

Meghalaya

Integrated Transport Project (MITP)

Funded by the World Bank

Environmental and Social Management Framework

**Meghalaya Infrastructure Development & Finance
Corporation Ltd (MIDFC)**

Government of Meghalaya

Nongrim Hills, Shillong-793003, Meghalaya

Public Works Department

Government of Meghalaya

Lachumiere, Shillong – 793001

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Abbreviation

ADCs	Autonomus District Councils
CC	Climate Change
DRM	Disaster Risk Management
ECOPs	Environmental Code of Practices
EE	Executive Engineer
EIA	Environment Impact Assessment
ESIA	Environment and Social Impact Assessment
ESMF	Environment and Social Management Framework
ESMP	Environment and Social Management Plan
GAP	Gender Action Plan
GHG	Green House Gas
GoI	Government of India
GoM	Government of Meghalaya
GRC	Grievance Redressal Committee
GRM	Grievance Redressal Mechanism
IBRD	International Bank for Reconstruction and Development
IEC	Information Education and Communication
ILO	International Labour Organisation
IMD	Indian Meteorological Department
IP	Indigenous People
LARR	Land Acquisition Rehabilitation and Resettlement
MGNREGA/S	Mahatma Gandhi National Rural Employment Guarantee Act / Scheme
MIS	Management Information System
MoEFCC	Ministry of Environment, Forests and Climate Change
PMGSY	Pradhan Mantri Gram Sadak Yojana

PWD	Public Works Department
VEC	Village Employment Council
WB	World Bank

Chapter 1: Introduction

1.1 Background to the Project

Meghalaya is a hilly state in northeastern India, bounded by another state Assam in the North and the East, and Bangladesh in the South and the West sharing a 443 kms international border.

The Road transport is the backbone of the state's socio-economic development. More than 80 percent of freight and almost cent percent of passenger movement within the state depends on roads. Yet, about half of the habitations lack all-weather road access. Further, many semi-permanent timber bridges are in dilapidated condition, limiting maximum allowable axle load on them. The problem is further compounded by difficult terrain and extreme climatic condition, leading to high maintenance cost of the roads.

Similarly, rapid urbanisation has created a huge gap between demand and supply of urban services and infrastructure. It has been assessed that other than Shillong, urban mobility at other cities and towns of the state are less than satisfactory¹. In most of the towns due to narrow roads, lack of parking facilities and yearly growth of vehicles, traffic congestion is often evident. Further, in most cases the major highways pass through the city center as a result of which regional traffic comes in conflict with the local traffic.

To overcome the abovementioned challenges in a holistic and all-inclusive manner, the Government of Meghalaya, with financing and technical support from the World Bank, is preparing a project titled "Meghalaya Integrated Transport Project". The objective of the project is to "provide a well-connected efficient, good quality and safe transport network on long-term basis in a cost-effective manner maximizing economic and social outcomes". This will involve taking a whole-of-the-state approach of the entire transport sector and introduce innovations, efficiency, and new ways of doing business at various stages of service delivery, ensuring value for money. This will involve:

1. Integrating transport and development agenda thus resulting in more job-creation, better incomes, and realization of the SDGs;
2. Integrating various modes of transport – such as roads, ropeways, waterways, and urban transport to operate as part of one system for optimal performance;
3. Integrating climate resilience, green growth, asset management, and safety in the transport sector thus making the sector more resource efficient, reducing carbon footprint, minimizing GHG and contributing to health outcomes.

1.2 Project Development Objective

MITP is an ambitious project of the Government of Meghalaya (hereinafter refer to as GoM) under which it intends to strategically transform the Core Road Network of 2000 km road length. In the project, State Road Network roads of 650 km road length will be widened, and 1350 km road length will be provided

¹ Planning Department, GoM, http://megplanning.gov.in/MSDR/urban_development.pdf

periodic maintenance besides other institutional, development activities. The Project shall follow a Multiphase Programmatic Approach (MPA). Up-gradation of 266.82 km road length will be carried out in Phase-I. The Department of Economic Affairs (DEA) and The World Bank (WB) has accorded in-principle approval of Tranche-I of MITP for US\$ 110 million (loan assistance of US\$ 82 million and State Share of US\$ 28 million), under which State Road Network roads measuring 128 km length will be upgraded along with certain other institutional development activities. List of roads under Phase-I are indicated in Table 1 below. The remaining length of roads (i.e. Tranche-II, Tranche-III, 1350 km maintenance component) will be finalized and supplied progressively i.e. on 90% delivery of milestones of each Phase.

Table 1: Proposed List of Roads prioritized under Phase-I of MITP

	District	Name of Road	Category	Total Length in km	Length Proposed in km
East Meghalaya (Khasi and Jaintia Hills)					
1	East Khasi Hills	Shillong - Diengpasoh Road	MDR	21.73	11.30
2	West Jaintia Hills	Pasysih - Garampani Road	MDR	48.00	48.00
3	Ri-Bhoi - East Khasi Hill	Mawmaram Nongthliew Mawmih Mawlyndep Road	MDR	44.00	44.00
4	East Khasi Hills	Laitkor-Pomlakrai, Laitlyngkot Road (5th - 16th Km)	MDR	15.52	11.52
5	Ri-Bhoi	Umling Patharkmah	MDR	40.00	32.00
Sub-total				169.25	146.82
West Meghalaya (Grao Hills)					
1	North Garo Hills	Bajengdoba - Resubelpara Mendipahar Damra road (0-14th km upto Bajengdoba to Resubelpara)	MDR	37.00	37.00
2	West Garo Hills	Agia - Medhipara - Phulbari - Tura (AMPT) Road	SH	132.00	32.00
3	East – West Garo Hills	Rongram Rongrenggre - Darugre (RRD)	MDR	42.00	42.00
4	West - South Garo Hills	Parallel Road to existing Dalu Baghmara road	MDR	18.00	18.00
5	North Garo Hills	Rongjeng Mangsang Adokgre (44th to 55th Km) Eldek Akong to Adokgre	MDR	54.00	11.00

Sub-total	229.00	140.00
Total Length Proposed in km		286.82

The project will support a whole-of-state approach to effectively manage the transport sector in Meghalaya. The aim is to develop a well-connected, efficient, good quality and safe transport system to promote key sectors of the economy (agriculture, tourism, industries) to enable Meghalaya to become a middle-income state - with higher incomes, more jobs, improved quality of life and accomplishments on the Sustainable Development Goals (SDGs).

The project is expected to emphasize in leveraging about additional investments in the transport sector by introducing good practice examples of sector policies, financing, scientific planning of the transport network and rational criteria for investment decision, efficiency delivery of transport infrastructure, asset management, improved transport services, urban mobility, and institutional effectiveness. This will be done through implementation of a Transport Sector Modernization Plan (TSMP). The project will focus on integrating transport and economy, various transport modes, transport infrastructure and services, and various transport programs funded by Central and State Governments, funding sources, geographical regions, institutions, and stakeholders.

1. Project Components

The project development objective will be achieved through the following three main components: (i) improved transport connectivity, (ii) improved transport efficiency, and (iii) modernize transport institutions.

Component I: Improved Transport Connectivity

This component will support (i) construction/rehabilitation of strategic State Highways (SH) and Major District Roads (MDR) including standalone bridges, (ii) replacement of semi-permanent Timber Bridges which are in dilapidated condition, (iii) pilot projects on ropeways, non-PMGSY roads, and footbridges and footpaths to provide connectivity to small and scattered habitations, and (iv) pilot projects on performance-based maintenance contracts (PBMC).

Component 2: Improvement of Transport Efficiency:

This component will support investments through pilot projects on improved transport infrastructure to reduce congestion and improve urban mobility, road safety demonstration corridors, and technical assistance for developing and implementing a road safety action plan, urban mobility strategy, improved transport services and logistics, and enhancing/strengthening transport institutions and policies including use of clean fuel and electric vehicles, and private sector participation in providing transport services.

Component 3: Modernize Transport Institutions (about 5 percent of the project cost; Technical Assistance):

This component is intended to modernize overall transport sector management, thereby rendering the sector more responsive to evolving transportation needs and continuously improving and modernizing the ways of doing business for better efficiency and performance in transport agencies based on latest research, innovations, and best practices used in transport agencies. This will be done through development and implementation of a Transport Sector Modernization Plan (TSMP).

1.4 Environmental & Social Categorization of MITP

The environmental and social risks and impacts related to the proposed project activities have been classified into 'category A' as per World Bank's Safeguard Policy Operational Process (OP) 4.01 as its potential adverse impacts on environmentally sensitive important areas and human populations are limited, site-specific, and mostly reversible in nature. Also, mitigation measures can be designed to remove or reduce the potential negative impacts.

1.5 Purpose and Objectives of the ESMF

The OP 4.01 requires that Environmental and Social Assessment of the project be undertaken to examine the potential negative and positive environmental and social impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. Thus, a 'Framework' called the 'Environmental and Social Management Framework' (ESMF) has been developed to provide guidance to GoM to ensure the environmental and social assessments and implementation of environmental and social safeguard requirements are in compliance with Governments of India and Meghalaya laws and regulations as well as in accordance with the World Bank Safeguard Policies. The framework also defines the procedures for undertaking Environmental and Social Impact Assessment (ESIA) and preparing Environmental and Social Management Plans (ESMPs) for current identified and future project activities and describes the institutional arrangements and the monitoring mechanisms.

This ESMF will be an integrated part of the Project Implementation Manual (PIM) and will be applicable to all linked investment activities financed under the project regardless of their funding source or implementing agency.

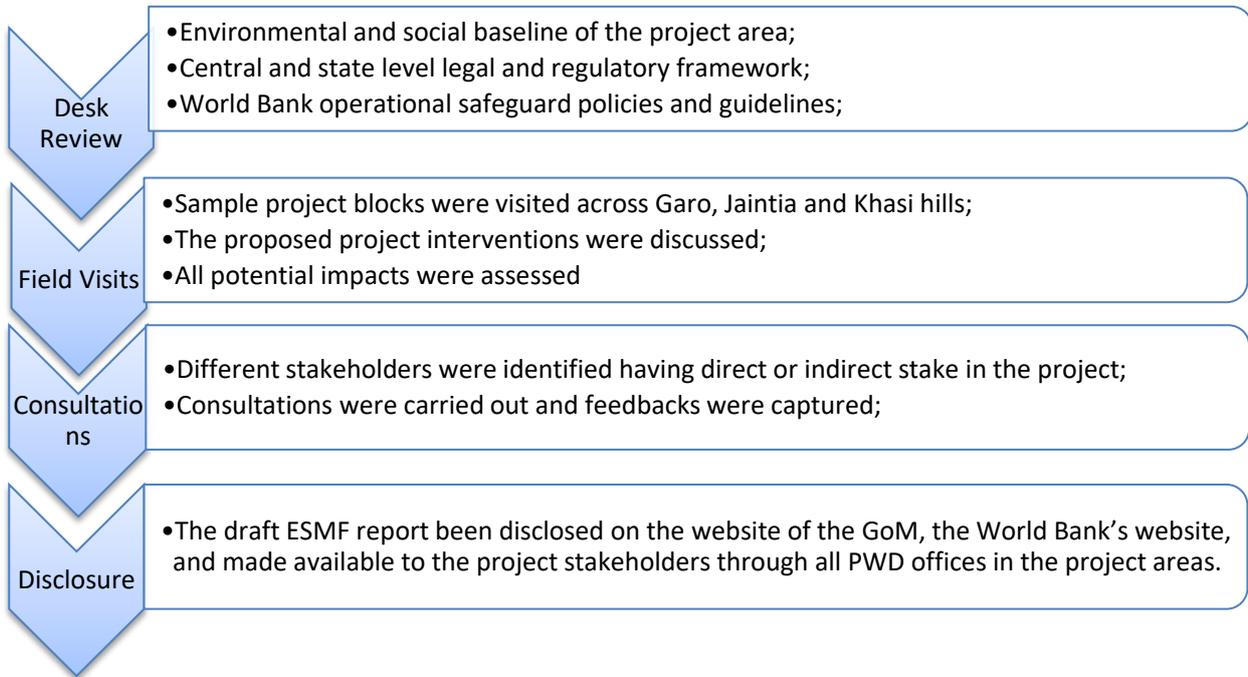
The application and implementation of the ESMF is therefore to:

1. Support the integration of environmental and social aspects into decision-making processes at all stages of the project cycle by identifying, avoiding, and/or minimizing adverse environmental and social impacts at an early stage;
2. Promote sustainable environmental and social outcomes through improved planning, design, and implementation of activities;

3. Minimize environmental degradation resulting from either individual project activities or through their indirect, induced, and cumulative effects; and
4. Ensure compliance with applicable laws and regulations of India, as well as with the requirements of the World Bank’s Safeguard Policies.
5. Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns of activities
6. Determine the institutional arrangements, including those related to training, capacity building and technical assistance (if required) needed to successfully implement the provisions of the ESMF.

1.7 Methodology of ESMF Development

A participatory and consultative approach has been adopted to prepare the ESMF. The ESMF was prepared by following the key activities. Project stakeholders at various levels, including line department personnel, technical experts, VECs, ADCs, local citizens (men and women) from the project areas, road users, local CBO / NGO etc., were consulted. Their views and concerns have been incorporated in this document. Refer to the chapter on Consultation for more detail.



Chapter 2: Baseline Assessment

2.1 Overview of Meghalaya

Meghalaya is literally 'the abode of the clouds'. It became an autonomous State on April 2, 1970 and was declared a State of the India Union on January 21, 1972. The state of Meghalaya comprises of 11 districts spread across Khasi, Garo and Jaintia hills. Figure 1 illustrates the physical map of the state.

Figure 1: Physical Map of Meghalaya



Source: Map of India

Environmental and Climate Assessment

2.2 Physical Features

Meghalaya is one of the Seven Sister States of northeast India. The state of Meghalaya is mountainous, with stretches of valley and highland plateaus, and it is geologically rich. It consists mainly of Archean rock formations. These rock formations contain rich deposits of valuable minerals like coal, limestone, uranium and sillimanite. This section covers the following features of the project area, i.e., climate, temperature and rainfall.

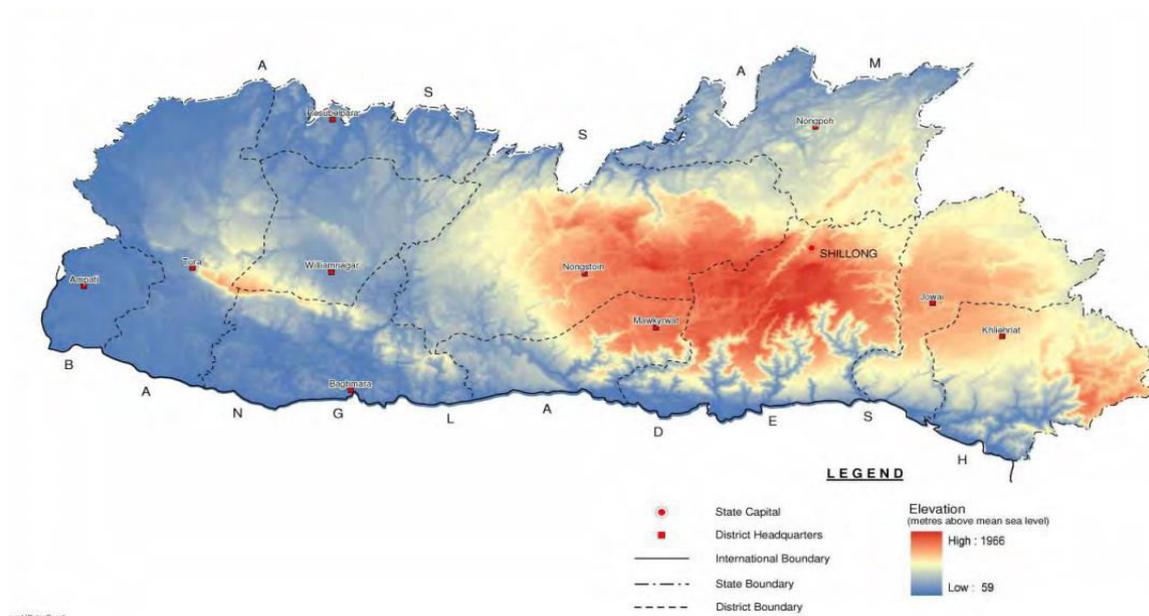
2.2.1 Landscape and Topography

Meghalaya state is also known as Meghalaya plateau. The state can, broadly, be divided into three physiographic zones, namely:

1. Central Plateau Region comprising the Khasi Hills and has the highest elevations between 900-2000m,
2. Sub-montane region in continuation with the Central Plateau below 900m which gradually merges with the plains in the West and North, namely the Jaintia Hills, and
3. Border region which stretches south-wards abruptly from the Central Plateau to the plains in Bangladesh, mainly the Garo Hills region, and is nearly plain.

The highest point in the state is the Shillong Peak with an altitude of 1961 meters. Figure 2 depicts the elevation across the state.

Figure 2: Topographical Map of the State



Source: Map of India

2.2.2 Seasons and Rainfall

Seasons in Meghalaya plateau is influenced by elevation and distribution of physical relief. Based on the weather condition, the Meghalaya plateau has 4 distinct seasons;

1. The rainy season from May to early October,
2. The cool season from early October to November,

3. The cold season from December to February and
4. The warm season or hot season from March to April.

Garo hills experienced higher temperature conditions and humidity from February to October. April and May are the warmest months and January is the coldest month. The Khasi and Jaintia hills experiences a moderate climate because of higher elevation. Warm and humid conditions are prevalent in the foothills region in the south and sub-montane region in the north and central uplands. The plateau experiences a temperature of 24°C throughout the year. The southern parts of the plateau have the Cherrapunji - Mawsynram region which receives the heaviest rainfall, an annual average of 12670mm which is the highest amount of rainfall in the world. The Khasi and Jaintia hills receive an average of 7700mm of rainfall and lies in the rain shadow area².

Table 2: Rainfall in Districts (mm)

District/Centres	2004	2005	2006	2007	2008	2009	2010	2011	2012
East Khasi Hills	14026	10072	8082	13302	10722	8952	11069	8927	12327
(a)Mawsynram									
(b)Sohra	NA	NA	NA	12647	11415	9000	13472	8732	13350
West Khasi Hills	4036	3097	2366	4778	NA	*3507	3316	2982	NA
(a)Nongstoin									
Jaintia Hills	5374	3042	2898	5379	3094	3025	3404	2964	4254
(a)Jowai									
East Garo Hills	3837	3612	2098	3899	3317	3252	3183	NA	3109
(a)Williamnagar									
West Garo Hills	4107	4652	2528	4265	3632	3355	3278	4003	3580
(a)Tura									
Ribhoi	1147	1792	1274	3086	3853	3354	1156	6278	NA
(a)Nongpoh									
South Garo Hills	1811	2347	1405	2589	2392	1532	1161	2147	1841
(a)Baghmara									

Source: District Agriculture office, Meghalaya, District and local Research Station and laboratories, West Garo Hills,

² Source - <https://www.webindia123.com/meghalaya/LAND/climate.htm>

Tura, S.D.O, PWD, Mawsynram, Sub-Divisional Agriculture Officer – Sohra (*February to December)

2.2.3 Temperature

Throughout the year, temperatures vary by 10.8 °C.

Table 3: Average Seasonal Temperature of the State

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Temp. (°C)	10.4	12.3	16.4	18.9	19.6	20.8	21.2	21.1	20.5	18.1	14.4	11.4
Min Temp (°C)	4.9	7.3	11.2	14.4	15.9	17.9	18.5	18.2	17.3	14.1	9.3	5.9
Max Temp (°C)	15.9	17.4	21.6	23.5	23.4	23.7	23.9	24.1	23.7	22.2	19.5	16.9

Source: <https://en.climate-data.org/asia/india/meghalaya/shillong-24618/>

2.3 Land3

Meghalaya lies between 24⁰ 58' North to 26⁰ 07' North latitudes and 89⁰ 48' East to 92⁰ 51' East longitudes. It covers an area of 22,429 sq. km. of which about 70% is endowed with dense forests and rivers cascading down undulating terrain. The State has most of its land covered by hills interspersed with gorges and small valleys.

Most of the land is under rural areas, with Shillong being predominately the main urban settlement. Only 12.74% is net sown area. The principal crop grown in the state is rice covering atleast 80% of the cultivated land, followed by maize and wheat. About 17.4% of the land is under wasteland category, (comprising of scrubland, jhum, abandoned jhum lands and degraded scrub forest, with the highest proportion in the west Khasi hills and Jaintia hills.

The state of Meghalaya is a resource rich state. There are a variety of landholdings, water resources and forests under different classifications. The table below provides district wise data on land use and forest cover:

Table 4: District Wise Land Use Classification

3 Source - Report on Meghalaya State Profile, Ministry of Micro, Small and Medium Enterprises, Br.MSME Development Institute, Government of India.

District-wise Land Use Classification, (2015 – 2016, Area in Ha)

		East Khasi Hills	Ri - Bhoi	West Khasi Hills	South West Khasi Hills	East Jaintia Hills	West Jaintia Hills	North Garo Hills	East Garo Hills	West Garo Hills	South West Garo Hills	South Garo Hills	Total
Area under Forest ⁴	106964	87141	156012	50508	84077	69886	55455	69122	126265	38526	102292	946248	
Land not available for cultivation	53731	33277	50284	24818	15565	17290	5063	6364	15809	6592	11167	239960	
Other un-cultivated land excluding Fallow land	65508	86290	110241	34889	78288	52797	35892	26240	29997	8900	25382	554424	
Fallow Land	10720	15036	47802	18865	14642	12618	11445	13596	13596	10162	24381	215045	
Net Sown Area	37866	22751	20260	11010	25169	11071	17778	19311	73241	22406	25462	286325	
Total	274789	244495	384599	140090	203643	177760	115981	144285	281090	86586	188684	2242902	
Area Sown More than Once	11127	2983	4724	2122	48	388	2576	2677	18668	6699	5264	57276	
Gross Cropped Area	48993	25734	24984	13132	11119	25557	20354	21988	91909	29105	30726	343601	

Source: Directorate of Economics & Statistics, Meghalaya (Statistical Abstract 2018)

2.4 Geology

Geologically the Meghalaya plateau comprises of rocks from the oldest Precambrian gneissic complex to the Recent alluvium formations. The stratigraphic sequence is as follows.

1. Cretaceous –Tertiary sediments
2. The Sylhet trap

⁴ The forest cover herein also includes green-wash areas. As per FSI, 2017, total forest cover of the State is 1714600 ha.

