding) | | | (Titleholder, Squatter, Encroacher, Tenant |
| | | | | | | | | | | Agri | Resi | Com | Agri | Resi | Com | Agri | Resi | Com | | Agri | Resi | Com | | Agri | Resi | Com | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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**Responsible agency/Person:** VC/TTADC

**Annex I(e)**

**Checklist on Procedure to be adopted for Land-Donation under TRESP**

1. Identification of potential set of land parcels likely to be impacted and listing of their landowners by the PWD in consultation with the Village Committee.
2. Formal communication from the PWD to the concerned Village Committee, regarding the proposed alignment and the date of village level consultation, at least 2 weeks in advance of the proposed date and time of the consultation. The communication needs to be accompanied with the list of potential land donors.
3. VC to put up public notices at all prominent locations in the village on the proposed road alignment and need for additional private land through donation.
4. Village committee to ensure the presence of villagers, especially those along the alignment including all the potential landowners, hawkers/vendors, encroachers, representatives from tribal households, women and other marginalised groups, if present in the village during the consultation.
5. From the government side, presence of concerned PWD staff, representatives of revenue department, one member of the Block Advisory Committee (BAC) to be mandatory.
6. PWD to provide information to community stakeholders about:
    a. Project details, proposed road intervention in the village and its proposed alignment.
    b. Land requirements and tentative timelines for procuring the land and initiating construction (*This should be at least 2 months before commencement of civil works*)
    c. Detailed explanation of the process of land donation to be adopted by the project, including exclusion of private land acquisition or land-take requiring relocation.
    d. Explanation of all available choices to potential land donors, including right of refusal, seek full or partial compensation, additional support required, or voluntary donation.
    e. Assurance from PWD and revenue department representatives regarding non-exercise of eminent domain in case of failure of negotiation.
7. Conduct Transect Walk to map and document all potential impacts-on land-assets-structures-utilities-resources (*based on existing PMGSY protocol*), explain the alignment to all potential donors, estimate private land required in each road section, seek their suggestions on the alignment and assess if the donor will directly benefit from the road or not.Assessment of exact individual land requirements from potential donors based on identified route/ alignment and discussion with them and the village committee members.
8. Assess the scale of land being proposed to be taken; VC to ensure that the donation does not constitute more than 10 percent of the total landholding of any individual.
9. Assess additional dependencies on identified land parcels, including those of tenants, leaseholders or farm workers.
10. In principle agreement on the final alignment and land donation with mandatory presence of all landowners along the proposed alignment, including land donors.
11. Allow 1 month for the donors and VC members to take free and informed decision on the land donation and formally communicate to the PWD.
12. In the intervening period, VC to hold consultations with identified land donors and stakeholders dependent on that land (if applicable) as a fair, objective intermediary and take final decision, while ensuring no pressure or coercion of potential landowners.

13. VC to document the process of consultation, participation, key concerns-suggestions raised by the community/ stakeholders and decisions taken.
14. In case of common or village land being donated, VC to hold separate consultation with potential impactees or users of that land, to seek their consent to the land donation.
15. VC to verify that donor is in legal possession of the land and has formal ownership of the parcel being donated; if land title is unclear or in case of unsettled ownership claims, VC to take steps to verify ownership or settle claims/ rights, as the case may be.
16. With support from PWD, VC to assess impact on tenants, leaseholders, farm workers, petty shops, street vendors/ hawkers and other roadside establishments and ensure access to any resettlement support or allowance in case of temporary or long term impacts.
17. VC to collect from all land donors and provide formal MoUs to PWD (based on Format 4.2 of PMGSY) and Affidavits of Land Donation (as per Format 4.3 of PMGSY ) undertaking that the land is being provided for the benefit of the village and that no compensation is being sought.
18. Finalisation of the alignment based on response received from the VC, including the affidavits/ gift-deeds from individual donors. All affidavits to necessarily mention the exact dimension of the land being donated.
19. PWD to ensure availability of documentation related to each land donation and their maintenance at the division level.
20. State PIU-PWD to keep division-wise and project level records of number of alignments that required land donation, total land received as donation, average size of land parcel donated, number of dependents impacted and provided resettlement allowance/ support, number of petty shops-street vendors- hawkers-roadside establishments impacted and provided resettlement allowance/support.
21. PWD to setup a Grievance Redressal Mechanism for PAPs with clear roles and timelines before the transect walk and create awareness about it during community consultation