3. Lower Gondwana rocks
4. Shillong Group of rocks
5. Precambrian gneissic complex (Basement gneiss)

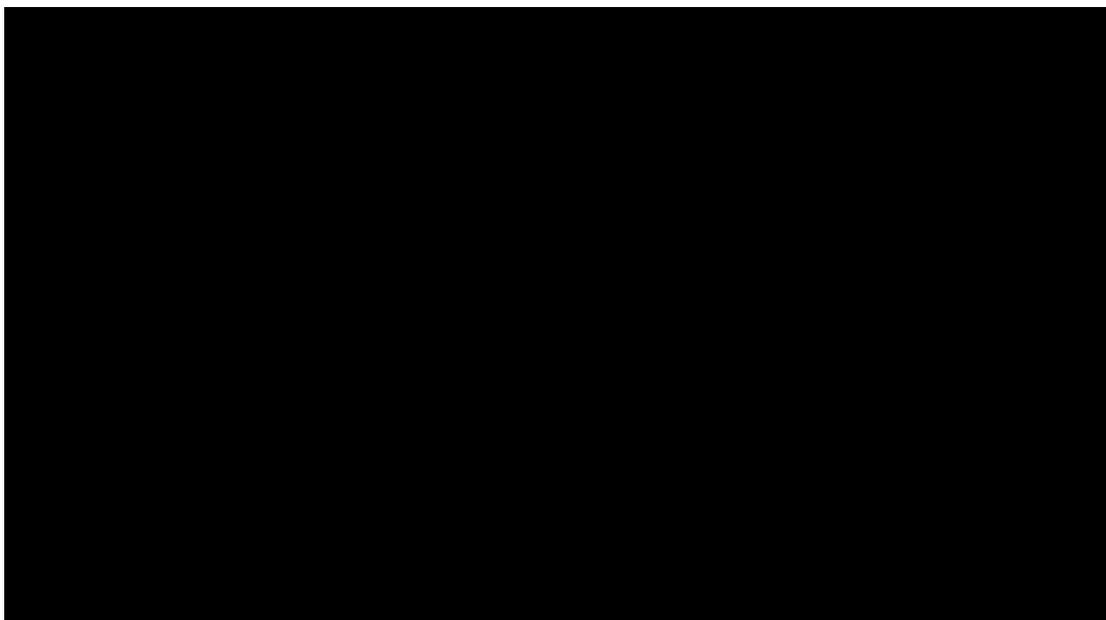
The Precambrian gneissic complex comprising para and orthogneisses, migmatites and the Shillong Group of rocks comprising mainly quartzites are exposed in the central, eastern and northern parts of the Meghalaya plateau. They are intruded by basic and ultrabasic intrusives and late tectonic granite plutons.

The lower Gondwana rocks of Permo-Carboniferous age are recognized at the western part of Garo Hills and consists of pebble bed, sandstone, and carbonaceous shale. The Sylhet trap of middle Jurassic age comprising mainly of basalt, rhyolites, acid tuffs, is exposed in a narrow E-W strip along the southern border of Khasi Hills.

The Cretaceous – Tertiary sediments occupying southern part of the Meghalaya plateau comprises of the Khasi Group (arenaceous facies), the Jaintia Group (calcareous facies) and the youngest formation the Garo Group which is represented as Simsang, Bagmara and Chengapara formations.

Besides these the Dupi Tilla group of mid-Pliocene age occurs in the western part of Garo Hills and towards south of Khasi Hills. Isolated patches of older Alluvium overlie the Tertiary rocks along the southern and western borders of the State. The recent Alluvium formation is mostly found in the river valleys of Garo & Khasi Hills Districts.

Figure 3: Geological and Tectonic Map of Meghalaya



Source: GoM, Department of Mining and Geology

2.5 Soil

The soils of the hills are derived from gneissic complex parent materials; they are dark brown to dark reddish-brown in colour, varying in depth from 50-200 cm. The texture of soils varies from loamy to fine loamy.

Broadly, the central part of Garo hills and central upland of Khasi and Jaintia hills have red loamy soils formed as a result of weathering of granite, gneisses, diorites, etc. Red and yellow fine textured soils ranging from loam to silty loam are found along the southern fringes of red loamy soils. Lateritic soils are present in the southern part of the State. Alluvial soils are found all along the southern, western and northern fringes of the State, with sandy to clay loam texture.

Soils are by and large highly leached, rich in organic carbon with high nitrogen supplying potential, but deficient in phosphorus and potassium. Soil reaction varies from acidic (pH 5.0 to 6.0) to strongly acidic (pH 4.5 to 5.0).

There is not much difference in fertility classes of soils across the State. Soils occurring on higher altitudes under high rainfall belt are strongly acidic due to intense leaching. These tend to be excessively drained and erosion-prone.

2.5.1 Soil and Drainage Property

Soils on very steeply sloping hill escarpment are moderately deep, excessively drained, with coarse-loamy texture, sandy surface with very severe erosion hazard and strong stoniness. Soils on steeply sloping side-slopes of hills are generally moderately deep, excessively drained, with fine-loamy surface. These have severe erosion hazard. Soils on moderately steep side-slopes of hills are deep to moderately deep, excessively drained, with fine loamy surface, moderate erosion hazard and strong stoniness. Soils on moderately sloping side-slopes of hills are deep to moderately deep, excessively drained, with fine loamy surface and moderate erosion hazard. Soils on gently sloping side-slopes of hills are deep to moderately deep, excessively drained, with fine loamy surface and some erosion hazard. Soils on level valley bottoms tend to be deep, very poorly drained, fine in texture with clayey surface and prone to water logging. Soils on gently sloping valleys tend to be deep, well drained, having fine-loamy surface. Soils on very gently sloping plains tend to be deep, inadequately drained with loamy surface and mild erosion hazard.

2.6 Forests

As per the Forest Survey of India report, Meghalaya rank seventh amongst the Indian states in respect of percentage of geographical area under forest cover. The forests of Meghalaya are rich in biodiversity and endowed with rare species of orchids and medicinal plants. The forest types in Meghalaya are Subtropical Pine, Subtropical Broadleaf, Tropical Wet Evergreen, Tropical Semi-Evergreen, and Tropical Moist Deciduous Forests. Sacred groves mostly located in the Khasi and the Jaintia Hills represent the climax

vegetation of the area. According to Haridasan and Rao (1985), the forest vegetation of Meghalaya consists of Tropical Evergreen Forest in the low-lying areas with high rainfall; Tropical Semi-Evergreen Forest up to the elevation of about 1,200 m with annual rainfall between 1,500 to 2,000 mm; Tropical Moist Deciduous Forest in the areas with less than 1,500 mm rainfall; Grassland on the tops of Khasi, the Jaintia and the Garo Hills; isolated patches of Temperate Forest along the southern slopes of the Khasi and Jaintia Hills; and Subtropical Pine Forest with pure stands of *Pinus kesiya* confined to the higher reaches of the Shillong Plateau. Bamboo and canes are found in undisturbed forests. Meghalaya has many endemic plant species, the most famous being the carnivore pitcher plant *Nepenthes khasiana*.

The Forest and Tree cover in the State is 79.37 % covering 17,803 Sq.km. Out of total forest area of 17,146 sq km (76.44% of the state's geographical area) only 1145.19 sq km of Forest areas (5.10 % of geographical area) comes directly under the control of the State Forest Department in the form of reserved forest, protected forest, national parks, wildlife sanctuaries and parks & gardens. The rest of the forest areas belong to communities, clan and private people and District Councils. There are three Autonomous District Councils (ADCs) i.e., Khasi Hills Autonomous District Councils, Jaintia Hills Autonomous District Councils and Garo Hills Autonomous District Councils, which have been set up under the provisions of the Sixth Schedule to the Constitution of India. These ADCs have the power to make laws with respect to, among others, the management of any forest not being a reserved forest.

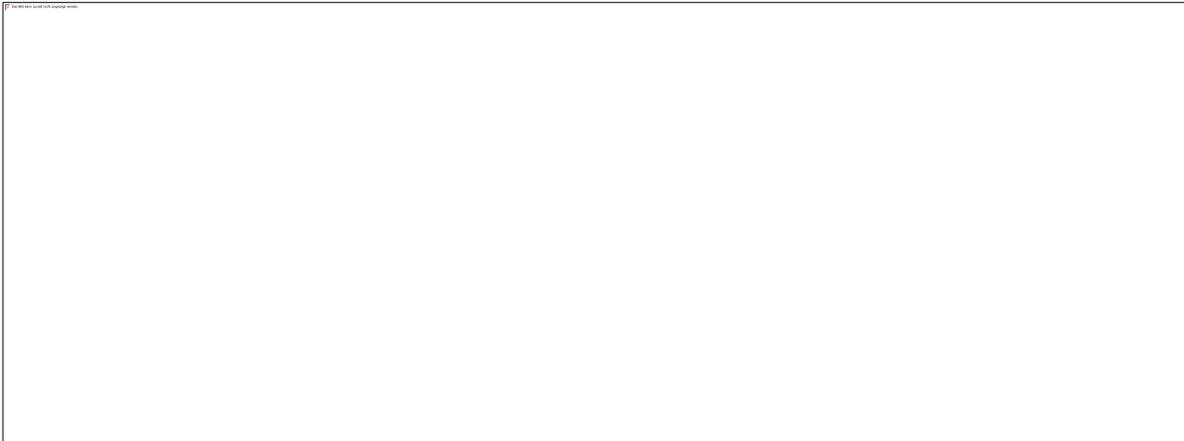
Table 5: Notified Forests of the State

Class of Forests	Area (sq. km.)
Reserved Forests	626.55
Protected Forests	12.39
National Parks (including proposed)	399.48
Wildlife Sanctuary (including proposed)	100.74
Parks and Gardens	295.39
Non-Forest Land transferred to the Department and Exchanged lands	3.08
Sub-total	1145.19
Unclassified	1600.81
Total	17146

Source: Department of Forest, GoM

The Khasi Hills Autonomous District Council, Garo Hills Autonomous District Council and the Jaintia Hills Autonomous District Council. Under the Sixth Schedule of the Constitution, these District Councils have been vested with legislative, executive and judicial functions in many subjects. In terms of canopy density classes, the total forest area is classified under Very dense forests (VDF), moderately dense forests (MDF), open forests (OF) and scrub land.

Figure 4: Forest cover type in Meghalaya



Source: GoM, Department of Forest and Environment

In addition to providing an economic and cultural backdrop for the lives of people, forests in Meghalaya deliver an array of essential local and global environmental services, including water storage and filtration, soil stabilisation and carbon sequestration, prevention and reduction of floods, provide food, fodder, fuel, medicines, and materials for construction.

Shifting cultivation or jhumming is widely prevalent in the State. It is believed that the loss of forest cover in the State is mainly due to shifting cultivation.

2.6.1 Protected Areas

The protected area network in Meghalaya occupies 512.61 Sq.km area. The Protected Area Network includes two National Parks, four Wildlife Sanctuaries and one Biosphere Reserve playing an important role in in-situ conservation of biodiversity. The Protected Area Network still supports a viable population of one of the two closely related Apes found in India, the endangered Western Hoolock Gibbon (*Hoolock hoolock*), and the Bengal Slow Loris (*Nycticebus bengalensis*). Other primates including Stumped-tailed Macaque (*Macaca arctoides*), Assamese Macaque (*Macaca assamensis*), Northern Pig-tailed Macaque (*Macaca leonina*), Rhesus Macaque (*Macaca mulatta*), Capped Langur (*Trachypithecus pileatus*) are also found in these areas. Among the carnivores, the Bengal Tiger (*Panthera tigris*) and the Clouded Leopard (*Neofelis nebulosa*) have become extremely rare while the adaptable Common Leopard (*Panthera pardus*) is still widely distributed. Bears including Sun Bear (*Helarctos malayanus*), Asiatic Black Bear (*Ursus thibetanus*) and the Sloth Bear (*Melursus ursinus*) are found as well. Smaller cats like the Jungle Cat (*Felis chaus*), Marbled Cat (*Pardofelis marmorata*) and Leopard Cat (*Prionailurus bengalensis*) are still found in these

protected areas. Smaller carnivores are also abounding, among them mongoose, badger, binturong, dhole, jackal, weasel, otter, fox and marten.

Table 6: Protected Areas in Meghalaya

Protected Area	Area in Sq. Km	District
Siju Wildlife Sanctuary	5.81	South Garo Hills
Nongkhylllem Wildlife Sanctuary	29	Ri-Bhoi District
Baghmara Pitcher Plant Sanctuary	0.02	South Garo Hills
Balpakram National Park	220	South Garo Hills
Nokrek Ridge National Park	47.78	East Garo Hills
Nokrek Biosphere Reserve	820	East, West and South Garo Hills
Narpuh Wildlife Sanctuary	59.90	East Jaintia Hills

Source: <http://megbiodiversity.nic.in>

2.6.2 Biodiversity

Meghalaya is part of Indo-Myanmar biogeographic region one of the mega bio-diversity regions of the world (Rodgers & Panwar, 1988). Bio-diversity rich areas of Meghalaya are:

1. Balphakram National Park 2200 ha. (South Garo Hills)
2. Nokrek Biosphere Reserve 82000 ha. (Garo Hills)
3. Nongkhylllem Wildlife Sanctuary 2900 ha. (Ribhoi)
4. Siju Wild Life Sanctuary 518 ha. (South Garo Hills)

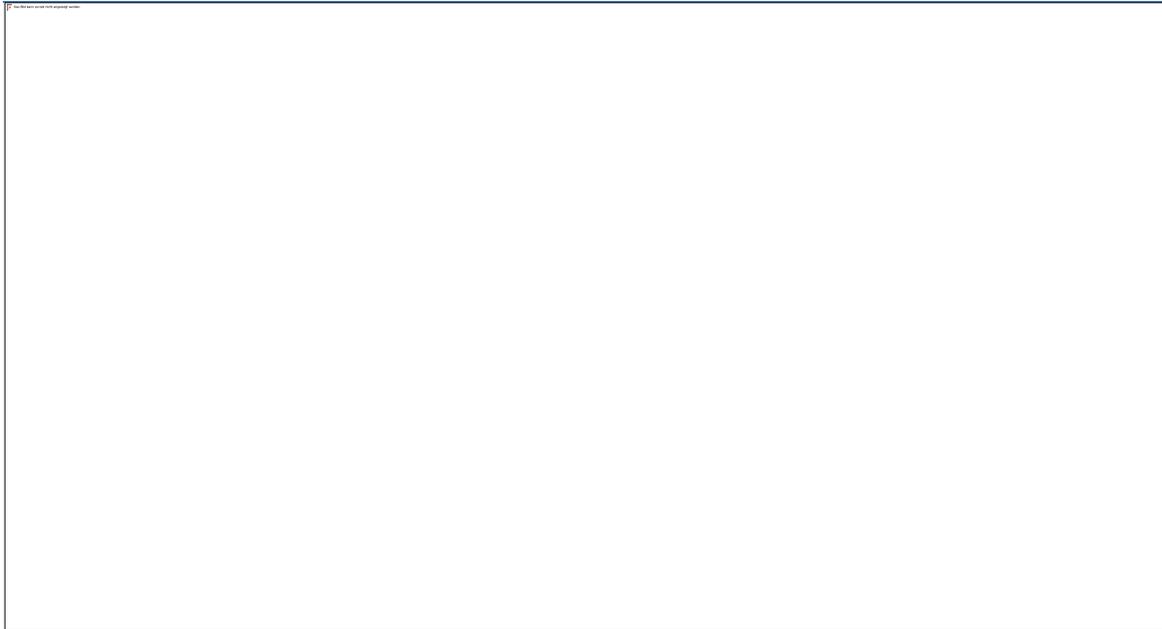
There are 3,128 species of flowering plants including 1,237 endemic species and several valuable medicinal plant species. Some highly exploited and endangered species include *Panax pseudoginseng* and *Rouvlfia serpetania*.

Most of the endemic and threatened species are confined to protected forests and sacred groves.

Species endemic to Meghalaya includes *Aeschynanthes parasiticus*, *A. superba*, *Callicarpa psilocalyx*, *Citrus latipes*, *Ilex embeloides*, *Impatiens khasiana*, *Nepenthes khasiana*, *Paramignya micrantha* and many others. Species that were common about 20 to 30 years ago have become rare (e.g., *Dipteris wallichii*, *Cyathea gigantea*, *Ilex embeloides*, *Styrax hookerii* and *Fissistigma verrucosum*) due to overexploitation, deforestation and habitat destruction. Beside a large number of amphibian, reptile, fish and bird species, more than 110 mammal species including elephants, wild buffalo, sambar and barking deer, red jungle

fowl, hornbills, civets, etc. are found in the forests of Meghalaya. Many factors are responsible for loss of bio-diversity such as unsustainable land tenure system, poor supervision of community owned forests, conversion of mixed forests in to mono-culture, urbanisation etc.

Figure 5: Map showing the distribution of National parks (NP), Wildlife sanctuaries (WLS) and Reserved forests (RF) in Meghalaya



1. Dribruhills RF, 2. Tura peak RF, 3. Chima Bangshi RF, 4. Dhima RF, 5. Rajasimla RF, 6. Iidek RF, 7. Songsak RF, 8. Darugiri RF, 9. DambuRF, 10. Rongrengiri RF, 11. Siju WLS/RF, 12. Emanggiri RF, 13. Angratoli RF, 14. Baghmara WLS/RF, 15. Rait Khawn RF, 16. Shyrwat RF, 17. Upper Shillong RF, 18. Rait Laban RF, 19. Nongkhyllem WLS/ RF, 20. Umsaw RF, 21. Saipung RF, 22. Saipung RF, 23. Narphu RF, 24. Nokrek NP, and 25. Balphakram NP.

Source: GoM, Department of Forest and Environment

2.6.3 Important Bird Areas

Based on various criteria, Meghalaya has nine Important Bird Areas (IBAs) spread over the state (Islam et al. 2004). Table below informs on the location of IBAs in the state and the endangered bird species per site:

Table 7: Important Bird Areas

IBA site codes	IBA site names	IBA criteria
In-ML-01	Balpakram Complex	A1, A2, A4i
IN-ML-02	Mawphlang Sacred Grove	A1, A2

IN-ML-03	Norek National Park	A1, A2, A3
IN-ML-04	Nongkhyllem Wildlife Sanctuary	A1
IN-ML-05	Norpuh Reserve Forests	A1, A2
IN-ML-06	Riat Khwan-Umiam	A1, A2
IN-ML-07	Saipung	Data Deficient
IN-ML-08	Upper Shillong	A1, A2
IN-ML-09	Cherapunjee: Cliffs, Gorge and Sacred Groves	A1, A2

Table 8: List of Endangered Bird Species found in the State

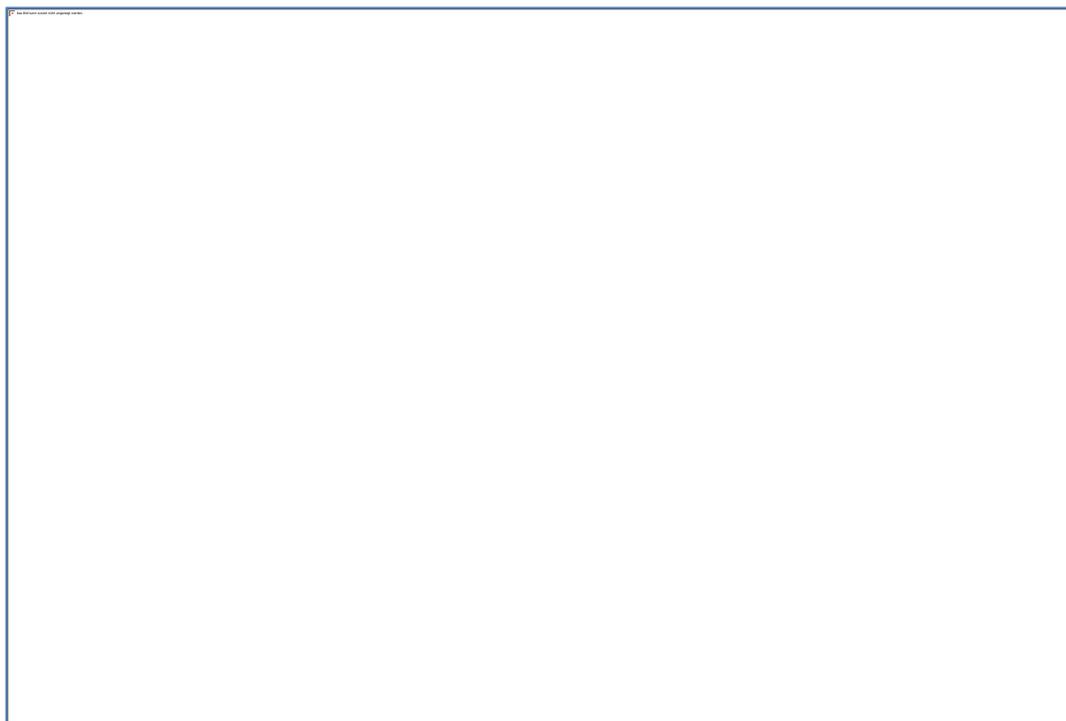
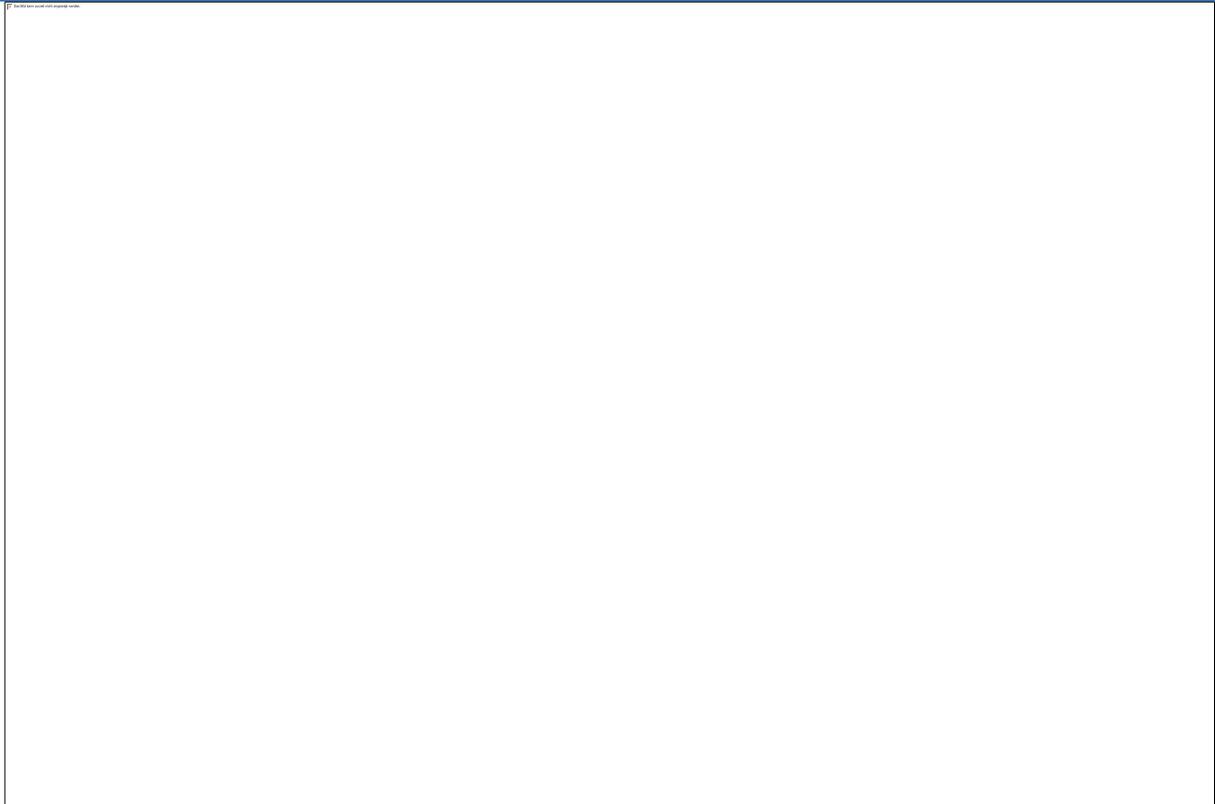


Figure 6: Locations of Important Bird Areas in Meghalaya





Source: GoM, Department of Forest and Environment

2.6.4 Elephant Corridor

According to 'Right of Passage: Elephant Corridors of India (2017)', five active elephant corridors have been identified in the State of Meghalaya. The details of five elephant corridors are:

Table 9: Elephant Corridor in the State

Ranggira – Nokrek

Connectivity	West Garo Hills with Nokrek National Park
Length and Width	7-8 km and 0.1 – 1.5 km
Geographical coordinates	25° 30' 5" - 25° 34' 59" N; 90° 12' 3" - 90° 15' 10" E
Legal status	Community Land (Aking Land) and Private Land
Major land use	Forest, plantation, settlement, agriculture and NEHU campus
Major habitation	Chasingre, Phagugre, Chibrage, Ganol Sangma, 2nd Police Battalion campus and

Boldorenggre

Forest type Tropical evergreen and moist deciduous with *jhum* patches

Corridor Usage Rare

Nokrek – Imangre

Connectivity Imangre Reserve Forest and Nokrek National Park

Length and Width 4-5 km and 3-4 km

Geographical coordinates 25° 21' 41" - 25° 25' 17" N

90° 30' 49" - 90° 34' 26" E

Legal status Community Land (Aking Land)

Major land use Forest, settlement and *jhum* cultivation

Major habitation Rongma Rekmangre, Dobagre, Gopgre, Enan Rompagre and Papa Asakgre

Forest type Tropical evergreen and moist deciduous patches

Corridor Usage Regular

Rewak – Imangre

Connectivity Imangre Reserve Forest with Rewak Reserve Forest

Length and Width 6.5 – 8.4 km and 1.7 – 2.8 km

Geographical coordinates 25° 19' 5" - 25° 21' 39" N

90° 34' 31" - 90° 39' 25" E

Legal status Community Land (Aking Land)

Major land use Forest, settlement and shifting cultivation

Major habitation Jadegindam

Forest type Tropical evergreen forest

Corridor Usage Throughout the year

Siju – Rewak

Connectivity Siju Wildlife Sanctuary with Rewak Reserve Forest

Length and Width 1.6 km and 0.5 km

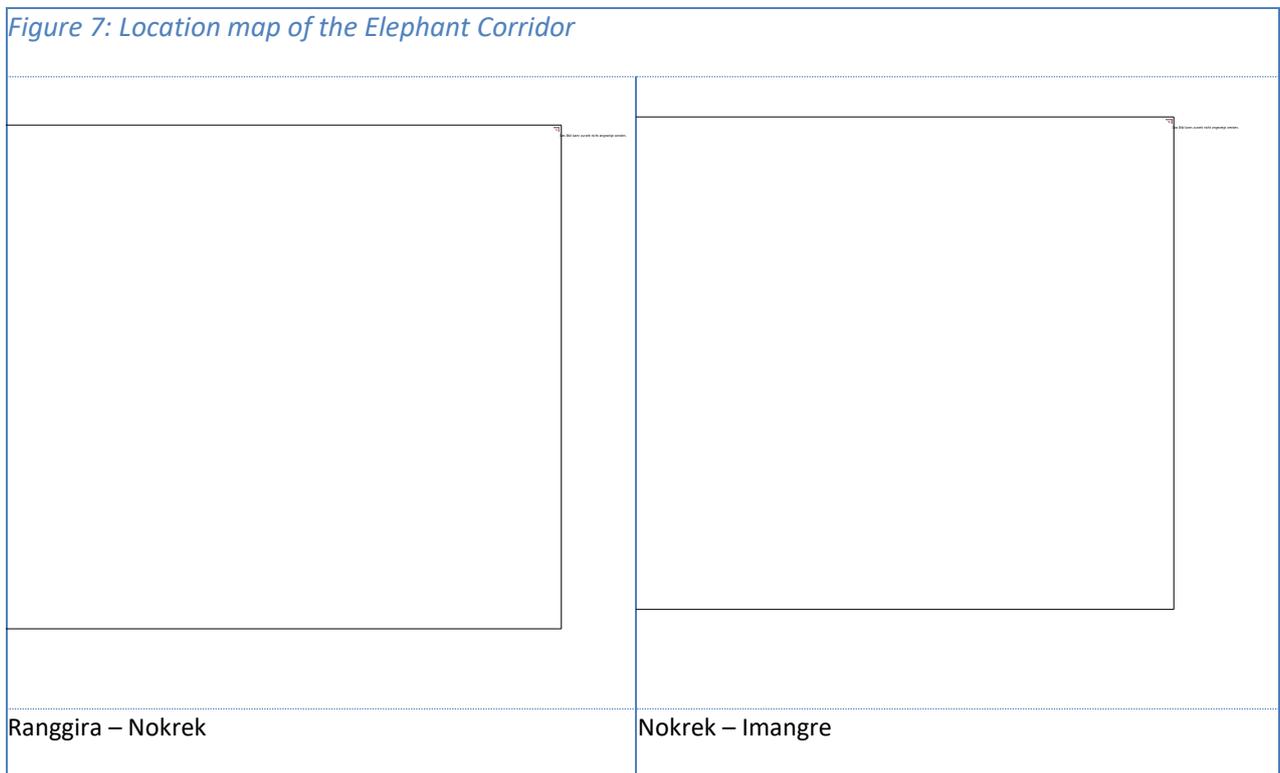
Geographical coordinates 25° 18' 46" - 25° 19' 34" N 90° 40' 11" - 90° 41' 3" E

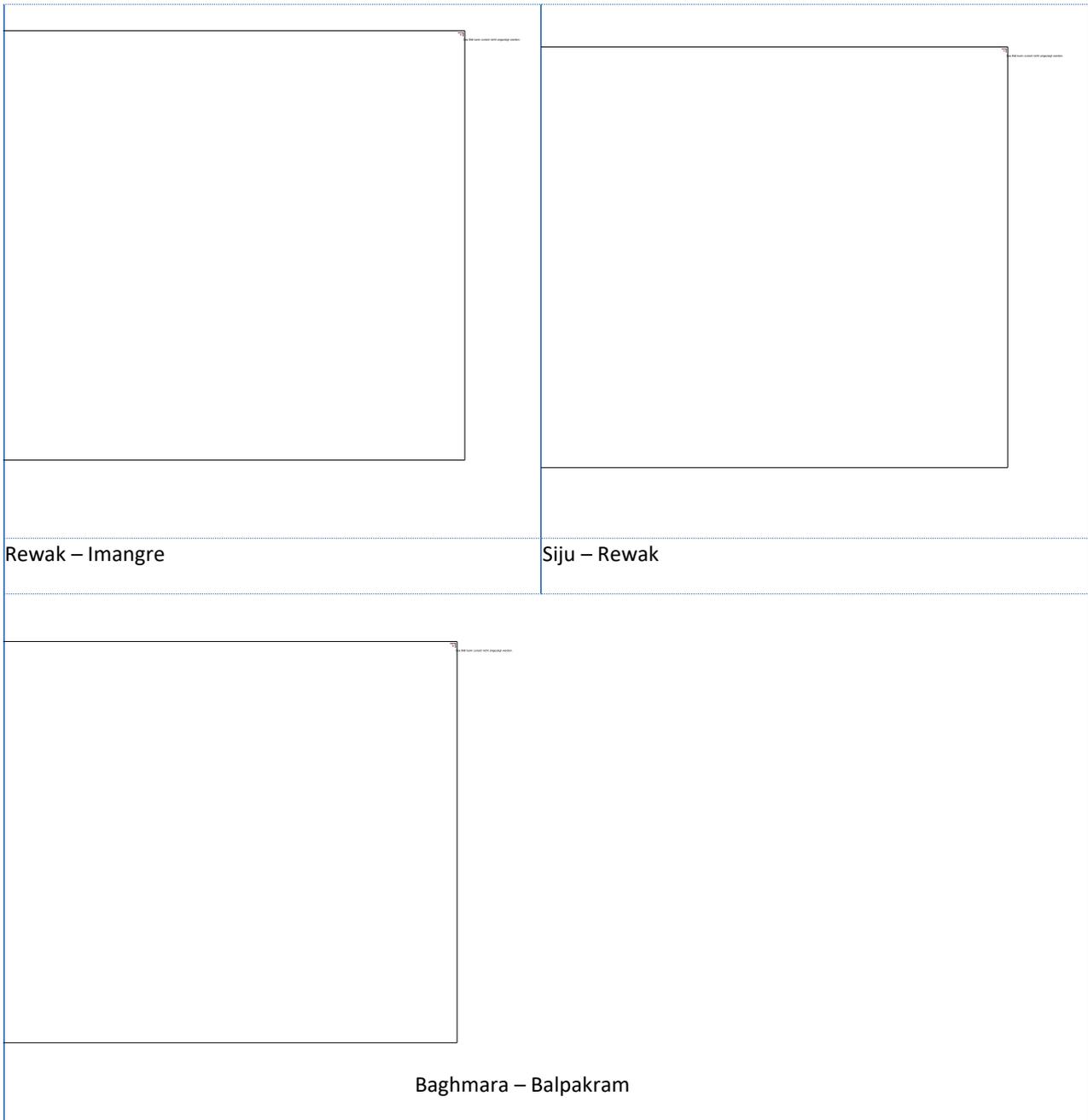
coordinates

Legal status	Community Land (Aking Land)
Major land use	Forest and settlement
Major habitation	Siju Aretika
Forest type	Tropical evergreen forest with plantation
Corridor Usage	Throughout the year

Baghmara – Balpakram

Connectivity	Balpakram National Park with Baghmara Reserve Forest
Length and Width	6 km and 4.5 km
Geographical coordinates	25° 12' 46" - 25° 15' 49" N 90° 41' 34" - 90° 46' 12" E
Legal status	Community Land (Aking Land)
Major land use	Forest, plantation and agriculture (<i>jhum</i>)
Major habitation	Settlements
Forest type	Tropical evergreen forest with plantation and <i>jhum</i> land
Corridor Usage	Regular





2.6.5 Endangered and Threatened Species

Current threats facing biodiversity are logging, mining and shifting cultivation activities. The Clouded leopard (*Neofelis nebulosi*) is a Schedule – I animal, according to wildlife (Protection) act, 1972 and classified as Vulnerable (VU) by the IUCN which is found within Meghalaya. The globally endangered Indian Wild Water Buffalo (*Bubalus arnee*) is still found in small groups of 10 to 20 in the Balpakram-Siju-Baghmara belt and adjacent areas including parts of the West Khasi Hills. Shalyni barb (*Pethia shalynius*), is a species of cyprinid fish found in hill streams of Meghalaya, and spawns in rice paddies is currently on IUCN list of vulnerable species as with the increase in coal mining there are reports of heavy metals affecting to this species affecting the quality of habitat, which is declining. The Khasi Hill Rock Toad, Mawblang Toad *Bufoides meghalayanus* (IUCN Engaged species) is found in Cherrapunjee area, East Khasi Hills, usually occurs in forest areas dominated by screw pine trees, however the habitat has been affected due to extensive rock-blasting and stone quarrying near Cherrapunjee and the Mawblang plateau area.

Other schedule -1 species found in Meghalaya include Black Spotted Turtle, Assam Roofed Turtle, Bengal Slow Loris, Guar, four horned Antelope, Capped Langur, Western Hoolock Gibbon, Chinese Pangolin, Sun Bear, Sloth Bear, Red Panda, Hedged badger, Oriental Small-clawed Otter, Large Indian Civet, Marbled Cat, Asiatic Golden Cat Leopard, Tiger and Asiatic Elephant.

2.6.6 Protected Archaeological and Historic Sites

This is a list of Monuments of National Importance as officially recognized by Archaeological Survey of India is listed below, there are also state protected monuments, archaeological sites that have been recognized by the ASI in Meghalaya, in the West Garo Hills, these include excavated temples, Buddhist Stupa and a Fortress.

Table 10: Protected Archaeological and Historic Sites

Sl. No	Name of monuments/ sites	Location	District
1.	Megalithic Bridge between Jaraem and Syndai	Um-Nyakaneth	Jaintia Hills
2.	Megalithic Bridge known as Thulum-wi between Jowai and Jarain	Maput	Jaintia Hills
3.	Megalithic Bridge on the Um-Kumbeh	Um-Kumbeh	Jaintia Hills
4.	Stone memorial of U.Mawthaw - dur-briew	Nartiang	Jaintia Hills
5.	Tank, Syndai	Syndai	Jaintia Hills
6.	Stone memorial of U-Mawthoh-dur, Bhoi	Bhoi	East Khasi Hills
7.	Scott's Memorials	Cherrapunji	East Khasi Hills
8.	Manipur Memorial	Shillong	East Khasi Hills
9.	Monolithic Garden	Jowai	Jaintia Hills

2.6.7 Sacred Groves

Sacred groves are forest patches, which are protected by communities based on religious beliefs, and have a significant religious connotation for the protecting community. These groves are considered as one of the most species-rich areas for plants, birds and mammals. Most of the groves are in the catchment areas of major rivers. The information on floristic richness of the sacred groves of Meghalaya revealed that at least 514 species representing 340 genera and 131 families are present in these sacred forests. Many endemic, rare, endangered and threatened species of the state are found in the sacred groves. The sacred grove biodiversity compares favourably with that of the core area of some of the biosphere reserves in this region, which are being managed by the state forest department.⁵

⁵[http://dspace.nehu.ac.in/bitstream/1/6287/1/Sacred%20groves%20of%20Meghalaya%20\(BK%20Tiwari\).pdf](http://dspace.nehu.ac.in/bitstream/1/6287/1/Sacred%20groves%20of%20Meghalaya%20(BK%20Tiwari).pdf)

Ryngkew, Basa, Labasa are some of the deities to whom these groves are dedicated. Bamboo, Needle wood, Indian birch, White Pear, Royal Robe, Balsum of Peru, Phurse Champ, Lac tree and Plot's Elm are among the most commonly found plant species in the sacred groves. 6

Tiwari et al (1998) reports 79 Sacred Groves from the State. Rodgers (1994) mentions categorization of protected groves in Meghalaya, which was formulated by Darbar of Khasis in 1925 as follows:

1. Ki Law Lyngdoh: forests under the control of the traditional religious leader (or now village councils); no public use permitted.
2. Ki Law Kyntang: forests of great sacred value for sacrificial and religious ceremonies.
3. Ki Law Niam: religious forest (may not be distinct from above).
4. Ki Law Adong: forest protected for non-commercial use, e.g. water.
5. Ki Law Shnong: forest resources for village use.

Sacred Groves of Meghalaya are falling under severe anthropogenic pressure causing fragmentation, area shrinkage and degradation, alien species invasion, grazing, resource extraction. Changing social structure plays an important role in gradual declination of sacred grove system. These nature centric worship places in many areas have already been replaced by temples/solid structures in the name of modernization. Once the god/goddess has been shifted to the temple, the surrounding places become irrelevant to the people, thus immediately converted for other usage.

Comparatively rich vegetation cover and thick litter cover help to regulate the runoff water thus reducing the chances of flash floods (downstream) and release it slowly during lean season. Studies in Meghalaya indicate that well preserved groves efficiently reduce the erosive power of runoff water thus preventing soil erosion and nutrient wash out (Khiewtam and Ramakrishnan 1993).

2.7 Water Resources

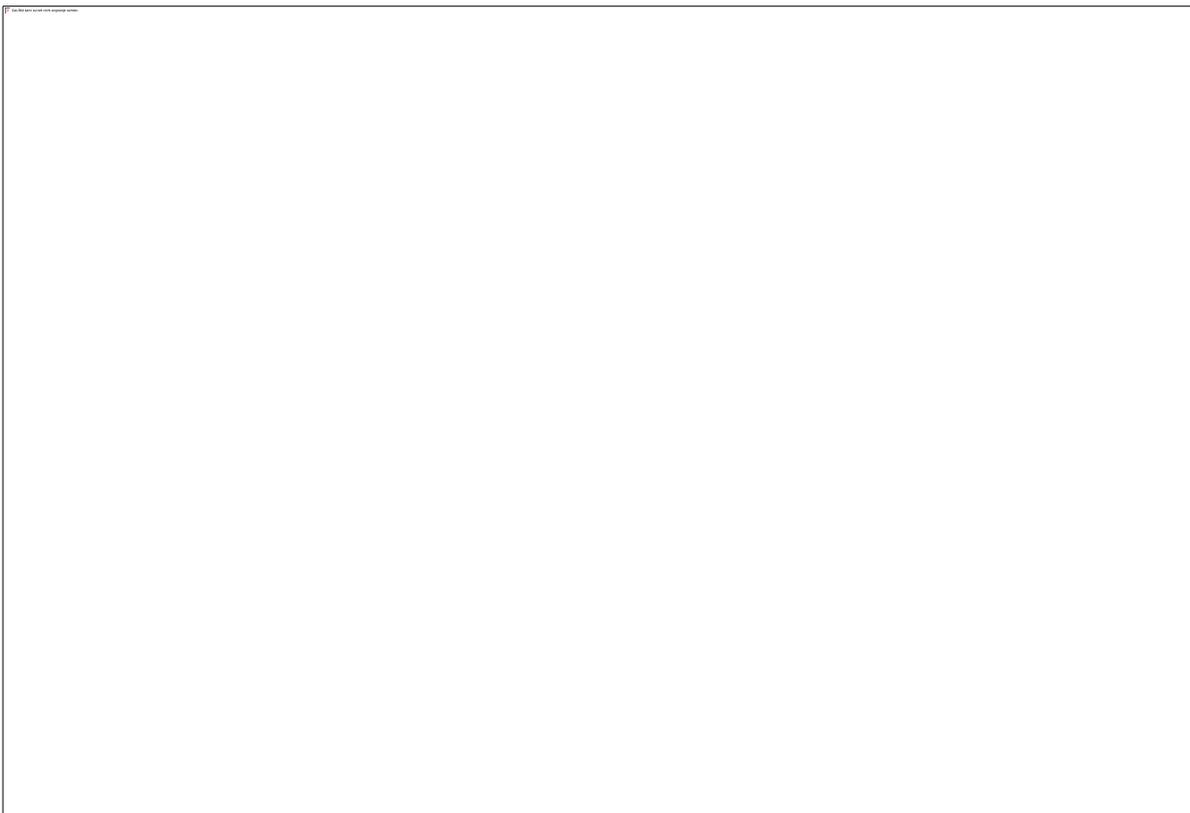
One of the **world's wettest regions** is found in Meghalaya. Mawsynram and Cherrapunji (Sohra) in the East Khasi Hills district are geographically considered as the rainiest places in the World, with Cherrapunjee, receiving close to 12000 mm of annual rainfall and Mawsynram, a village directly west of Cherrapunji, where rainfall of around 17,800 mm (700 inches) per year. These areas receive rainfall on an average for 160 days in a year, spread over six to eight months between March to October. Paradoxically, even then the state of Meghalaya is water stressed in some regions during summer months. This is mainly due to topographical and geomorphological conditions apart from alterations of the natural land surface by way of development, mining and urbanization. Moreover, the characteristic hilly and steep sloping terrain condition in the area with localized small valleys results in very high surface run-off during the monsoon.

6 Tiwari B.K., S.K. Barik and R.S. Tripathi, 1999, "Sacred Forests of Meghalaya- Biological and Cultural Diversity", and Barik, S.K., H.N.Pandey, B.K. Tiwari and B. Singh, 2006, " Sacred Groves of Meghalaya: A scientific and conservation perspective", Regional Centre, National Afforestation and Eco- Development Board, North- Eastern Hill University, Shillong.

The rivers of the State are rainfed and therefore their discharge dwindles during summer. Important rivers in Garo Hills region are Daring, Sanda, Bugi, Dareng and Simsang. In the central and eastern part of the plateau are Umkhri, Digaru, Umngot and Myntdu rivers. The surface water resource is tapped in a number of places by constructing dams across the rivers. The reservoirs, like the Umiam and Kopili, so developed are not only used for irrigation and drinking water but also for generating electricity.

The surface water available in Meghalaya on annual basis is roughly estimated at 63.204 billion cubic metres (BCM) and the estimated replenishable ground water resources estimated as 1.15BCM. According to the Central Ground Water Board (CGWB) 1.04BCM of ground water is potentially available for utilization. Figure shows spread to two major river basins Brahmaputra and Meghna, and their sub-basins

Figure 8: Brahmaputra and Meghna, and their sub-basins



Source: Central Water Board

In Meghalaya, **groundwater** is generally extracted through dugwells and springs (or seepage wells in valley areas/topographic depressions) and bore wells. Apart from this, tubewells are in use in West Garo Hills district. Dugwells are generally shallow in depth. The level of ground water development in the state is 0.15%. The annual gross dynamic ground water recharge of Meghalaya has been estimated as 1.234BCM. Annual allocation for domestic & industrial water requirement upto year 2025 is estimated as 0.096 BCM as per census 2001. 1.014 BCM of ground water potential may be utilized for irrigation. The importance and contribution of groundwater is felt in the recent years, particularly to meet the drinking water needs.

Meghalaya's economy is primarily agricultural engaging around 80 per cent of its total work force. Thus, major part of **water consumption** in the state is under irrigation followed by utilization of water in household and industrial needs. The State is mostly dependent on rain and surface water resources for irrigation purposes. Surface water is abundant but limited during non-rainy season. According to the CGWB, 18% of the available groundwater is currently utilized and there is ample potential for further increase in ground water exploitation.

Figure 9: Area for Groundwater Development at Major Aquifers of the State



Source: Central Water Board

2.7.1 Key Issues Affecting Water Availability and Quality

The water resource in the state are currently threatened with contamination, siltation and pollution primarily contributed from coal mining and domestic effluents. The water in coal mining areas is highly acidic with silt and suspended solids deposited at the bottom of these water bodies. The agricultural fields in the coal mining affected areas have turned into unusable infertile land from use and infiltration of the highly-polluted water. According to an estimate, the State has over 60,000 springs. A sample survey of 714 springs (MINR, 2015) has revealed that more than half of the total springs have either dried or water discharge from them has significantly reduced. Impaired springs have caused widespread water stress in the rural landscape, adversely affecting agriculture, livestock and other allied livelihood activities of the people and causing hardship and drudgery. Despite heavy rainfall, many areas are water-stressed due to increase in demand-supply gap leading to a surge in the use of ground water. Further, ground water data shows that the depletion rate between pre-and post-monsoon period is about 40 to 80% depending on the landscape. Changing land use, deforestation, quarrying, mining and climate change are perceived to be the main causes for deterioration of springs and ground water.

2.8 Ecological Profile of the Project area

The table below gives the ecological profile of the project area (only for Phase I roads) indicating the critical ecological features

Table 11: Ecological profile of project area

Ecologically significant feature		Availability within project area
Elephant corridors		No
Wildlife corridors		Yes, Umling - Patharkama Road, km 10, km 12, km 14 and km 16, as per stakeholder discussion only.
Meandering rivers		Yes
Flood-prone areas		Yes
Areas of severe landslides		Yes
River erosion		Yes
Flood embankment		Yes
Physical cultural properties		No
Protected Areas	NP	No
	WLS	Yes, Umling - Patharkama Road, The Stretch of road from chainage 18 th km to 21 st km is abutting a small stream which is adjoining to Nongkhyliem Wild Life Sanctuary.
	RF	Yes, Shillong – Diengpasoh Road, is abutting Shyrwat Reserve Forest which is of 0.44 sq.km (No.FOR.179/80/187 of 28.3.1988)
	RAMSAR sites	No
	Biosphere reserves	No
Unprotected and community forests		Yes, some stretches.
Forest patches		No
Protected Wetlands		No
Surface water bodies		Yes. Small ponds mostly used for fishery.

2.9 Vulnerability to Climate Change

The State's climatic sensitivity has origin in its fragile ecosystem. The diverse physiographical features of the State and mountainous topography provide a range of climatic conditions from near tropical to temperate and alpine, which are likely to be disturbed considerably under the impacts of climate variability. The geographic location of the State in the eastern Himalayan periphery augments the State's vulnerability towards water induced disasters.

The stream originating from Brahmaputra and the Barak river systems criss-cross the state, due to their underlying hydrological system and monsoon regime these resources evident to be flood-prone under the increasing impacts of climate change.

Floods: The trend in the occurrence of floods is perceived to be increasing as compared to the past few decades. The increasing trend of flood events in the State indicates vulnerability of low lying areas to water related extreme events, especially in the Garo Hills region.

Landslides: The overall assessment shows an increasing trend in occurrence of landslides in the State.

Drought: Though Meghalaya receives the highest amount of rainfall in India, some parts of the State still faced drought-like situation mostly during the post monsoon season in the past. The State has experienced mild drought during the years 1975 to 1979 and 2005 as observed by some of the respondents during field visit.

Storms and Hailstorms: The occurrence of storms in the State is a regular phenomenon during the month of March to May, causing loss of lives, agricultural crops and damage to property.

Figure 10: Landslide in Ri Bhoi



Figure 11: Landslide in East Khasi Hills



Source: Field Visit

Source: Field Visit

In addition, the fragile geo-environmental settings and under-developed economic situation further poses threats to the resilience of the vulnerable community. Moreover, the highly dispersed and vulnerable population is poorly equipped to cope effectively with the adversities of climate change due to low capabilities, weak institutional mechanisms, inability to diversify to other livelihood activities and lack of access to adequate resources to recover from climate shocks. As per the climate change projections for the State, the effects of increasing annual mean temperature, varying rainfall pattern and shift in weather pattern are likely to have a destructive impact on infrastructure such as roads .

Socio-Economic Assessment

2.10 Demography

Meghalaya is predominantly a tribal state with (~) 86 per cent of the total population being Scheduled Tribes. The tribes of Meghalaya can be classified into three major groups - Garos, Khasis and Jaintias (or Pnars). The other minor tribes include Rabha, Hajong, Koch and Bodo Kachari. The Khasi are the largest tribal group, followed by the Garo and the Jaintia. The most noteworthy feature of the tribes of Meghalaya is matrilineal lineage, whereby lineage is traced through the mother, and property and inheritance is given to the youngest daughter.

According to the 2011 census, the total population of Meghalaya is 29,66,889. The State has a population density of 132 persons per square kilometer. Approximately 80 percent of the population is rural. The state and district-wise population break-up reflects that over 86 percent of the state's population constitutes of Scheduled Tribes.

Table 12: Demographic Profile of the State

				Urban	Rural	All	ST
Total	29,66,889	5,95,450	23,71,439	1,58,358	21,36,891	74%	61.3%
Male	14,91,832	2,97,572	11,94,260	75,009	10,70,557	76%	63.5%
Female	14,91,832	2,97,878	11,77,179	83,349	10,66,334	73%	59.2%

Source: Census of India, 2011

2.11 Tribes of Meghalaya

Meghalaya is predominantly a tribal state with (~) 86 per cent of the total population being Scheduled Tribes. The tribes of Meghalaya can be classified into three major groups - Garos, Khasis and Jaintias (or Pnars). The other minor tribes include Rabha, Hajong, Koch and Bodo Kachari. The Khasi are the largest tribal group, followed by the Garo and the Jaintia. The most noteworthy feature of the tribes of Meghalaya is matrilineal lineage, whereby lineage is traced through the mother, and property and inheritance are given to the youngest daughter.

Khasi and Jaintia Tribes

The term “Khasi” generally is used to describe a group consisting of the Khyntiam, Pnar, Bhoi and War. The people who inhabit the Jaintia Hills are called the Synteng or the Pnar or simply Jaintia; the people who dwell in the upland of the central part of the state or the Khasi Hills are called the Khyntiam. On the other hand, the people who reside in the deep valleys and hill-sides of the southern part of the state are called War, while those occupying the low-lying hills on the north are called the Bhoi. Over the years the term “Khasi” has come to be synonymous with those occupying the Khasi Hills of Meghalaya. There are not many differences among the tribes and they observe the matrilineal system and are exogamous in their way of life.

The Khasi and the Jaintia are of common ethnic stock and social and cultural background. The society is matrilineal and lineage is through the mother. This is however, not to say that there is no role of the father in the family— he is the head of the family and a ‘kni’ or maternal uncle in his sister’s house. His earnings before marriage remain part of his mother’s or sister’s which he cannot take away to his wife’s house; while after marriage, his earnings become part of his wife’s household. Among the Jaintias, the practice differs to the extent that the son continues to remain a part of his mother’s or sister’s family (before or after marriage) and all earnings are towards them. If a wife were to retain the property of her husband, she must vow to never remarry or the property will revert back to her husband’s family. The matrilineal tradition which the Khasis follow is unique with principles emphasized in myths, legends, and origin narratives. Khasi kings embarking on wars left the responsibility of running the family to women and thus their role in society became very deep rooted and respected.

Garos

The Garos are a hill tribe currently inhabiting the Garo Hills district of Meghalaya. It is bounded on the north and west by the district of Goalpara in Assam; on the south by the district of Mymensingh in Bangladesh; and on the east by the Khasi Hills. Historically, they inhabited the outermost end of the mountain promontory which runs out into the rice lands of Bengal. The Garos may be roughly divided into the Plains Garo and the Hills Garo each inhabiting the district to which they owe their name to. The Plains Garos inhabit the plain areas like Mymensingh and it was believed that their ancestors crossed the Himalayas and settled in the plains at their foot; while the Hills Garos inhabit the hills of low elevation popularly known as the Tura range, rarely rising much above 2000 feet. The Garos, like the Khasis and

Jaintias, also follow the matrilineal system. A man may marry as many women as he like, but usually it is limited to three; though for him to remarry, he must obtain the permission of his earlier wives. Originally, the Garos were divided into three katchis or exogamous septs or clans, namely, Momin, Marak, and Sangma. With time, there has been new addition to these clans and new clans like the Arengs, Ebang and Shira has been named as exogamous independent groups. Among the Garos, marriage within the same clan is taboo. The children belong to their mother's clan "machong" or "motherhood".

2.12 Religion

As per the 2011 Census, Christianity is the predominant religion in Meghalaya constituting 74.59 percent of the state's population and the remaining population follows Hinduism (11.53%), Islam (4.40%) and other religions. Demographic characteristics of the districts further reveals that over 90 percent of the population of West Khasi Hills, East Garo Hills and South Garo Hills comprises of Christians. The East Khasi Hills (17.55 %) and West Garo Hills (19.11%) also have a sizeable population of Hindus, whereas, 16.60 percent of the population in West Garo Hills constitute of Muslims.

Table 13: Religious Representation in Districts

Name of District	% Hindu	% Muslims	% Christians	% Sikhs	% Buddhist	% Jains	% Others
East Khasi Hills	17.55	1.72	65.79	0.30	0.38	0.04	14
West Khasi Hills	1.69	0.40	95.68	0.02	0.34	0.01	1.53
West Jaintia Hills	3.15	0.42	68.74	0.01	0.07	0.01	27.22
East Garo Hills	5.43	1.06	91.13	0.02	0.32	0.01	1.77
West Garo Hills	19.11	16.60	60.62	0.03	0.53	0.02	2.63
South Garo Hills	4.94	0.74	93.43	0.02	0.23	0.01	0.25
RiBhoi District	11.96	0.71	84.42	0.06	0.17	0.02	2.44

2.13 Education Facilities

During the years 1951 to 2011, the state saw a considerable rise in its literacy rate through the collective support of the state government, the Christian missionaries and civil society organisations and others. Substantial contributions in terms of infrastructure facility, access to quality education and connectivity has helped in its growth. However, in the rural areas, the quality of education seems inadequate even with government-run schools present. Higher education has not reached full penetration in the state, and many areas suffer due to this as the capability of the students to continue further education is hampered. Based on the information obtained from the Department of Education, GoM it is evident educational institutions are concentrated in the Khasi Hills, while the Garo Hills and Jaintia Hills lag behind. The colleges are mostly found in the urban areas and district headquarters with very little seen in other places. Further, the data reveals that there is presence of at least one primary school in each village. While, secondary schools in the

three regions are few and far, there are no higher secondary schools in the assessed villages of Khasi and Jaintia Hills.

Table 14: Educational Institutes Present in the State

Sl. No.	Type of Educational Institution	Khasi Hills	Jaintia Hills	Garo Hills
1.	Higher Secondary	58	13	31
2.	Colleges	42	7	14
3.	Vocational/ Professional Institutions	3	1	1
4.	Institutes of National Importance	6	0	1
5.	Universities	9	0	2

Source: Department of Education, GoM

2.14 Literacy Level

Literacy rate in Meghalaya has seen upward trend and is 74.43 percent as per 2011 population census. Further detail on literacy level is given in the table below:

Table 15: Literacy rate at the State – District Wise

District	Literacy Rate %	Male Literacy	Female Literacy
East Khasi Hills	84.15	84.51	83.81
West Khasi Hills	77.87	78.53	77.19
West Garo Hills	67.58	72.39	62.70
East Garo Hills	73.95	77.72	70.05
South Garo Hills	71.72	76.23	66.90
Jaintia Hills	61.64	58.14	65.06
Ri Bhoi	75.67	76.79	74.49

Source: Census, 2011

2.15 Health

The health condition of women and children in Meghalaya is worrisome with a large number of the population being malnourished. According to National Family and Health Survey-4 (NFHS) and Public Health Foundation of India (PHFI) report 2015, Meghalaya has some of the highest number of “stunting, wasting and underweight” children in the age group of 0 to 5 years. In fact, from 2014 to 2015, the number of stunting children in Meghalaya has risen from 42.9 percent to 43.8 percent. In the same period, the number of wasting children has risen from 13.1 percent to 15.3 percent.

Table 16: Health Profile of Meghalaya State as compared to India

Indicator	Meghalaya	India
Crude Birth Rate (SRS 2013)	23.9	21.4
Crude Death Rate (SRS 2013)	7.6	7
Natural Growth Rate (SRS 2013)	16.4	14.4
Infant Mortality Rate (SRS 2013)	47	40
Maternal Mortality Rate (SRS 2010-12)	NA	178
Total Fertility Rate (SRS 2012)	NA	2.4

Source: National Rural Health Mission Accessed from http://nrhm.gov.in/nrhm-in-state/state-wise-information/meghalaya.html#health_profile

As for underweight children, Meghalaya’s total share of such children accounts for 1.9 percent of India’s total. According to the National Family Health Survey 2015-16 (NFHS4), 29 percent of children in Meghalaya under the age of five years are underweight. This translates to 1 in 53 children in the State being underweight. When it came to women and adolescent girls, a whopping 56.2 percent of women (age group of 15-49 years) and 46.5 percent of adolescent girls (age group of 15 to 19 years) were found to be anaemic.

2.16 Livelihood:

Agriculture and allied activities: The main occupation in the state is agriculture and allied activities as the industrial sector in Meghalaya is still under-developed. It employs 70% of the population in Meghalaya and contributes 22% to the State GDP. Agriculture is heavily dependent on monsoon with irrigation potential being under-utilised. Primitive agricultural practices like shifting cultivation (*Jhum*) are indigenous to the region especially in the Garo Hills.

Livestock, Fisheries and other related activities: The other economic sectors that add to the livelihood source of the people are livestock and poultry, pisciculture, apiculture, forestry, sericulture and weaving. There has been a steady increase in the production of milk and egg in the state, with a growth rate of 1.16

% on milk production and 0.63 % on egg. While, the production of meat has decreased by 0.44% over 2014-2015. Fisheries and aquaculture is an important source of revenue, food, employment and social security for the rural poor.

Data on *Fish Seed Distribution* clearly indicates that engagement of population in fisheries and aquaculture in East Khasi Hills, West Khasi Hills and South Garo Hills districts is higher in comparison to other districts. Climatic conditions are a big obstacle in the development of fisheries in the State with heavy rains and resulting flash floods and run-away water which causes siltation of fish ponds and washes away the fish feed.

Mining and Quarrying: Meghalaya is endowed with large deposits of valuable minerals such as coal, limestone, kaolin, clay and iron. Mining and quarrying has been an integral part of the economic activity of the state for a long time. This, however, was brought to a close by the interim ban on mining activities in the state in 2014 by the National Green Tribunal⁷. Due to intensive unscientific rat hole mining in major coal reserve areas, vast lands have been degraded, with forest and water bodies equally affected by the mining activity. The project interventions should focus on rehabilitating some of these critical landscapes to increase land fertility, forest cover and protection of water bodies from further degradation. From the baseline survey it was found that coal mining has given way to sand mining in Nongtalang, further degrading its community forests and threatening the surrounding water sources.

Table 17: Estimated Reserves of Minerals in Meghalaya

Minerals	Reserves
Coal	563.5
Limestone	4147.0
Kaolin	4.5
Clay	81.0
Sillimanite	0.05
Glass sand	2.54
Quartz	0.08
Feldspar	0.06
Iron	4.0

⁷All Dimasa Students Union Dima Hasao Dist. Committee Vs. State of Meghalaya &Ors., Original Application No. 73/2014, National Green Tribunal, New Delhi, April 17, 2014.

Fire clay 12.0

Source: State Development Report, Chapter X, 2008-2009; Planning Department, Govt. of Meghalaya

Tourism: The tourism sector is also an important aspect of the state of Meghalaya. With its natural beauty and undulating hills, streams and flora and fauna Meghalaya is a tourist hot spot. This sector however is still largely untapped as much has not been done to add to its value.

There are about 101 tourist destinations in Meghalaya with majority of them existing in East Khasi Hills followed by West Garo Hills. This may be concentrated in the East Khasi Hills District due to the accessibility and promotion of these sites. The number of tourists visiting Meghalaya has also considerably increased from 271720 in 2002 to 685567 in 2012.

Table18: Tourist Spots in Meghalaya

District	2007	2008	2009	2010	2011	2012
Jaintia Hills	6	6	6	NA	6	7
East Khasi Hills	33	33	34	NA	45	45
West Khasi Hills	4	4	4	NA	8	8
Ri-Bhoi	4	4	4	NA	8	8
East Garo Hills	7	7	7	NA	7	7
West Garo Hills	9	9	8	NA	16	16
South Garo Hills	7	7	7	NA	7	7
Meghalaya	70	70	70	NA	101	101

Table19: Tourists Visiting Meghalaya

Year	Indian	Foreign	Total
2002	268529	3191	271720
2003	371953	6304	378257
2004	433495	12407	445902
2005	375911	5099	381010
2006	400287	4259	404546

2007	457685	5267	462592
2008	549954	4919	554873
2009	591398	4522	595920
2010	NA	NA	NA
2011	667504	4803	672307
2012	680254	5313	685567

Source: Directorate of Tourism, Government of Meghalaya

Sericulture and weaving: Sericulture and weaving sector in Meghalaya are the two most important cottage based, eco-friendly industries in the rural areas. These twin industries portray the cultural ethos and rich heritage of the people of the State. There are 1812 sericulture villages as per 2011-2012 statistics and involve 28923 families engaged in sericulture.

With limited infrastructure and fragile environment not suitable for setting up of heavy industries in Meghalaya, it is the small scale industries sector that contributes to the state's economy. From the table below it can be seen that there are 641 small scale industries at present in the state which employ 3057 people. Industries like tailoring and embroidery, betelnut preservation, cane and bamboo works, weaving and handloom, bee keeping, and honey processing have shown great potential in this sector.

Apart from this, educated individuals have taken up teaching, government jobs and private services as their profession. It is only in the recent times that individuals have been seen to take up various other entrepreneurial steps and come out of the so called conservative occupations and hence depend on business of varying natures and sizes.

Incidence of Poverty: The percentage poverty as per Planning Commission 2011-2012 estimates has shown a decrease from 17.1% in 2009 -10 to 11.87% in 2011-2012. In Rural Meghalaya, 12.53% of the population are BPL while the figure for urban areas of the state is 9.26 %. However, the baseline survey of selected villages across the state illustrates that the incidence of poverty is high in all three regions. The recent survey indicates that the poverty rate is highest in Jaintia Hills, wherein about 94% of the households surveyed are poor. Whereas, 63% of the households surveyed in Khasi Hills fall under the BPL category, followed by Garo Hills which has about 45.94% of BPL households.⁸ The livelihood patterns in the villages surveyed indicate that most of the population are involved in agricultural related activities, while remaining are labourers or run small-scale businesses/ trade. A small percentage of the population is salaried or holds a government post. The high incidence of poverty can be a result of many social and economic factors,

⁸ It is to be noted that the sample for the baseline survey is not representative to conclusively draw out that the poverty rate in the Jaintia Hills has substantially increased over the years.

such as lack of new economic opportunities, stagnant agricultural production, unsustainable land use practices and the impact on the livelihoods of marginal workers such as in the Jaintia Hills where intermittent ban on mining may have further increased the destitution in the remote villages.

From the data below, it can be further observed that a considerable number of households are landless in all three regions, viz. Khasi, Jaintia and Garo Hills (approx. 20%, 23%, and 26% respectively). Interestingly, both communal and private properties are present in the traditional land system, which ensure that there are no landless people. However, with increasing privatisation there has been a loss of rights in land, thus resulting to landlessness in the region.

2.17 Status of Women

The matrilineal system followed in all three major indigenous communities of Meghalaya has its share of limitations. The women have the privilege of lineage being passed on from their side and also have part ownership in inheritance and control of family property, however when it comes to decision making, women are not allowed to take part in the local governance system. The decision making power is thus mostly vested in their husbands or their maternal uncles when it comes to Khasis. The Garos whose head is a woman *Nokma*, leaves all the management to her husband. The Jaintias do not have claim over their husband or his property and are under the protection of their maternal uncles and brothers.

The village administration is mainly headed by men and women can only act as a moral force behind it. They may give their view and suggestions to men on different issues but it is the prerogative of the men to use it. It is only in the recent years that women have also started to attend and participate in the proceedings of a *dorbar* in a few urban localities.

Negotiations and decision making between governments and other departments over the use of land do not fully engage communities especially women, and the decision-making power lies only in the hands of village heads. It was found that most of the land in Meghalaya is headed by women. Women have had a fairly important role in Khasi, Jaintia and Garo society in terms of decision-making in relation to choice of crops and marketing of crops.

Despite having a matrilineal society, Meghalaya lags behind in several social indicators affecting women, such as poverty, illiteracy, unemployment, high drop-out rates, early marriages. It is only in the recent times that the female population have done considerably well in education and have come quite at par with its male counterpart. Besides this, women in Meghalaya by and large are free from many social taboos and constraints of the larger Indian society such as dowry, female feticide, neglect of girl child and other social evils.

2.17.1 Gender work participation rate

Women's participation in the workforce in Meghalaya is higher than the national average, whereas men's participation is seen to be lower than the national average. Based on the primary data, it was observed that a larger percentage of women are engaged in agricultural activities and small scale trade. The Census of India, 2011 mirrors the findings of the primary data, which indicates that about 35% women in rural Meghalaya are in the labour force. Further, relatively more women in rural Meghalaya are marginal workers compared to their counterparts in the rest of the country. The all India figures of labour force participation are 53% and 30% respectively for men and women, which is lesser than the state figures. Interestingly, Working Participation Rates (WPR) of women has declined in rural Meghalaya from 39% in 1991 to 35% in 2011. It is anticipated that in project interventions that require labour from the community itself, approximately half of the labour force would be women. During this time, measures addressing discrimination at workplace, such as equal pay for equal work, should be in place to close the gender gap.

Table 20: Gender Work Participation Rates in Meghalaya

District	Rural			Urban		
	Person	Male	Female	Person	Male	Female
Garo Hills	40.59	46.47	34.56	30.66	42.61	18.60
Khasi Hills	42.16	48.15	36.10	37.01	49.52	24.50
Jaintia Hills	39.13	45.42	32.89	37.58	43.10	32.46
Meghalaya	41.05	47.04	34.97	35.63	47.68	23.59

**Note: The rates have been circulated by taking together main and marginal workers.

Source: Census of India, 2011.

2.17.2 Gender differentiated work

Traditionally, women in Meghalaya engage in small-scale trade wherein they sell their produce in the local market and manage the income/profits accrued from the trade. Such practices are not prevalent in other areas of the Indian subcontinent, where visiting the market and especially selling produce in the market is the preserve of men. However, in most parts, women in Meghalaya like their counterparts engage in agricultural activities like sowing, weeding, harvesting and threshing while simultaneously looking after their families (cooking, cleaning, tending to the ill, caring for livestock, etc.).

Table 21: Gender -wise occupational status from primary data in different regions

Category	Garo hills		Khasi hills		Jaintia hills		Meghalaya	
	Male	Female	Male	Female	Male	Female	Male	Female
Cultivators	58.99	68.90	49.69	58.54	43.90	41.71	52.61	59.74
Agricultural Laborers	10.45	12.44	18.10	16.83	17.67	19.36	14.99	15.67
Household industry	1.58	12.50	1.03	1.45	0.93	1.68	1.24	1.85
Other workers	28.98	16.16	31.19	23.18	37.50	37.26	31.17	22.75
Total	100	100	100	100	100	100	100	100

Source: Census of India, 2011

Chapter 3: APPLICABLE LAWS AND REGULATORY FRAMEWORKS

This section discusses the policies, laws and rules for environmental and social impact assessment and conservation/ protection those that are relevant for relevant in the context

of the proposed project interventions. Further, the section also outlines the environmental and social safeguards policies of the World Bank as applicable to the project.

3.1 Key Policies and Government Programs

Gol has over the past four decades developed several policies, plans and legislation to guide private and public institutions to pursue environmentally and socially sustainable development in various sectors of the economy. Environmental and social issues are crosscutting and this is reflected in the various legislative frameworks, policies and legal structures that are in place as depicted below:

National Environmental Policy, 2006 – The policy promotes protection and conservation of critical ecological system and resources and to ensure equitable access to these resources for communities which are dependent on these resources for their livelihood.

Similarly, following the guidelines of the policy, the project promotes conservation and sustainable use of land, forests and biomass. The project addresses the issue of conservation of critical ecological system and resources through awareness generation and mitigation measures.

Meghalaya Water Policy, 2018 - The objective of the Meghalaya Water Policy is to “ensure that water is used efficiently, shared equitably, managed sustainably, governed transparently and contributing to improving the health and livelihoods of all citizens”. The policy is applicable to the project as the roads thus rehabilitated/ strengthened and or widened may intercept with community-used springs shed development plans will be designed to ensure that water resources are protected, maintained, improved and utilized sustainably, and that ecosystem integrity and land productivity is maintained, enhancing the resilience to disasters and the impacts of climate change.

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005 - is an Indian labour law and social security measure that aims to guarantee the 'right to work'. It aims to enhance livelihood security in rural areas by providing at least 100 days of wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. Apart from providing economic security and creating rural assets, NREGA can help in protecting the environment, empowering rural women, reducing rural-urban migration and fostering social equity, among others. The proposed project can employ local community under the scheme and provide employment to community during construction phase of the project. The daily wages to the community can be paid utilizing the guarantee scheme. This is will ensure better community buy-in as well as participation of women ini building infrastucture for the state.

3.2 Environmental Laws and Regulations

The following tables under this section highlight some salient features of select laws, which have a particularly important bearing on the design and implementation of the proposed project:

Table 22: Applicable Environmental Legislations and Specific Requirements for the Project

Legislation	Description	Regulator	Applicability
National Level			
Environmental (Protection) Act, 1986 amended 1991 and associated rules / notifications	To protect and improve overall environment. This act essentially links pollution and natural resource issues. It seeks to supplement existing laws on pollution control and also lays down standards for air quality and noise. For protection and improvement of environment and the prevention of hazards to human beings, other living creatures, plants and property.	MoEFCC, GoI DOE, GoM, CPCB, SPCB	Relevant This is a umbrella legislation for protecting the environment. Many rules/ notification are formed under this act which are relevant for the project
Notification on Environment Impact Assessment of Development projects, 2006 as amended in	To provide environmental clearance to new development activities following environmental impact assessment	MoEFCC and SEIAA	Applicable Phase I (266.82km, involving 11 road streches as mentioned in Table 1 of this report) of the project does not involve any activity leading to expansion or modernization of existing road streches or activities entailing capacity addition with change in process and or technology. Thus

2009 and 2013, 2016

this act is Not Applicable⁹ in Phase I. However, for the remaining length of roads (i.e. Tranche-II, Tranche-III, 1350 km maintenance component), some widening activities are envisaged. This act will be applicable then.

Wildlife (Protection) Act, 1972 amended 1993 and Rules 1995; Wildlife (Protection) Amendment Act, 2002	To protect wildlife and preserve national parks and sanctuaries An Act to provide for the comprehensive protection of wild animals, birds and plants. This would cover matters concerning Appointment of forest authorities, hunting of wild animals, protection of specified plants, conservation of national parks and sanctuaries, trade commerce in relation to plants and animals and prevention of any offences.	National Board of Wildlife / State wildlife boards	Applicable None of the project activities will be taken up in protected or reserved forest areas. However any project road abutting any wildlife sancturay should get prior clearneces from relevant forest and wildlife authority.
Water (Prevention and Control of Pollution) Act, 1974, amended 1988 and it's Rules, 1975.	For the prevention and control of water pollution by controlling discharge of pollutants and the maintaining or restoring of wholesomeness of water as per prescribed standards.	SPCB	Applicable There will be generation of wastewater and other water-based pollutants during construction and operations. Consent to establish (CTE) and consent to operate (CTO) from SPCB required .
Air (Prevention and Control of Pollution)	For prevention, control and abatement of air pollution	SPCB	Applicable

⁹ The Gazette of India, extraordinary, Part-II, and section (3), sub-section (II), Ministry of Environment and Forest dated 14th September, 2006 notification (S.O. 1533) reads that “... **the required construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to this notification entailing capacity addition with change in process and or technology shall be undertaken in any part of India only after the prior environmental clearance from the Central Government or as the case may be, by the State Level Environment Impact Assessment Authority,...**”.

Act, 1981, amended 1987 and it's Rules, 1982.	activities. Establishes ambient air quality standards.		Applicable for equipment and machinery's potential to emit air pollution (including diesel generators and vehicles); The project involves scarification, aggregate dumping, handling of bituminous-concrete waste, etc., which will generate fugitive dust. Consent to establish (CTE) and consent to operate (CTO) from WBPCB required
Forest (Conservation) Act, 1980	To check deforestation by restricting conversion of forested areas into non-forested areas. Applies to reserved forests, village forests, and protected forests. This act also concerns lands not being the property of government. Provides penalties and procedures with regard to all property, cattle trespasses and powers of Forest officers.	MoEFCC GoM Forest Department	Applicable Proposed rehabilitation work under Phase I of the project will be restricted within the existing Right of the Way (RoW) without disturbing or diverting any forest or forest fringe area. However, for the remaining length of roads (i.e. Tranche-II, Tranche-III, 1350 km maintenance component), some widening activities are envisaged. This act will be applicable then.
Central Motor Vehicle Act, 1988 and Central Motor Vehicle Rules, 1989	To check vehicular air and noise pollution	State Motor Vehicle Department	Applicable , as during project implementation, there will be use of vehicles and these vehicles need to operate within permissible emission levels
Ancient Monuments & Archaeological Sites and Remains Act, 1958	Ancient Monuments & Archaeological Sites and Remains Act, 1958 The act has been enacted to prevent damage to archaeological sites identified by Archaeological Survey of India	Archaeological Dept. GOI and GoM	Applicable As the state contains several National and State protected heritage sites, while widening any road stretches under the project, care will be taken and all possible efforts are made to avoid these areas. Wherever it becomes unavoidable community will take necessary permission under this act

National Green Tribunal Act, 2010 (NGT)	The NGT Act enables creation of a special tribunal to handle the expeditious disposal of the cases pertaining to environmental issues. It draws inspiration from the India's constitutional provision of Article 21, which assures the citizens of India the right to a healthy environment	NGT	Applicable The key environmental concerns in Meghalaya constitute deforestation, fragmentation of forests, land degradation, biodiversity loss and contamination and silting of water bodies, unregulated, unscientific, illegal mining and logging, and the practice of short cycle distorted jhum. This Act is applicable to areas of quarry mining directly related to the project.
Biological Diversity Act (2002) Biological Diversity Rules (2004)	Having objectives of (i) conservation, (ii) sustainable use of biodiversity and (iii) equitable sharing of benefits derived out of its use. The policy regulates access to biodiversity and traditional knowledge and provision for benefit sharing.	National Biodiversity Authority, State Biodiversity Boards	Applicable Relevant to project activities during Tranche II and Tranche III as activities may involve widening activity that may have ecological implication.
Wetland (Conservation and Management) Rules, 2010	For the protection of wetlands and restriction of certain activities within wetlands, provides a regulatory mechanism. Applies to protected wetlands notified under the rules (which include Ramsar sites; wetlands in ESZ/ United Nations Educational, Scientific and Cultural Organization (UNESCO) sites, high altitudes, etc.). Activities such as the following are regulated: water withdrawal/diversion, treated effluent discharge, dredging, repair of existing infrastructure, buildings and construction.	Central Wetlands Regulatory Authority	Not applicable None of the project activity so far falls within declared wetland (Ramsar sites; wetlands in ESZs) However, in future if any of the proposed activity falls under the protected wetlands notified, relevant clause of the rules shall be applicable to the project and requisite permission from the given authority will have to be seek.
Municipal Solid Wastes Management Rules, 2016	Rules to manage municipal solid waste generated; provides rules for segregation, storage, collection, processing and disposal.	SPCB	Applicable Solid waste generated during construction stage at construction camp shall be managed and disposed in accordance with the Rules.

Construction and Demolition Waste Management Rules, 2016	Rules to manage construction waste resulting from construction, remodeling, repair and demolition of any civil structure.	SPCB	Applicable Construction and demolition waste generated from the project construction shall be managed and disposed as per the rules
Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2015	<ul style="list-style-type: none"> - Rules defines and classifies hazardous waste, and procedures for handling and storage - Requires Pollution Control Board's consent for handling hazardous waste - Provides procedures for recycling, reprocessing or reuse, import and export of HW - Rules for development of treatment, storage, disposal facility (TSDF) for hazardous wastes 	CPCB and SPCB	Applicable Used engine oil, gear oil, hydraulic oil, spent oil, lubricants etc. will be generated during construction and dredging operation as well as operation of diesel generator at camp site. The dredged sediments will be tested for toxicity (presence of heavy metals, pesticide residues, etc.). Desilted material is unlikely to be classified as hazardous waste
Noise Pollution (Regulation and Control) Act, 1990 and Rules, 2000.	Standards for permitted level of noise during the day and night have been promulgated by the MoEFCC for various uses.	SPCB	Applicable Noise will be generated during project construction stage due to different activities. Adequate measures will be taken to reduce impact.
Notification of Eco Sensitive Zones (ESZs):	<p>ESZs are of significant ecological importance, and to conserve and protect the natural resources and living beings, several zones are declared in the country as eco sensitive zones by notifications. Besides for specific reasons, buffer areas around protected areas (national park, wildlife sanctuaries etc.,) are also declared as ESZ in this notification.</p> <p>Restriction of activities (including construction, tree cutting, etc.) in the notified zones</p> <p>Any project activity located in ESZs will require prior permission from ESZ monitoring committee</p>	Forest Department, GoM and MoEFCC	Applicable None of the project activity falls within declared ESZ However any project road abutting any ESZ should get prior clearances from relevant forest and wildlife authority.

<p>Manufacture, Storage, and Import of Hazardous Chemical Rules, 1989</p>	<p>-Defines hazardous chemicals - stipulates rules, procedures to manufacture, storage and import of hazardous chemicals -requires permission, authorization from various agencies if the total storage exceeds specified quantity; requires emergency management plan</p>	<p>Various agencies</p>	<p>Applicable Use and storing of any kind of hazardous chemical beyond permissible limit during construction, or dredging or any other project activity, will trigger this rules)</p>
<p>Notification for use of fly ash, 2003 and subsequent amendment, 2016</p>	<p>Reuse large quantity of fly ash discharged from thermal power plant to minimize land use for disposal. Any construction agency engaged in construction of building with a radius of 300km of coal or lignite based thermal power plant (TPP) shall use only fly ash based product for construction. Fly ash shall mandatorily be utilized in asset creation programmes of the Govt. involving construction of building, road, dams and embankment. Fly ash shall be used in soil conditioner. Fly ash based bricks or product shall be used in construction under all Govt. scheme or programme.</p>	<p>MOEF</p>	<p>Applicable Presence of TPPs within 300km radius of proposed project activities may be there. Possibility of using fly ash in different construction related activities will be explored during construction work.</p>
<p>Public Liability and Insurance Act, 1991</p>	<p>Protection from hazardous materials and accidents</p>	<p>SPCB</p>	<p>Not applicable, as any of projects activities will not entail the use of hazardous materials. Day to day fuel (Diesel) requirement for operation of heavy machineries will directly be purchased from nearby diesel pump.</p>

State Level

Meghalaya Forest Regulation (Application and Amendment) Act, 1973	The provisions of Assam Forest Regulation, 1891 was extended to the state of Meghalaya with certain modifications and renamed as Meghalaya Forest Regulation (Application and Amendment) Act, 1973. Most of the forests in Meghalaya is owned by the private individuals and controlled by the three District Councils, viz., Garo/Khasi/Jaintia Hills District Councils. The act is silent on livelihood issues of the forest dwellers or forest-fringe dwellers.	Department of Forest, GoM	Applicable Section 25 of the Assam Forest Regulation, as adapted by the State of Meghalaya, deals with any person who commits the offence of felling trees.
The Meghalaya Tree (Preservation) Act, 1976	An Act to make provisions for regulating the felling of trees for purpose of protection of catchment areas and soil from erosion and to preserve the special characteristics of the hilly areas, the vegetal cover and climate and to provide for matters connected there with and incidental thereto.	Department of Forest, GoM	Applicable to 10 Km radius of the municipal areas of Shillong and Shillong Cantonment area.
Meghalaya Protection of Catchment Areas Act, 1990	To provide for the protection of catchment areas with a view to preserve water sources and to make provisions for matters connected therewith		
The Mines and Minerals (Regulation and Development) Act (MMRD Act), 1957	Lays down the legal framework for the regulation of mines and development of all minerals other than petroleum and natural gas in India.	Department of Mining & Geology, GoM	Applicable Quarrying was an integral part of mining. Project will require quarrying of stones for aggregate preparation. This act will be applicable for such activities.
The Meghalaya Minor Minerals Concession Rules 2016	Rules for the granting of mining leases and quarrying permits including provisions to ensure that operations are not in forest land, catchment areas, protected areas, areas of biodiversity heritage or designated no-mining zones.		
The Autonomous	Provide for establishment and administration of town	District Council	Applicable

<p>District (Establishment committees in the township of the Jaintia, Khasi, Garo Hills and Administration of Autonomous District respectively. TThe duties and functions of the town committees include construction, maintenance and Rules – of all three and improvement of water supply and water ways and also hills – Jaintia, Khasi and protection of community land and preserve the ecosystem . Garo - 1956 (Act I of 1957), 1957</p>	<p>Affairs Department & Executive & Legislative Department - <i>Of the respective hills</i></p>	<p>Any road passing through and or abutting lands those that are under the jurisdiction of respective ADCs, should get NOC prior to start of any work.</p> <p>Clarity of roles and responsibilities of stakeholders to mitigate conflict over authority should be followed.</p> <p>The project activities include capacity building program to strengthen the capabilities of institutions in good governance practices should include ADC and keep them informed about any impacts on the community land and or ecosystem as a whole.</p>
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3.3 Social Laws and Regulations

Table 23: Applicable Environmental Legislations and Specific Requirements for the Project

Legislation	Description	Regulator	Applicability
National Level			
<p>Contract Labour (Regulation and Abolition) Act, 1970;</p>	<p>The Act provides for certain welfare measures to be provided by the Contractor to contract labor and in case the Contractor fails to provide, the same are required to be provided by the Principal Employer by Law. The principal employer is required to take Certificate of Registration and the Contractor is required to take a License from the designated Officer. The Act is applicable to the establishments or Contractor of principal employer if they employ 20 or more contract labor.</p>	<p>Chief Labour Commissioner, GoM</p>	<p>Applicable PWD/PMU to obtain a Certificate of Registration as the principle employer;</p>

The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Cess Act of 1996.	All the establishments who carry on any building or other construction work and employ 10 or more workers are covered under this Act. All such establishments are required to pay Cess at rate not exceeding 2% of the cost of construction as may be notified by the Government. The 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 etc. The employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government - Cess should be paid at a notified rate; -The employer has to obtain a registration certificate from the Registering Officer	Chief Labour Commissioner, GoM	Applicable during construction work Applicable to any building or other construction work employing 10 or more workers; Provide safety measures at the construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodation for workers near the workplace etc.
The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979	The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The inter- state migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home up to the establishment and back, etc.	Chief Labour Commissioner, GoM	Applicable Contractor shall register with Labour Department if Inter- state migrant workmen are engaged Adequate and appropriate amenities and facilities to be provided to workers - housing, medical aid, traveling expenses
The Child Labour (Prohibition and Regulation) Act, 1986.	The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of child labor is prohibited in Building and Construction Industry.	As above	- No child labor shall be employed
Minimum Wages Act, 1948.	The employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings,	As above	All construction workers should be paid not less than the prescribed minimum wage.

	Roads, Runways are scheduled employment.		
Workmen Compensation Act, 1923.	The Act provides for compensation in case of injury by accident arising out of and during the course of employment.	As above	Compensation for workers in case of injury by accident.
Equal Remuneration Act, 1979.	The Act provides for payment of equal wages for work of equal nature to Male and Female workers and not for making discrimination against Female employees in the matters of transfers, training and promotions etc.	As above	Equal wages for work of equal nature to male and female workers.

State Level

The Meghalaya Transfer of Land (Regulation) Act, 1971	The Act states that no land (includes immovable property of every descriptions and any rights in or over such property) in Meghalaya can be transferred by a tribal to non-tribal or by a non-tribal to another non-tribal except with the previous sanction of the competent authority.	Revenue and Disaster Management Department	Under this project, proper documentation, management plans and mapping of land may be done, which has not yet been completed in the state.
		ADCs	
The Autonomous District (Establishment and Administration of Town Committees) Act and Rules – of all three hills – Jaintia, Khasi and Garo - 1956 (Act I of 1957), 1957	Provide for establishment and administration of town committees in the township of the Jaintia Hills Autonomous District. The duties and functions of the town committees include construction, maintenance and improvement of water supply and water ways.	District Council Affairs Department & Executive & Legislative Department - <i>Of the respective hills</i>	Applicable Clarity of roles and responsibilities of stakeholders to mitigate conflict over authority. The project activities include capacity building program to strengthen the capabilities of institutions in good governance practices.
The Cadastral Survey and Preparation of	The Act provides for a cadastral survey of lands and the preparation of land records in the state. The Act was amended in 1991 to enable the	Revenue and Disaster Management	Applicable

Records of Rights Act, 1980	ADCs to undertake the cadastral survey with the financial and technical assistance of the State government.	Department ADCs	Enables the project to perform in part a cadastral survey and map out areas of cultural and social significance.
The Garo Hills District (Transfer of Land) Act, 1955 (Act IV of 1955)	Provides for the transfer of land in the GHAD where land includes benefits which arise out of land and things attached to the earth.	Garo ADC	<p>All project roads passing through and or abutting community forest land should take clearances from ADC prior to start of any work.</p> <p>Applicable</p> <p>Under this project, proper documentation, management plans and mapping of land may be done.</p>
Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and	Regulate the employment and conditions of service of building and other construction workers and to provide for their safety, health and welfare measures. Provide various benefits for the registered workers	Chief Labour Commissioner, GoM	<p>Applicable</p> <p>Project activities involve construction work where construction labour will be engaged.</p> <p>Provisions are integrated in the ESMP for Construction and campsite management plan.</p>
The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	This law provides for recognition of forest rights to Scheduled Tribes in occupation of the forest land prior to 13.12.2005 and to other traditional forest dwellers who are in occupation of the forest land for at least 3 generations i.e. 75 years, up to maximum of 4 hectares. These rights are heritable but not alienable or transferable.	Department of Environment and Forests ADCs	<p>Applicable</p> <p>The project ensures effective participation of Indigenous Peoples in the preparation of environmental and social impact assessments to assess risks and opportunities and to improve the understanding of the local context and affected communities.</p> <p>The project is not expected to take any such</p>

3.3.1 RFCTLAR&R Act 2013

The Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation (RFCTLAR&R) Act, 2013, enacted by the Government of India is the latest legislation. This is in force and supersedes all other old acts for land acquisition and to determining R&R activities throughout the country. Meghalaya too has adopted the same. Apart from this, for land acquisition, Government of Meghalaya has published gazette notification "Meghalaya Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation (RFCTLAR&R) Rules, dated 25th Spetember, 2017 which will also be applicable in suitable cases. The act shall apply, when the Government acquires land for its own use, hold and control for public purpose.

The act specifies that the process of obtaining the consent shall be carried out along with the Social Impact Assessment (SIA) study. The act also has the provision that no land shall be transferred by way of acquisition, in the Scheduled Areas in contravention of any law (including any order or judgment of a court which has become final) relating to land transfer, prevailing in Scheduled Areas.

The act defines (1) "affected area" as such area as may be notified by the Government for the purposes of land acquisition; (2) "affected family" includes a family whose land or other immovable property has been acquired; a family which does not own any land but a member or members of such family may be agricultural labourers, tenants including any form of tenancy or holding of usufruct right, share-croppers or artisans or who may be working in the affected area for three years prior to the acquisition of the land, whose primary source of livelihood stand affected by the acquisition of land; (3) the Scheduled Tribes and other traditional forest dwellers who have lost any of their forest rights recognised under the **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006** due to acquisition of land (4) family whose primary source of livelihood for three years prior to the acquisition of the land is dependent on forests or water bodies and includes gatherers of forest produce, hunters, fisher folk and boatmen and such livelihood is affected due to acquisition of land.

The act further specifies that a member of the family who has been assigned land by the State Government or the Central Government under any of its schemes and such land is under acquisition; and a family residing on any land in the urban areas for preceding three years or more prior to the acquisition of the land or whose primary source of livelihood for three years prior to the acquisition of the land is affected by the acquisition of such land. Detail provision of the act with regard to compensation, rehabilitation and resettlement are discussed in below sections.

Table 24: Gap between RFCTLARR 2013 and WB OP on Involuntary Resettlement

Topics/ Issues/ Areas	World Bank OP4.12	RFCTLAR&R	Remarks / Measures taken to address in ESMF
Application of	Direct economic and social	Section 2 Applicable to projects	In line with bank OP

LA	impacts that both result from Bank-assisted investment projects. Applies to all components of the project that result in involuntary resettlement, regardless of the source of financing.	where government acquires land for its own use, hold, and control, including PSU and for public purpose;	4.12
Principle of avoidance	Involuntary resettlement should be avoided where feasible or minimized, exploring all viable alternative project design	Alternatives to be considered as Act in chapter II, point # 4 (d) says "extent of land proposed for acquisition is the absolute bare minimum needed for the project; and (e) says land acquisition at an alternate place has been considered and found not feasible.	In line with bank OP 4.12
Linkages with other projects	OP 4.12 applies to all components of the project that result in involuntary resettlement, regardless of the source of financing. It also applies to other activities resulting in involuntary resettlement, that in the judgment of the Bank, are(a) directly and significantly related to the Bank-assisted project, (b) necessary to achieve its objectives as set forth in the project documents; and(c) carried out, or planned to be carried out, contemporaneously with the project.	No such provision	The RPF will be applicable for all components of the project or any linked project necessary to achieve its objective.
Application of R&R	Same as above	In addition to the above, Section 2(3) land purchased by private company as prescribed by Govt. or when part acquired by govt	Provision of OP 4.12 to apply.
Affected area	Involuntary take of land resulting in loss of shelter, loss of assets or access to assets, loss of income sources or means of livelihood	Section3(b): Area notified for 'acquisition'	Provisions of OP 4.12 will be applicable as Act only notifies for titleholders of private land

Family		<p>Section 3(m) includes a person, his and her spouse, minor children, minor brothers, and sisters dependent.</p> <p>Widows, divorcees, abandoned women will be considered as separate families.</p>	<p>The definition of family given in the RFCTLAR&R Act 2013 will be followed for both titleholders and non-titleholders.</p>
Affected family for eligibility	<p>All adversely affected people whether have formal legal rights or do not have formal legal rights on land</p>	<p>Section 3 (a): whose land and other immovable property acquired.</p> <p>(b)&(e): Family residing in affected areas such as labourers, tenants, dependent on forest and water bodies, etc whose primary source of livelihood is affected due to acquisition</p> <p>(c)Scheduled tribes and other forest dwellers whose rights recognized under the Forest Dwellers Act 2006.</p> <p>(f) Family assigned land by state or central government under any schemes</p> <p>(g) Family residing on any land in an urban area that will be acquired or primary source of livelihood affected by acquisition.</p>	<p>The Act does not support non-titleholders on government land, hence provision of OP 4.12 will prevail. The gap has been addressed in the entitlement matrix of RPF in ESMF.</p>
Cut-Off date Notice to affected person	<p>Date established by the borrower and acceptable to the Bank. It is the date of the census.</p>	<p>Section 3 c (ii), (iv) (vi): Families residing for preceding 3 years or more prior to “acquisition of land”.</p> <p>Section 21 (1) The Collector shall publish the public notice on his website and cause public notice to be given at convenient places on or near the land to be taken, stating that the government intends to take possession of the land. and that claims to compensations and rehabilitation and resettlement for all interests in such land may be made to him.</p>	<p>Provisions of OP 4.12 will be followed as RFCTLAR&R Act has no such provision for people living on public land. Moreover, RFCTLAR&R Act requires proof of residing in the project area at least three years prior to initial notice on LA.</p>
Non-	<p>Stand-alone SIA for all</p>	<p>Section 6(2): Irrigation projects</p>	<p>The provision of OP 4.12</p>

application of investments Chapter II		where EIA is required under other laws, provisions of SIA not applicable.	will be followed.
Consultation – Phase I during preparation	Consultation a continuous process during planning and implementation	Section 4(1) date issued for <i>first consultation</i> with PRIs, Urban local bodies, Municipalities, etc to carry out SIA. Section 5: Public hearing of SIA in the affected area. Provide adequate publicity of date and time.	Provisions of OP 4.12 will be followed. The draft and final SIA will be disclosed in public as per the provision given in RFCTLAR&R Act, 2013.
Time duration to prepare SIA and SIMP	Draft Social Assessment, Resettlement Action Plan and or Social Management Framework prepared before appraisal.	Section 4 (2): within six months from the date of its commencement.	No gap found. RFCTLAR&R Act specifies a timeframe which is followed by the client.
Disclosure – Stage I	To be disclosed before appraisal.	Section 6(1): Translated in local language available in PRI institutions and local urban government bodies; district administrative offices and websites of concerned government agency.	No gap found.
Formation of Expert Group to appraise SIA and SIMP	Appraised by Bank staff	Section 7(1): Constitute a multi-disciplinary Expert Group includes members of decentralized govt Institutes (PRIs, ULBs).	No gaps found.
Time stipulated for Group to submit its report	Before the decision meeting for appraisal	Section 7(4): Submit its report within two months from the date of its constitution	No gaps found.
Scope of work of the Expert group	Social Assessment, resettlement action Plan reviewed and appraised by Bank staff and approved by Regional safeguard advisor	Section 7 (4) (a&b): assess whether it serves any public purpose or not; if social costs outweigh potential benefits then should be abandoned; Section 7 (5) (a&b): if serves a public purpose, then it has considered minimum land acquisition and alternate options to minimize displacement; potential benefits outweigh social costs	No gap found.

Consultation – Phase II during appraisal	In practice, consultation workshops are organized in project affected areas at district and state levels.	Section 2 (2): Prior consent of 80% and 70% of land owners in PPP and where private company has approached the govt to acquire balance land has been obtained,	No gap found.
Disclosure – Stage II	Information dissemination through the planning and implementation	Section 7 (6): recommendations of the expert group under 7(4&5) to be made public in local language in district and block administrative office and PRIs	No gap found.
Minimize impact on multi-crop land	Select a feasible design that has minimal adverse impact.	Section 10: In case multi-crop land is to be acquired under exceptional circumstances, the area to be acquired cannot exceed the aggregate of land of all projects in district or state. The area to be acquired cannot exceed the total net sown area of the district or state. Wasteland equivalent to twice the area acquired will be developed.	No gap found.
Information dissemination of preliminary notice	Continuous part of the preparation and participation of	Section 11 (1), (2) & (3): Notice published in local language and meetings called of gram sabhas, municipalities to provide full information about the purpose of the project, summary of SIA and particulars of administrator appointed for R&R' summary of R&R scheme	No gap found.
Updating land records	To be part of RAP	Section 11 (5): Once established that the land is required for public purpose, accordingly notice to be issued <i>under section 19 following which land records to be updated within two months</i>	No gap found.
Census and preparation of R&R schemes	To be part of RAP including both titleholders and non-titleholders	Section 16 (1) (2): carry out a census of affected people and their assets to be affected, livelihood loss and common property to be affected; R&R scheme including time line for	only titleholders into account. Provision of OP 4.12 to be followed.

		implementation.	
Information dissemination and Public hearing - Stage III	Consultation throughout the process is mandatory	Section 16(4) & (5): mandatory to disseminate information on R&R scheme including resettlement area and organize a public hearing on the Draft R&R scheme in each Gram Sabha, Municipality and consultations in Scheduled area as required under PESA.	Provisions of OP 4.12 to be followed.
Approval of R&R Scheme	As part of RAP prior to appraisal	Section 17 & 18: Draft R&R Scheme to be finalized after addressing objections raised during the public hearing and approved.	No gap found
Final declaration of R&R Scheme	Approved RAP including budgetary provisions to implement it	Section 19 (2): Only after the requiring body has deposited the money will the govt issue the notice along with 19(1) .	No gap found.
Time period stipulated.	Included in RAP - Time line synchronized with Government's procedures or adopts innovative methods to reduce the time which is based operated on the principles of participation and transparency.	Section 19 (2): the entire process to update land records disseminate information, preliminary survey, census, hearing of objections, preparation of R&R schemes and approval, deposit of money must complete within 12 months from the date on which section 11, the preliminary notice issued. Section 19 (7): If the final declaration not made within 12 months of section 11 (1), the process will lapse, except under special circumstances.	No gap found.
Preparation of land acquisition plans		Section 20: Land marked, measured for preparation of acquisition plans.	No gap found.
Hearing of claims		Section 21(1) (2): Notices issued indicating govt's intension to take possession of land and claims on compensation and R&R can be made not less than one month and not more than six months from the	

Time period stipulated for declaring the award	Included in RAP.	date of issue of section 21(1). Section 25: It is required to announce the award <i>within 12 months of issue of Section 19 (final declaration to acquire land, approved R&R scheme)</i> after completing land acquisition plans, hearing of objection, settling individual claims for declaration of the award. If award not made within the stipulated time, the entire proceedings will lapse.	
LA Act 1984 deem to lapse and RFCTLAR&R is applicable		Section 24: where award is not declared under section 11, or where made five years ago but land not taken in possession or where award declared but money not deposited in the account of the majority of beneficiary.	No gap found.
Methodology for determining market value for land	Full replacement Cost	Section 26 and First Schedule: Recognizes 3 methods and whichever is higher will be considered which will be multiplied by a factor given in Schedule First; compensation given earlier will not be considered; if rates not available floor price can be set; steps to be taken to update the market value.	No gap found.
Valuation of structures	Full Replacement cost	Section 29 (1) without deducting the depreciated value.	Provisions of OP 4.12
Solatium and interest		Section 30(1) 100% of the compensation amount Section 30(3): 12% per annum on the market rate from the date of notification of SIA to the date of ward or land taken over	No gap found.
R&R Award	Total cost included in RAP to resettle and rehabilitate the affected persons and assist in their efforts to improve their livelihoods and standards of	Section 31, Second Schedule: A family as a unit will receive R&R grant over and above the compensation and those who are not entitled to compensation.	No gap found

	living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher	Second Schedule: Homeless entitled to constructed house, land for land in irrigation projects in lieu of compensation, in case of acquisition for urbanization 20% of developed land reserved for owners at a price equal to compensation' jobs or onetime payment or annuity for 20 years' subsistence grant, transportation, land and house registered on joint name husband and wife, etc	
Transparency		Section 37(1): Information of each individual family including loss, compensation awarded, etc will be available on the website.	No gap found.
Possession of land	Taking of land and related assets may take place only after compensation has been paid and, where applicable, resettlement sites and moving allowances have been provided to the displaced persons.	Section 38(1): Land will be taken over by the government within three months of compensation and 6 months of R&R benefits disbursed; infrastructure facilities at resettlement sites will be completed within 18 months from the date of award made under section 30 for compensation; in case of irrigation and hydel projects R&R completed six months prior to submergence.	No gap found.
Multiple displacement		Section 39: Additional compensation equivalent to compensation determined will be paid to displaced	No gap found.
Acquisition for emergency purpose	Not permeable in bank funded projects	Section 40 (5): 75% additional compensation will be paid over and above the compensation amount	Provisions of OP 4.12 will be followed.
Prior consent before acquisition and alienation	Affected persons to be consulted.	Section 4: Public disclosure of SIA and R&R Plan is mandatory.	No gap found.
Development plans for SC	Indigenous Peoples' Development plan required	Section 41: Separate development plans to be prepared, settle land	No gap found.

and ST	<p>along with RAP.</p> <p>Land for land is an option across all sectors.</p>	<p>rights before acquisition; provision of for alternate fuel fodder, non-timber produce on forest land to be developed within 5 years; 1/3rd compensation amount to be paid as first instalment and rest at the time of taking possession; ST to be resettled within Scheduled area; land free of cost for community purpose; land alienation will be null and void and ST and SC considered for R&R benefits; fishing rights restored in irrigation and hydel projects; if wish to settle outside the district additional benefits to be provided in monetary terms; all rights enjoyed under other laws will continue.</p> <p>Second Schedule: additional provisions for SC&ST for land for land in irrigation projects, additional sum over and above the subsistence grant,</p>	
Institutional arrangement	Institutional arrangement must be agreed upon and included in the RAP	Section 43-45: Appointment of administrator, R&R Commissioner, when more than 100 acres of land is to be acquired, R&R Committee will be formed at project level, social audit to be carried out by Gram Sabha and Municipalities.	Provisions of OP 4.12 will be followed
Change of land use	Compensation and R&R assistance should be disbursed before taking physical possession of land.	Section 46(4): Land will not be transferred to the requisitioning authority until R&R plan is not fully implemented.	No gap found.
Monitoring and Evaluation	Indicators and monitoring system included in RAP	Section 48-50: Set up National and State level Monitoring Committee to review and monitor progress	The Act does not specify indicators. Provisions of OP 4.12 will be followed.
Authority to settle claims		Section 51-74: The Authority will be set up to settle any legal disputes that arise from acquisition and R&R, the aggrieved party can move to the	No gap found

		high court thereafter.	
Exempt from tax and fee	Project to bear all taxes and other expenses if new assets are purchased by the PAP	Section 96: Compensation and agreements will not be liable to tax	No gap found
No change in the status of land acquired		Section 99: Once the land is acquired for a particular purpose, its purpose cannot be changed	No gap found
Return of unutilized land		Section 101: If the acquired land remains unutilized for 5 years, then it will be returned to the original owner, heir or included in land bank	No gap found
Distribution of increased value of land transferred		Section 102: 40% of the appreciated value of acquired land will be distributed to owners provided no development has taken place.	No gap found
Grievance Redress Mechanism	Appropriate and accessible grievance mechanisms are established	Section 15: Any person interested in any land which has been notified under sub-section of section 11 as being required or likely to be required for a public purpose, may within sixty days from the date of the publication of the preliminary notification, has the right to object. The person can approach the Administrator of R&R and if not satisfied can to Commissioner R&R. The aggrieved person has the right to approach the judiciary as well.	Since there is no provision for local level grievance mechanisms, the provision of this ESMF will be followed.

3.3.2 Village Employment Council

In absence of a Panchayati Raj Institution (PRI) or local councils/authorities, Meghalaya had to explore its own institutional arrangement resembling the PRI for the implementation of *Mahatma Gandhi National Rural Employment Guarantee Act, 2005* (NREGA). With the support of traditional institutions, Village Employment Council (VEC) and Area Employment Councils had been formed for planning, monitoring and implementation of the Act at the village level. Each VEC is vested with powers and functions of the Gram Sabha and a Community Coordinator, who is responsible for identification and supervision of such work. The VEC is considered to be inclusive, transparent and accountable than the traditional institutions. VEC mandates 1/3rd representation of women in its executive body. Further, in terms of decision making, it seeks participation from all strata of the community. VEC as part of the Audit of Scheme Rules, 2011 were

responsible for conducting bi-annual social audits. Following the amendments to the state scheme, the role of conducting the social audit has now been assigned to the AEC. However, due to inexperience and absence of capable persons, instead of the AEC, Non- Government Organisations are engaged as Social Audit facilitators. Under this project, VEC will be one of the principal authority for environment and social impact assessment and implementation of management plans. The project will focus on building their capacity for management of social risks and impacts pertaining to natural resources viz. land, forest and water resources, to the extent possible.

3.3.3 Applicable Labor Laws

1. **Payment of Wages Act, 1936:** It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
2. **Minimum Wages Act, 1948:** The employer is to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of buildings, roads, runways are scheduled employment.
3. **Equal Remuneration Act, 1979:** The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.
4. **Contract Labour (Regulation & Abolition) Act, 1970:** The Act provides for certain welfare measures to be provided by the contractor to contract labour and in case the contractor fails to provide, the same are required to be provided, by the principal employer by law. The principal Employer is required to take Certificate of Registration and the contractor is required to take license from the designated Officer. The Act is applicable to the establishments or contractor of principal employer if they employ prescribed minimum (say 20) or more contract labour.
5. **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 the prescribed minimum years (say, five years) of service or more or on death the rate of prescribed minimum days (say, 15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.
6. **Employees P.F. and Miscellaneous Provision Act, 1952:** The Act provides for monthly contributions by the employer plus workers at the rate prescribed (say, 10% or 8.33%). The benefits payable under the Act are:
 1. Pension or family pension on retirement or death, as the case may be.
 2. Deposit linked insurance on the death in harness of the worker.
 3. Payment of P.F. accumulation on retirement/death etc.
7. **Payment of Bonus Act, 1965:** The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments. The

newly set-up establishments are exempted for five years in certain circumstances. States may have different number of employment size.

8. **Maternity Benefit Act, 1961:** The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
9. **Child Labour (Prohibition & Regulation) Act, 1986:** The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.
10. **Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act, 1979:** The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Travelling expenses from home up to the establishment and back etc.
11. **Applicability:** Though small-scale activities, civil work contractors would be required to execute multiple sub-projects involving mostly local labor drawn from neighboring villages. The project will ensure that bid document for civil works include commensurate provisions to ensure compliance with existing labor laws.

3.4 Traditional Norms for Land Management in Meghalaya

As mentioned earlier, the land tenure system and land ownership in Meghalaya mainly follows the traditional system wherein they are governed in accordance with the customary norms and practices of the people. Although many changes in the pattern of landholding have occurred over the years, the principle of transmission of rights of ownership has largely remained the same. The land tenure system and ownership involve both traditional and non-traditional institutions. The traditional institutions function on the basis of local customary laws and traditions and traditions which have not been codified. The non-traditional are codified and enforced by constitutional bodies such as the Autonomous District Councils.

3.4.1 Mapping of Practices of Benefit Sharing, Ownership, Management -Land

Among all three major tribes of Meghalaya viz. Garo, Jaintia and Khasi, there exists an indigenous practice of benefit sharing, ownership and management of land. Even though there has been a paradigm shift in the pattern of landholding over the years, the principal of transmission of rights of ownership has largely remained the same. Meghalaya is predominantly a matrilineal society which follows a system of inheritance wherein landed property and its ownership are mostly vested with the female member of the household. Ownership and management of land among the three tribes is traditionally very similar.

Amongst the **Garos**, community and clan ownership of land is the practice among all although private ownership also exists in some pockets, particularly in areas where terrace cultivation and horticulture are prevalent.¹⁰ Nokma is the guardian and nominal proprietor of the communal or *a-king* land within its jurisdiction. All inhabitants of the village are entitled to cultivate anywhere on that land upon paying a nominal tribute. Certain land title practices are also followed in Garo Hills wherein a-king land becomes individual private property. An annual *patta* is issued by the District Council with consent of the *Nokma* of the particular *a-king* on application. Once the *patta* is issued the land goes out of the *a-king*, out of the control of the *Nokma* and clan members and becomes individual private property.

While, in the **Jaintia Hills** land is basically classified into two types, namely *Hali* land and High land. Hali lands are the permanently cultivated terraced wet rice land and are of two kinds; the difference being in the method of irrigation. Whereas, High lands are government and private lands. Hali lands on the other hand include raj lands (previously under the British Raj), service land, village puja lands, private lands and patta lands.

The land tenure system amongst the **Khasis** is classified into two main heads – Ri Raid and RiKynti. Ri Raid is generally community owned land or ‘public’ land wherein no individual has propriety over it. The land is free to use for all and is under the Village Council and the Syiem who has the authority to allot the land for use and occupancy to individuals. The individual may sell the produce from the land but cannot sell the land. While RiKynti land is private lands which are in absolute possession of the owners. It can be sold, mortgaged, leased and disposed of in any manner they deem fit. These lands are demarcated by boundary stones and landmarks. In certain cases, the Syiem, *Sordar* or Village Councils have no rights over these lands but if they want to sell, mortgage or transfer such lands, consent of the owners, locality, and community is required.

In the existing land tenure and ownership structure, it is difficult to establish if the land is privately owned or belongs to the community, as no land survey has been carried out within the state. Through this project, documentation and mapping of land may be done bearing in mind traditional practices of benefit sharing, ownership and management of land. Furthermore, existence of dichotomy in land governance has brought to fore the need to understand the complexities that subsist in ownership, benefit sharing and management of land. The overlay of government policies with the role of traditional institutions has resulted in their gradual weakening as agents of development. The project aims to address these weaknesses by strengthening the capacity and capabilities of the traditional institutions in good governance practices. Overall, understanding the existing customary norms, laws and policies of state is essential to ensure that there are no conflicts while undertaking any developmental work in the state. The project activities will be planned and implemented keeping in view the traditional socio-economic and cultural systems of local governance. Other formal laws and regulations pertaining to natural resources will

¹⁰In 1928, a few sections of the Assam Land Revenue Regulation, 1886 were brought into force in the Garo Hills. However, it became relevant only to the plains portion of the Garo Hills. In the hilly portion, the perennial customs continue though the District Council has passed some Acts and Regulations in certain matters. These prevail over more than 94 % of the total area which is hilly and 6% are plain areas over which this Act prevails.

also be adhered to. The project activities will hopefully lead to strengthening of their traditional cultural values and customary use of natural resources and livelihood opportunities.

Table 25: Traditional Classification of Land in Garo Hills

Classification of Land	Benefit Sharing	Ownership	Management
<i>A-king</i> land	This is communal property	Can be used by all upon paying a nominal tribute.	Community land Managed by the <i>Nokma</i>
<i>A-mate</i> land	This is assigned land. Plot of land acquired by an individual by purchase or through gift. Some of a-mate a-king lands acquired are: <i>Jongmegre a-king</i> land purchased for Rs 100/ and two <i>gongs</i> . <i>Wa-gaesi a-king</i> land	Private Property	
<i>A-jinma</i> or <i>A-joma</i> land	Land owned by the community. It is the common land of one motherhood.	Only for people belonging to the same clan.	Community Land Managed by the <i>Mahari</i>
<i>A-jikse</i> land	This is common for both the husband and the wife. This land comes into existence through the system of common inheritance and through unity by a bond of inter clan relationship.	Used by members of the two motherhoods of the husband and wife.	Private land Through joint deliberation of the two motherhoods of the husband and wife.
<i>A-milam</i> land	This particular land lies in between the two a-king unclaimed by anyone. In other words it is “no-man’s land”	May be used by all members of the community	Community land Referred to as ‘cursed’ land cannot be claimed by any <i>Nokma</i>

Table 26 Classification of Land in the Jaintia Hills

Classification of Land	Benefit Sharing	Ownership	Management
High Land	The High lands which are private can be bought, sold or mortgaged at the will of the inheritors	Used by the family	Private property under the name of a female Managed by the family, that is the maternal uncle
Raj Lands	property of the erstwhile	Used by individual	Government Land By private individuals

	syiems/rajas which became the property of the government which leased it to private individuals in accordance with customary laws	households		in terms of lease of 3 years.
Service Lands or Rek Lands	Land that was given rent free to Dolois, Pators Chiefs and other officials as remuneration for the services provided by them.	Used by Dollois, Pators and Chief	Government Land	Managed by Dollois, Pators, and Chiefs.
Village Puja Land	consists of the lands held by the <i>Lyngdohs</i> or the <i>Dolois</i> who performs the <i>pujas</i> of the <i>doloiships</i>	Held by and cultivated by the headmen and the yield is utilized for meeting expenses connected with religious ceremony.	Owned by the LyngdohDallois	Managed by the LyngdohDallois for worship.
Private Land	Lands held by private individuals and can be transferred, mortgaged and sold or otherwise at the will of the owners.	Used by the individuals	Owned by female	Managed by the maternal uncle
Patta Land -	Encompasses lands that were allotted or transferred to individuals or institutions by the British during their administration, whose power has now been substituted by the Autonomous District Councils.	Used by the individuals	Owned by ADC	Managed by Institutions or Individuals only with respect to paddy fields.

Table 27 Type of Ri Raid in the Khasi Hills

Classification of Land		Benefit Sharing	Ownership	Management
RiShnong	This is part of the village which villagers can use for to this type of land cultivation and to occupy but not transfer	All members of the community have access to this type of land	Community land	Managed by the Village Durbar
RiLyngdoh	Land which has been set aside for the support of Lyngdohs who perform religious rites and ceremonies.	Members of the Lyngdoh clan in a particular village have access to this type of land	Lyngdoh clan, with a female head.	Managed by the maternal uncles of the Lyngdoh clan
Ri Bam Syiem	Land which has been set aside for the ruling chiefs.	Used by the Syiems.	Syiem clan of a particular area under a female head.	Managed by maternal uncles of the Syiems of a particular area.
RiBamlang	Community land which has been set aside for the use by the community.	Can be used by all	Community land	Managed by the Village Durbar
RiLehMokutduma	Land acquired through litigation	Can be used by individual/community	Community land	Managed by the Village Durbar
RiAiti Mon or RiNongmei-Nongpa	Land that has been donated or gifted willingly by the owners for use by the public	Can be used by individual/community	Community land	Managed by the Village Durbar/Clan
RiRaphlang– RiBamduh	Barren land which anyone can use	Can be used by all	Community land	Managed by the village durbar
RiDiengsai – Diengjin	Forests area that is covered with vegetation	Can be used by all	Community land	Managed by the village durbar

between the uplands and low lying areas of the lands

RiSamla	Land acquired by an unmarried person who has the right to dispose off as one likes	Used by all	Community	Reverts back to the village
RiUmsnam	Land acquired through wars	Used by all	Community owned	Managed by the Village Council

Table 28 Type of RiKynti (Private Property)

Type of RiKynti (Private Property)		Benefit Sharing	Ownership	Management
RiNongtymmen	Land that has been inherited from generations to generations.	Used by the decedents of one mother	By the youngest daughter.	Managed by the maternal uncle or brothers
Ri Maw	Land that has been acquired through purchase or through the right of apportionment.	Used by the members or decedents of one mother	Owned by the youngest daughter	Managed by the maternal uncle or brothers
Ri Seng and RiKhain	Undivided family owned land	Used by members of one family or decedents of one mother	Owned by the youngest daughter	Managed by the maternal uncle or brothers
RiKhurid	Land that has been purchased or bought over which the purchaser has the propriety, heritable and transferable rights over land.	Used by members of the one family	Owned by the female	Managed by the family
RiBitor	Land that has been acquired on receipt of a ceremonial bottle of liquor	Used by members of one family or decedents of one mother	Owned by the youngest daughter	Managed by the maternal uncle or brothers
RiDakhol	Land that has been obtained by the right of	Used by members of one family or	Owned by the youngest	Managed by the maternal uncle or

	occupation	decedents of one mother	daughter	brothers
RiShyieng	Portion of land that has been given to the youngest daughter of a clan for meeting the expense on performance of religious rites and ceremonies.	Used by the youngest daughter of the family	Owned by the youngest daughter	Managed by the maternal uncle or brothers
RiPhniang	Part of the land of Ri Kur or RiNongtymmenthat has been given to female members who acts as custodian and assists in the preparation of religious ceremonies or for looking after them in times of trouble.	Used by the youngest daughter of the family	Owned by the youngest daughter	Managed by the maternal uncle or brothers
Rilapduh	Land of a family or a clan that has become extinct which is kept as Ri Raid or Ri Bam Syiem	Used by the Syiem clan	Owned by the female head of the Syiem clan of a particular region	Managed by the maternal uncle or brothers
RiShiak	Land that has been acquired by the husband and the wife which is given to the clan.	Used by the members of the family	Owned by the female head.	Managed by the husband and on his demise by his son.

3.5 World Bank Safeguard Policies

This section is intended to highlight the World Bank safeguard policies and their applicability to the project. The World Bank's environmental and social safeguard policies are a cornerstone of its support to sustainable poverty reduction. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide guidelines for Bank and borrower in the identification, preparation, and implementation of programs and projects. They also provide a platform for the participation of stakeholders in project design. In essence, the safeguard policies ensure that environmental and social issues are evaluated in decision making, help reduce and manage the risks associated with the project and provide a mechanism for consultation and disclosure of information. The safeguards policies of the World Bank are outlined in the Table and the implications of these policies for the project are discussed in Table below.

Table 29: Operational Policies and its Implications for the Project

Operational Policy Triggered (Yes/No)	Summary of OP	Implications for the Project and Compliance Mechanism
OP 4.01: Environmental Assessment	Yes	<p>The purpose of this policy is to help ensure the environmental and social soundness and sustainability of investment projects. The policy supports the integration of environmental and social aspects of projects in the decision-making process. The OP/BP 4.01 requires that the environmental consequences of the project are taken into consideration during the project cycle and are considered in selection, siting, planning and designing of projects. It emphasizes upon the mitigative measures so as to reduce the adverse environmental impact, if any.</p>
		<p>The project aims at rehabilitation and restoration of road infrastructure and improvement through various measures. These activities could result in adverse environmental impacts, if not properly designed, implemented and managed.</p> <p>The project is categorized as Category A as per the policy. Environmental Assessment is necessary to understand the current environmental setting and possible impact and thereafter propose alternatives or mitigation measures for the identified impacts.</p> <p>The exact scope, scale and location of the project activities will be evident after the feasibility study is completed and the preferred options for the project activities are identified and designed. Hence, at the current stage of project preparation, a 'Framework' has been developed to spell out the procedures for undertaking ESIA and preparing ESMPs for the identified project activities. The 'Framework' called the 'Environmental and Social Management Framework' (ESMF) also describes the institutional arrangements and the monitoring mechanisms. The ESMF will also guide the environmental assessments for future activities to be taken up by the IWD (that is for activities that are identified through the feasibility study but are not part of the current project).</p>
OP 4.04:	Yes	<p>The OP promotes environmentally sustainable development</p> <p>The project involves rehabilitation, strengthening and widening of existing roads infrastructure. The project will not involve</p>

Natural Habitats		by supporting the protection, conservation, maintenance, and rehabilitation of natural habitats and their functions.	activities that can lead to significant conversion or degradation of critical natural habitats. The project impacts on natural habitats such as the rivers and wetlands will be assessed as part of the ESIA, and ESMPs for the various project activities will be prepared to mitigate any identified impacts.
OP 4.36: Forests	Yes	This policy emphasizes upon the management, conservation, and sustainable development of forest ecosystems.	The project activities are not envisaged to be executed in any notified forest area or forest land. As the state is endowed with 70 percent forest and forest landscapes, with over 60% forest land being community owned; and faces numerous threats and challenges, including complex governance, land use conflicts, mining, jhum cultivation and other non-forest land use, and illegal logging, there could be indirect or cumulative impacts. The ESIA will confirm presence of forest area for the project activities.
OP 4.11 Physical Cultural Resources (PCR)	Yes	The policy aims assist in preserving PCR and in avoiding their destruction or damage. PCR includes resources of archaeological, paleontological, historical, architectural, religious (including graveyards and burial sites), aesthetic, or other cultural significance.	The project activities (construction works) are limited to existing roads infrastructure. As the structural / construction works are limited to existing structures, PCR are not likely to be adversely affected. The ESIA will confirm any involvement of any PCR in the project activity sites. The ESMPs will include provisions for dealing with any 'Chance Finds' of archaeological, paleontological, historical significance.
OP 4.10 Indigenous People	Yes	This policy asserts that the adverse impacts of the development projects on the indigenous people should be mitigated or avoided and the benefits of the project should be accrued to them.	The assessment finds scheduled tribe population living in command area of the DV. Though, the project is not likely to impact adversely to the tribal population, the project will take care of ensuring their participation in the implementation process and ensure equity and inclusion in accessing project benefits. The project will have a TPPF focusing on inclusion of tribal in the project benefits. Based on the TPPF, if so found required, specific TPP will be prepared once sites are

			identified.
OP 4.12 Involuntary Resettlement	Yes	This policy aims at avoiding, if not minimizing adverse impacts on the local population due to project and where unavoidable it ensures that those affected improve or at least restore their livelihood.	Preliminary assessment reveals that there are some encroachments in the river bed and near embankment those may be temporary relocated. However, the project is unlikely in the need of any additional land for which displacement will take place.
Projects in Disputed Areas (OP 7.60, BP 7.60)	No	This policy is concerned with any project in the disputed area/s concerning two countries	The project is not in any disputed area and hence OP7.60 is not applicable to the project.
Dam Safety			
	NA		
International Waterways	TBD		

3.5.1 World Bank Environmental, Health, and Safety Guidelines

Environmental issues during the construction and operation of roads are similar to those of other large infrastructure projects involving significant earth moving and civil works and their prevention and control recommendations are presented in the General EHS Guidelines. These impacts include, among others, construction site waste generation; soil erosion and sediment control from materials sourcing areas and site preparation activities; fugitive dust and other emissions (e.g. from vehicle traffic, land clearing and movement, and materials stockpiles); noise from heavy equipment and truck traffic; and potential hazardous materials and oil spills associated with heavy equipment operation and fuelling activities. This World Bank EHS guideline contain the following

12. Environmental issues specific to construction and operation of roads
13. Occupational Health and Safety Guidelines
14. Community Health and Safety
15. Performance Indicators and Monitoring

EHS guideline stated above will be applicable for this project and will be part of the contract document.

Chapter 4: Environmental and Social Management Framework

The Environmental and Social Management Framework (ESMF) is an instrument to identify and address the potential environmental and social impacts of the project right from the planning to its implementation and post-implementation stages. ESMF provides general policies, guidelines, codes of practice and procedures to be integrated into the implementation of the Project. It defines the steps, processes, and procedures for screening, alternative analysis, assessment, monitoring and management of the environmentally and socially related issues. In addition, ESMF presents overview of environmental policies and legal regime and WB safeguard policies; includes institutional and capacity assessment related to environmental management; and describes the principles, objectives and approach to be followed while designing the site-specific environmental and social mitigation measures. A generic sample E&S mitigation and monitoring plans are included in the document.

4.1 Purpose and Objectives of Environment Management Framework

The objective of developing ESMF is to ensure that environmental and social concerns are adequately and appropriately addressed by the project and it is mainstreamed with project planning, implementation and post-implementation stages. Keeping this in view, the present ESMF has been developed for use by the Public Works Department of Government of Meghalaya for construction of roads (any type) whether or not assisted by the World Bank.

The ESMF will be followed as an apex guideline document to:

1. Undertake due diligence of proposed projects, proportionate to the nature and potential significance of the environmental and social risks and impacts related to the project;
2. As and where required, to carry out early and continuing engagement and meaningful consultation with stakeholders, in particular affected communities, and in providing project-based grievance mechanisms;
3. Identify appropriate methods and tools to assess and manage the potential environmental and social risks and impacts of the project;
4. Set out in the Environmental and Social Management Plan (ESMP);
5. Monitor the environmental and social performance of a project in accordance with the ESMP;

This ESMF has been prepared based on the preliminary field visits to sample locations, physical observations and consultation with departmental personnel as well as local community.

4.2 Key Contents of the Environment Management Framework

Following process-flow diagram illustrates the steps of ESMF and its sub-elements of ESMF

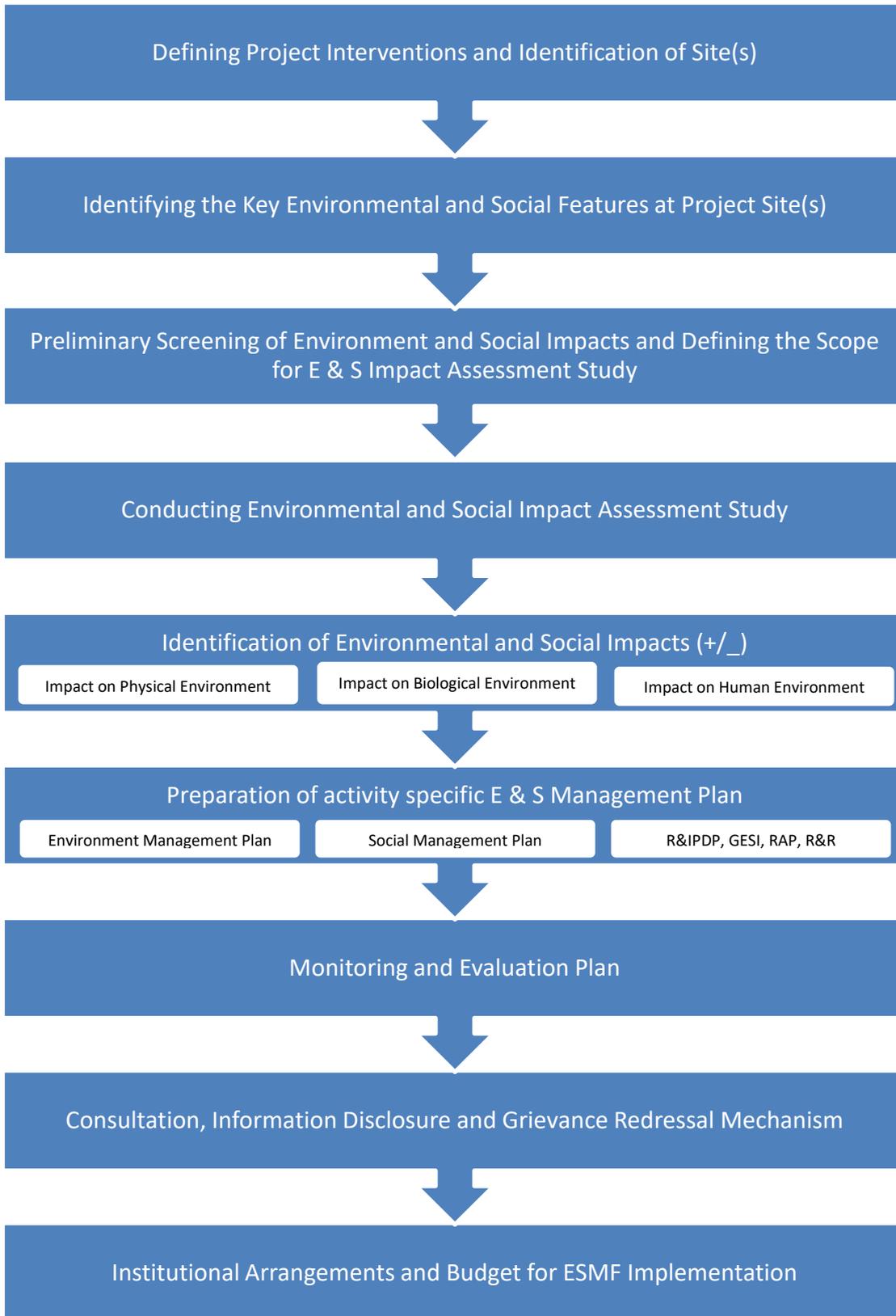


Figure 12: Environment and Social Management Framework (ESMF)

4.3 Application of ESMF

The ESMF needs to be integrated into the preparation and implementation stages of the various project components. It is an essential ingredient aligned with the project/subproject activities and is to be followed through the entire project cycle from planning, including site identification; design; implementation and operation/maintenance to attain the above outlined purpose and objectives.

PMGSY Roads: For all PMGSY roads to be undertaken under MITP, should follow the ESMF guidelines prepared by National Rural Roads Development Agency, Ministry of Rural Development, Government of India, available at the given website: <http://pmsgsy.nic.in/downloads/esmf.pdf>

4.3.1 Revision/Modification of the ESMF

The 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 sub-component design would therefore be assessed and appropriate management measures will be incorporated by updating the Environment and Social Management Framework. 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.

4.4 Procedure for screening of project activities

The overall step-by step process beginning with the screening stage is depicted in a flow chart below. The project will use a structured approach to environmental and social management following the hierarchy of avoidance, minimization, compensation/mitigation for negative impacts and enhancement of positive impacts where practically feasible and advantageous.

The screening checklist will help identify any likelihood of substantial social and environmental impacts of the activities arising due to the nature, scale and location of the activities. The screening checklist will also help identify activities having limited or insignificant environmental and social consequences for which further assessment could be limited in scope or may not be required.

4.4.1. Details of the Screening Process

The steps to be followed include the following:

1. Confirm the presence of environmentally and socially sensitive areas from secondary sources or preliminary site observations.
2. Verify the extent of applicability of GoI, state (GoM) and World Bank policies in project activities.
3. Identify potential negative and positive impacts; provide clarity on which issues need to be investigated more comprehensively during preparation of Environmental & Social Impact Assessment that will be done during the design stage.

This should help with finalizing project alignments and factoring in timelines like those associated with regulatory clearance processes into project implementation.

The process of preparing the environmental and social screening checklist and scoping will typically cover:

1. Describing the proposed project activities and alternative options.
2. Identifying the potential environmental and social impacts of the options.
3. Undertaking a preliminary evaluation of the potential environmental and social impacts of the options.
4. Consulting local officials on the options, and the potential impacts.
5. Describing the preliminary consultation with relevant agencies and local community. The focus of these consultations would be informing the local community, reviewing the likely issues and problems.
6. Selecting a preferred option. The appraisal of the available DPR / Feasibility study reports should be included from an environmental and social perspective.
7. Identifying the planning approvals which are likely to be required from MoEFCC, SPCB and other regulatory agencies.
8. Determining the type and scope of EIA study. Terms of Reference (ToR) for an Environmental and Social Assessment Study of the preferred option or the short list of options.

While more extensive data is likely to be required for ESIA, some data on baseline conditions will generally be required for screening to compare the environmental and social impacts of project options and to assess the extent of any environmental and social impacts. The robustness of screening will often be dependent on the quality of data on baseline conditions and the assessment of induced environmental and social impacts. The assessment of baseline conditions should consider the followings:

1. Past trends in environmental and social quality
2. Community preferences and competing demands for resources
3. Other current or proposed development programs in the project area.

The following checklist will help identify the components that need to be investigated during the screening process.

Table 30: Environmental and Social Screening Checklist

S. No.	Environmental & Social Features	Presence within 500mts from activity sites (Yes/No) If yes, mention distance in km)	Type of Impact (+ or -)	Significance of Impact (High (H), Medium (M), Low (L))	Likelihood of Impact (Likely, Unlikely)	Description of Impact
Physical Environment						
	Springs					
	Standing water bodies (ponds, lakes, etc.)					
	Flowing water bodies (rivers, rivulets, streams, canals, etc.)					
	Ground water sources (open wells, bore wells, etc.)					
	Meandering River					
	Erosion prone stretches					
	Areas with high slope (higher than 15 percent)					
	Landforms (hills, valleys)					
	Coal Mine					
Biological Environment						
	National Park / Wildlife Sanctuary					
	Reserved Forests					

Community Forest

Large Trees / Woodland

Sacred Groves

Presence of endangered species / habitat areas

Migratory routes

Ecologically sensitive areas

Human Environment

Settlements/Habitations

Sensitive Receptors (schools, hospitals, markets etc.)

Drinking water sources

Underground utility lines like electricity lines, pipelines for gas, etc

Physical cultural resources – Protected monuments, historical/ heritage sites etc.

Physical cultural resources – Religious structures, other sites significant to community

Agricultural land

Defence Installations / Airports

Heavy polluting Industry

Water or Waste water Treatment Plant

Social Safeguard Issues

Any loss / reduction of access to traditional dependent communities (to areas where they earn for their primary or substantial livelihood).

Adverse impacts to women, gender issues including economic and safety concerns

Presence of Indigenous / vulnerable communities

Land acquisition of private land leading to loss of shelter and livelihood

Land acquisition resulting to loss of income; livelihood; sources of livelihood; loss of access to common property resources and / or private residential and/or property resources.

Possible conflicts with and/or disruption to local community

Significant issues raised by the stakeholders during consultation

The results of the above checklist will help identify the scope of the ESIA study and timeframe required for obtaining the regulatory clearances (if any). The environmental and social safeguard screening shall be carried out during the project preparation stage the project activities. The formulation of the project specific terms of reference (ToR) shall be done based on the screening outputs highlighting environmental and social components that require detailed assessment during the ESIA stage. A generic ToR for ESIA study is attached in Annexure-I.

4.5 Environmental and Social Impact Assessment (ESIA)

ESIA may take the form of Comprehensive ESIA or Rapid ESIA depending on whether the environmental and social impacts can be readily mitigated. A comprehensive ESIA generally need to rely on data collected over a 12-month period whereas a Rapid EIA can rely on data collected in one season (other than the monsoon season) to facilitate a speedier assessment process.

Rapid ESIA's are generally acceptable if the analysis of environmental and social impacts is sufficient for the purposes of selecting a preferred project option and determining appropriate measures for mitigating environmental and social impacts. The outcome of a Rapid ESIA process will sometimes determine if a Comprehensive ESIA is required and, if this is likely, then it will often be more efficient to prepare a Comprehensive ESIA from the outset.

The formulation of terms of reference (ToR) for the project specific ESIA shall be done based on the screening outputs highlighting environmental and social features and possible impacts of the project during preliminary screening stage. A generic ToR for ESIA study is attached in Annexure-I.

Having identified the probable adverse impacts, the next step shall involve quantification of the impacts and developing action plans to mitigate such adverse impacts.

4.6 Environmental and Social Management Plans (ESMP)

An Environmental and Social Management Plan (ESMP) documents the project's risk management strategy. It serves as an "Umbrella Document" that integrates the findings of all impact studies carried out during the design phase, the plans and other provisions for complying with the requirements of the laws and regulations relevant to the project as well as the World Bank's Safeguard standards, those that were triggered based on site-specific information and relevant for the project's risk management strategy.

Site specific ESMPs will need to be prepared based on ESIA conducted for individual project sites. Preparation of the site specific ESMPs will require further focused field study. Project activities that have no major environmental or social concerns do not require site specific ESMPs but should be covered under a generic ESMP.

The ESMP has the following content:

1. Projects description including logframe and project activities, location and geographic extent of the project;
2. Brief reference to the legal framework in the host country relevant for environmental and social management and how the projects ensures compliance;
3. Complete list of identified negative effects that specific project activities may cause and their significance;
4. Planned measures to avoid adverse environmental and/or social impacts, to minimise them to acceptable levels or to compensate for them; including responsibilities (staffing) and schedule for implementing the mitigation measures, their technical feasibility, cultural appropriateness, expected effectiveness in providing mitigation to all affected groups;
5. Reference to plans required by the Standards (e.g. Indigenous Peoples Plan, Action Plan Access Restrictions etc.) and whether mitigation measures have been included or not in the ESMP;
6. Cost estimates for the proposed mitigation measures and for ensuring compliance, to be included in the budget of the project proposal;
7. Description of the executing entities' capacity to implement the ESMP; where needed, provide for capacity building measures (to be included in the ESMP budget).

There are instances where a mitigation measure is already conceptualized as an activity in the project's main implementation plan. It is still advisable to also include this activity in the ESMP along with all other mitigation measures in order to provide an overall picture of the project's mitigation strategy and to be able to check the list of mitigation measures against the identified impacts.

For each mitigation measure the operational details need to be summarised in form of a table. A generic ESMP with roles and responsibilities of each implementing agency is given below.

Table 31: Environmental and Social Management Plan

Activity	Environment and Social Management Action	Responsible Agency
Pre-planning phase		
Project	1. Preliminary Environmental and Social Screening including consultations and categorization of the	PWD / MIDFC

Identification & Pre-Feasibility Studies	project (category A /B as per WB requirement)	
Planning phase		
Capacity building	Preparing a training needs assessment for the implementing agencies Training of members of implementing agencies	WB/ MIDFC/ PMU
Communication Strategy	Disseminating information on project through awareness camps/meetings Ensuring all vulnerable sections of the community to take active participation in the project planning and implementation.	WB / MIDFC/PMU
Screening of environmental and social issues	1. Identifying significant potential impacts and project alternatives, and propose terms of reference for the EIA and SIA.	Environmental and Social Expert of PMU
Baseline Data Collection	2. Collecting data and information on current and future environmental and social conditions without the project.	
Impact Assessment	3. Assessing impacts in terms of characteristics such as magnitude, extent and duration of impacts in quantitative terms as far as possible;	
	4. Describing all reasonable alternatives, including preferred and 'no action' options.	
	5. Analysing the alternatives in terms of economic, social and technical merits	
Design Mitigation Measures	Census survey of impacted households. Consultation with affected community and other stakeholders	
	8. Suggesting mitigation measures to avoid, reduce and minimize adverse impacts and enhance beneficial impacts.	
Resettlement Action Plan	Preparing RAP on SIA and mitigation measures suggested as per RPF. Disclosure of RAP in local language	
Indigenous Peoples Development Plan	Social screening assessment to be carried out FPIC to be carried out IPP to be prepared; disclosed in local language	
Grievance Resolution Mechanism	Strengthening of traditional institution by putting systems and processes in place Setting up of integrated grievance redress mechanism	PWD / MIDFC

Implementation phase			
Implementation of EMP	1.	Implementing mitigation action plan as per approved EMP	MIDFC/ PWD/ Environmental Expert of PMU
	2.	Disaster management contingency plan where applicable especially in areas with potential flooding, earthquake zones	
Implementation of RAP	3.	Community consultation in case of land is to be donated	MIDFC / PWD/ Social Expert of PMU
	4.	Transect walk and finalization of alignment	
	5.	Land acquisition plan if land is to be acquired	
	6.	Micro plan preparation for affected families	
	7.	Disbursement of compensation and R&R assistance	
	8.	Livelihood restoration activities	
Implementation of IPP	9.	Training of local community on social audit	MIDFC / PWD/ Social Expert of PMU
	10.	FPIC with tribal community	
	11.	Finalization of activities to be carried out	
M&E and Audits	12.	Implementation of activities	Community PWD / Environmental and Social Expert of PMU Independent Agency
	13.	Training of local tribal community on social audit	
	1.	Conduct Environmental and Social Audit of all project areas;	
	2.	Concurrent monitoring of RAP and IPP implementation	
	3.	Periodic evaluation of implementation of RAP and IPP	

Chapter 5: Anticipated Impacts and Mitigation Strategy

MITP will include activities that have several positive environmental and social impacts including connecting remote areas of the state to market places, education institutes, health services, as well as capacity building and job creation. However, many activities under the project include construction works that are likely to have negative environmental and social impacts. The project so far does not envisage constructing new roads. Thus, significant land acquisition is not anticipated. However, any encroachment on right of the way (RoW) will be removed as per approved RAP. Considering these aspects, the project has been classified as category A as per the World Bank's OP 4.01.

This chapter presents the preliminary screening of the project activities for E & S impacts, based on the information available at this stage of the project preparation process as well as discussion on mitigation measures against any negative impact anticipated.

5.1 Preliminary Environment and Social Impact Screening

A preliminary screening exercise of 14 road stretches across the State (most of which is proposed to undergo rehabilitation and or strengthening works under the Phase I of the project) was carried out to delineate the potential environmental and social impacts due to the activities identified in the project preparation stage.

Table 32: List of Roads Visited for Initial Screening

S.No.	Road Name	Type of Road	District
1	Laitkor Pomlakrai Laitlyngkot Road	MDR	East Khasi Hills
2	Shillong – Diengpasoh	SH	East Khasi Hills
3	Pasyih – Garampani	SH	West Jaintia Hills
4	Nartiang Janglo Barreto	ODR	West Jaintia Hills
5	Kynshi Myriaw Road MDR	MDR	Khasi Hills
6	Rd connecting to NH127B (1.2km inside)	ODR	Khasi Hills
7	Mawshynrut Hahim Road	SH	Khasi Hills
8	Rongram Rongrenggre - Darugre (RRD)	SH	Garo Hills
9	Agia - Medhipara - Phulbari - Tura (AMPT) Road	SH	Garo Hills
10	Bajengdoba-Resubelpara-Mendipahar Damra	MDR	Garo Hills

11	Rongjeng-Mangsang-Adokgre Road (33 rd to 43 rd Km)	SH	Garo Hills
12	Hatmawdon Rynku Road	MDR	Khasi Hills
13	Mawsynram Balat Shella Road	SH	Khasi Hills
14	Shillong Sohra (Cherrapunjee) Road	SH	Khasi Hills

The screening has been carried out based on three major parameters:

1. Potential impacts covering positive and adverse impacts which includes land, air quality, water quality, other biological factors and impacts of human and or any settlement/ establishment;
2. Nature of the potential impact which may be reversible or irreversible; and
3. Mitigation measures which should be applied to either avoid and or reduce the negativity of any potential impact.

5.1.1 Positive Impacts/Project's Benefits

The proposed Project Development Objective is to improve existing connectivity, and to provide safe hill roads. The improved connectivity is expected to enhance the accessibility to agricultural markets and thereby improve socio-economic status of the region. The improved accessibility is also expected to generate incidental benefits of improving cross-border trade with better quality of connectivity with Bangladesh.

The rehabilitation/major maintenance of parts of the core road network will address cumulative impacts arising due to poorly maintained road network, leading to landslides and thereby affecting the connectivity as well as agricultural produce in hill slopes.

Significant social benefits in the form of better access to basic amenities and services including health, public distribution, etc. Improvement in the capacity and effectiveness of the Meghalaya's PWD to deliver comprehensive road sector services.

The Environmental benefits to be generated by the Project, which include cumulative benefits are: (a) improved drainage in the project areas; (b) reduced landslides and soil erosion; (c) afforestation, enhancing degraded forests; and (d) introduction of "environment sensitized" construction management and machinery and landscaping of the project's surrounding areas, thus improving the aesthetics.

5.1.2 Anticipated Adverse Impacts and Mitigation Strategy

Following table list out the generic/ typical environmental and social impacts (adverse) that may arise from project activities as observed during the initial screening process (field visit to 14 stretches of roads of Phase I) for the preparation ESMF:

Table 33: List of Generic/ Typical E & S Adverse Impacts Relevant to the Project

Environmental Impacts and Indicative Mitigation Measures	
Impacts	Mitigation Measures
<p><u>Project roads abutting reserved and or protected areas (forest/ wildlife)</u></p> <p>Two of the project roads are adjoining to the protected areas as follow:</p> <ol style="list-style-type: none"> Umling - Patharkama Road, a stretch of road from chainage 18th km to 21st km is abutting a small stream which is adjoining to Nongkhyliem Wild Life Sanctuary. Shillong – Diengpasoh Road, is abutting Shyrwat Reserve Forest which is of 0.44 sq.km (No.FOR.179/80/187 of 28.3.1988) 	<p>For these roads and all future roads those that may run adjoining to any eco-sensitive zone as listed in this ESMF (national park, reserve forest, protected areas, wild-life sancturay, etc.) should apply for relevant clearances to the State and or Central Ministry as deem fit.</p> <p>For new roads, an alternative alignment should be identified to avoid any disturbance and or damage/ impact cause to such areas.</p> <p>The respective EIA should clearly mention the Laws and Regulations applicable to the those project sites and clearly identify the clearances that needs to be obtained before start of any work.</p> <p>Additionally, the respective EIA should also state what are the mitigation (protective) measures that should apply to avoid any impact.</p>
<p><u>Wildlife Corridors</u></p> <p>Umling - Patharkama Road, wildlife passess from km10, km12, km14 and km16, as per stakeholder feedback.</p>	<p>Relevant clearances from Forest Authority (State/ Central) should be obtained before start of any work.</p> <p>These stretches should kept clear of any hindrance and all civil work should be completed at the earliest.</p> <p>No night-time activities should be allowed in these areas and</p>

labour camps should not be established in near vicinity of these areas and all human-animal conflict should be avoided.

All kind of pollution (especially noise, land and water) by all means should be avoided.

Stone quarrying

Project is envisaged to use fresh aggregates and sand. Several quarries were observed to be operating contiguous to some of the roads visited. The quarrying operations at these sites appeared to be unscientific and unorganized leading to excessive dust pollution, at times disrupting the natural drainage system (i.e. springs) as well as damaging the environment in the vicinity.

There is a need for proper regulation of these operations through identification of proper quarry sites for extraction of raw material for the road works and installing of stone crushers. Hand broken aggregates shall be disallowed in the project.

Stone crushing and sand extraction

At one of the stones crushing and sand extraction unit

it was observed that the sludge thus formed after washing of stone aggregates and extraction of sand is discharged to the nearby natural stream without any primary treatment. The adjoining natural stream was thus red in colour indicating increased sediment load while sides of the natural drainage were found to be narrowing down due to sludge depositions.

The project should source aggregates from SPCB certified units only. As part of monitoring control, such units should mandatorily produce valid 'No Objection Certificate' (NOC) to operate and confirm that the aggregates produced and supplied to the project have been produced after following all necessary norms. The project should follow Mines and Mineral Development and Regulation Act, 1957 and State rules for procurement of aggregate.

Sand mining

Large scale sand mining from the riverbed was also observed at two locations in the Khasi Hills. This could be detrimental to the river ecology on the long-run resulting in altering of river course and flow downstream.

Procurement of sand from river mining operations should be avoided as it could be detrimental on the longer run, beyond the project period, changing the course of the river and leading to unseen environmental and social damages. The project should follow Mines and Mineral Development and Regulation Act, 1957 and State rules for procurement of sand.

Borrow Earth Management

For selection of borrow pits, amount that can be borrowed and its rehabilitation, the Indian Road Congress (IRC) guidelines should be followed. Borrow areas should not be located on cultivated lands. However, if it becomes necessary to borrow earth from temporarily acquired cultivated lands, their depth should not exceed 45 cm. Borrowing should be from land acquired temporarily and located at least 500 m away from the road. Borrow area near to any surface water body should be at least at a distance of 15 m from the bank or high flood level, whichever is maximum. In case of settlements, borrow pits should not be selected within a distance of 800 m from town or villages. If unavoidable, earth excavation should not exceed 30 m in depth. Borrow pits should be backfilled with rejected construction waste and covered with vegetation. Borrow areas can be used for aquaculture in case landowner wants such development. Borrow pits located near habitations should be redeveloped immediately after borrowing is completed.

Scraping/ Cutting of Hills and Felling of Trees

Proposed rehabilitation work under Phase I of the project will be restricted within the existing Right of the Way (RoW) without disturbing or diverting any forest or forest fringe area. However, for the remaining length of roads (i.e. Tranche-II, Tranche-III, 1350 km maintenance component), some widening activities are envisaged, leading to scraping and or cutting of hills. Hill cutting is expected to affect stability of natural slopes and if unattended could lead to landslides and soil erosion, particularly due to improper water management in the vicinity.

There could other chain of impacts such as loss of crops or farmland, land degradation due to silt/debris deposition, loss of vegetation as well as impacting the roads/ other infrastructure.

Disruption to Natural Drainage System

While proposed rehabilitation work under Phase I of the project may not disrupt any natural drainage, however, replacement of existing 'timber bridges' to 'RCC type', may require diversion of traffic to temporary

The unnecessary scraping, cutting, clearing of vegetation should be avoided. If possible alternative alignment should be analysed.

Additionally, where unavoidable the area of ground clearance should be reduced, the slopes should be replanted with local vegetation and their routine maintenance should be included in the road maintenance schedule. Further, measures should be employed to control volume and flow rate of the runoff in the area. Bio-engineering solutions should be explored to mitigate these kind of issues.

Furthermore, should there be any need of mature tree felling, possible transplant option should be explored, such that the carbon stock stored by the tree is not lost.

Towards this, a spring inventory on planned roads is needed. It is advisable that natural drainage patterns be left undisturbed as far as possible. Whenever it is necessary, appropriate mitigation measures and drainage works such as causeways should be created for natural movement of

pathways which may intercept flowing streams/ natural drainage sites.

stream flow – whether or not perennial.

For the waterway transports stream-simulation approach should be considered during the design process to reduce the chances of the structure becoming clogged. Stream simulation also allows aquatic and riparian processes to function without interruption through a road-stream crossing interface. It provides passage for all life stages of fish and other aquatic species present in the system because the waterway channel is continuous through the crossing structure, and are natural substrate, stream banks and in some cases, vegetation. Following are the basic principle:

-Designing crossing structures (usually culverts), that creates a structure that is as similar as possible to the natural channel.

-When channel dimensions, slope and streambed structure are similar, water velocities and depths also will be similar. Therefore, the simulated channel should present no more of an obstacle to aquatic animals than the natural channel.

-All road related activities, including debris storage, drainage etc. need to be planned ensuring that the natural flow of these springs is not disrupted.

Roadside drainage

The drainage of roads and roadsides must be designed to minimise impacts on adjacent vegetation and habitats.

Roadside vegetation can perform many important functions, including the provision of habitat for rare plant and animals, a source of seeds for adjacent landscape, a buffer to reduce the penetration of traffic noise and light, carbon sinks and enhanced aesthetic for road users. It may differ from site to site. Therefore, it is important to address these issues during the EIA process.

Generation of debris and its disposal

While it is expected that the project will strive to reuse materials of good quality in rehabilitation process (such as providing hard shoulders), however it is still expected that a significant amount of debris will require to be dumped.

All project should identify safe space for collection of debris. Such debris should be collected and disposed in frequent intervals per the capacity of the space.

Due care should be taken during the site clearance and disposal of debris so that public/private properties are not damaged or effected, and no traffic is interrupted. The debris should be stored at site ensuring that existing water bodies and drains within or adjacent site are kept safe and

Discussions on common practices suggest that due to space constrains (both for

operations of dumpers to collect the rejects free and no blocking of drains occur. All efforts should be as well as space for dumping), rejects/ mucks made to use debris in road construction or any other public are often dumped at the valley side of the utiliites. All liquid waste like oils and paint waste should be hill. This often leads to soil-erosion/ landslide stored at identified loctions and preferably on cemented at the valley-side. floor.

In the plain area most of the road stretches were found either being surrounded by agricultural fields or built-up areas. In such cases it is envisaged any mishandling of debris could lead to damages, either in form of agricultural loss or loss of community structures.

Should there be any agricultural field just beside the shoulder of the road and or settlement, and high dust settlement is expected during handling of debris, surrounding communities should be informed of such activities and advise them of the measures to be taken to protect themselves. For instance, farmers and fisheries can be provided with green dust protection net to avoid settling of dust on the agricultural fields/ ponds.

All standard precautions and procedures should be followed for emergency preparedness and occupational health and safety during construction and handling a waste.

Effects on Water source and water Quality

Uncontrolled construction activities such as cutting and filling, disposal of construction waste and spoil, erosion and soil movement due to road construction activities like quarrying and borrowing, etc. cause increase in turbidity/silt content of streams and rivers.

Protection measures should be used are soil erosion control measures, construction of settling basins, good house-keeping of construction activities, reuse or controlled disposal of oil/grease/chemicals, precaution to avoid accidental spills, and restricted entrance to drinking water sources.

Improper sanitation of workers in camp or local inhabitants may also pollute water, particularly drinking water sources. Surface water may be polluted by road run-off containing oil, grease, lubricants and other chemical spills. Other water pollution sources include wastewater generated by the new activities (hotels, industries, settlements) due to construction/ rehabilitation of roads and bad sanitation practices (open field defecation, discharging wastewater into water bodies, dumping solid wastes into or near to the water bodies, etc.).

The construction camp, if needed, should be provided with appropriate waste disposal and sanitation facilities in order to avoid any contamination with drinking water source.

Instability, Landslide and Soil Erosion

Instability, landslide and soil erosion are the major environmental impacts associated with road construction in project districts. This is particularly due to hilly and mountainous terrain and weak and vulnerable geological

An investigation of soil types and hydrogeology together with land use patterns and rainfall trends is needed to ascertain the causes of these landslides. The slopes should be re-planted with local vegetation and their routine maintenance should be included in the road maintenane

areas. The problem generally results from interaction between water flow and soil, both of which are disturbed by road construction. The situation gets worse if vegetation is also cleared. Fresh cut slopes and embankments are relatively more vulnerable to landslides and soil erosion, particularly due to improper water management in the vicinity.

schedule. Further, measures should be employed to control volume and flow rate of the runoff in the area. Bio-engineering solutions should be explored to mitigate these kind of issues.

Agricultural practices leading to land disturbances

The extensive plantation of Arecanut, alongside the road, especially in Garo Hills was observed. Some of the landslides showed evidence of being caused because of these plantations, whose rootstock has less soil binding properties. Further, in order to plant the Arecanut, land is cleared of all foliage increasing soil erosion and rates of water runoff. This may have negative impacts on the roads created under this project rather other way round.

Slope stabilisation through bioengineering measures using local species and providing alternatives to Arecanut needs to be considered in light of these observations.

Given the increasing incidence of landslips and landslides, the project needs to include bio-engineering measures as well as consider soil and water conservation measures in convergence with the Soil and Water Conservation Department and the Community and Natural Resource Department (CNRD); This could be piloted in villages being covered under the World Bank Community Led Landscape Management Project (CLLMP)

Air and Noise Pollution

Air pollution due to vehicle emission and noise are generally not major issues in these project roads since the traffic volume is extremely low. However, the dust raised and blown by vehicles may significantly pollute the air in the areas adjacent to construction sites or earthen/gravel roads. Direct effects of dust could be health hazards to road workers, residents adjacent to road and/or interference on plant/crop growth in the vicinity.

Careful management of construction sites, storage of construction materials, management of road surface and simple dust control measures like water sprinkling in sensitive places can reduce this problem.

Social Impacts and Indicative Mitigation Measures

Impacts	Mitigation Measures
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Impact on Archaeological/Protected Monuments and Cultural Properties

Cultural properties in the form of memorial stone in different shape have been noticed adjacent to the existing roads. Graves are

Appropriate stakeholder consultation should be conducted to identify such areas. It is advisable to avoid any widening

located next to formation width for the road apart from which there are lands belonging to church etc., which may be impacted. The State is also famous for caves of archaeological importance. Some new caves are also being discovered. .

intervention in such areas. Engineering measures should be applied to protect those areas from any damages as well as segregate from traffic flow.

Loss of agricultural, homestead, commercial land

Many of the road stretches have proposed for upgradation from single lane to intermediate lane. The widening will require land acquisition, leading to possible change of land use pattern – agriculture/ forest to built-up area and potentially resettlement.

All land acquisition should be as per The Meghalaya Land Transfer of Land Regulation Act, 1971 and The Meghalaya Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2017. Affected person/ household/ community should be compensated per the given law. Processes to ensure that these stakeholders are assisted during the project, even if they are not legal titleholders would need to be put in place.

Loss of livelihood

There may be negative economic impacts on small businesses/traditional and small- scale / farmers/ individuals informally working in the structure/site/area to be rehabilitated. Vendors or small businesses removed or displaced from their original locations may be unable to return to these once they have been rehabilitated, thus facing significant loss of income. Resettlement Action Plan will have measures to restore livelihoods.

Relocation of structures

Structures, such as street vendor stalls, may need to be moved or relocated in case of road widening. Resettlement Action Plan will be prepared in line with agreed RPF in case of any adverse impact on the structures whether residential or commercial.

Road Safety Issues

There is a practice of putting up weekly markets in various villages/areas. It was observed that stalls set up both sides along the roads were encroaching up on the carriageway, with buyers spilling over on the roads. Vehicles are also parked haphazardly on the carriageway. The net result is congestion on the road with very limited space available to traffic movement. There is also safety risk to the pedestrians envisaged.

To resolve this issue, it is proposed that a dedicated area in the vicinity of the roads be allocated for setting up stalls along with provision for vehicle parking. Also, the pedestrian footpaths at such locations need to be provided with barricade so as to effectively segregate the pedestrians from the moving vehicles and decongest the traffic. The development of such sites can form a part of the project as a sub-component of traffic improvements. Revenue, CNRD and the PW Departments will be required to work jointly to identify areas and ways to raise people awareness on need for decongestion of traffic and safety issues. Adequate

Another road safety risk identified was

springs contiguous to the road, that are used by women and children and are also in use at night. Furthermore, approach to few schools, hospitals, public health centres opens directly over the roads, without any signage or speed breakers. This could lead to unsafe interception of traffic and pedestrians.

Loss of and /or loss of access to common property resources

provisions should be made in the project design for safety near schools, hospitals and other sensitive locations. Provisions to ensure that vehicles and users of the spring are safe from accidents need to be ensured, by providing signage, barriers or lighting solutions jointly with CNRD. -

Common property resources structures even falling within ROW but out of required formation width should be saved to the extent feasible through engineering measures. In case of loss of access, the project will provide alternative access in consultation with the community to ensure no adverse impact on the business of the local community.

In case any CPR is adversely impacted, project will re-construct the property.

Labour Management Procedures

Road construction will require migrant labourers and will be accommodated in labour camps.

The labour camps will be managed as per the labour management plan agreed between contractor and PWD.

Labour influx and impact on local population during construction

The contractor will preferably engage the local labour force except for the labourers requiring special skills and the non-availability of such skilled laborers from the local area.

Awareness raising of laborers/ workers on societal norms, taboos, and other cultural practices

Organise awareness creation and educational programmes for all workers and the general public on the behavioural changes required to prevent the spread of HIV/AIDS and other STDs

The 'Labour Influx and Construction Workers Campsite Management Plan' will be implemented

Project to assess and manage labour influx risk based on risks identified in the ESIA. Depending on the risk factors and their level, appropriate site-specific Labour Influx Management Plan and/or a Workers' Camp Management Plan.

The project will incorporate the ESMP into the civil works contract. The responsibilities for managing these adverse impacts will be clearly reflected as a contractual obligation,

with a mechanism for addressing non-compliance.

Employment of any person under 18 years of age will be strictly prohibited. The contractor will maintain a labour register with name, age, and sex with supporting document (preferably copy of Aadhar card or voter's ID card). This will be monitored by the Environmental and Social office of contractors.

Contractor and labourer will sign a code of conduct to maintain good manners with the community and avoid GBV

Project will undertake awareness raising program for the workers and community on the risk of labour influx.

Conflict with Community

During the implementation phase, there might be a conflict with the local community despite having the consultation meetings. These can happen due to the apprehension of inconvenience, the influx of workers or fear of loss or inaccessibility to the common resources. Community consultation will be an ongoing activity to avoid any kind of conflict with the community.

5.2 Unacceptable of Environmental Impacts

The project will not support following activities which may have severe, irreversible, long-term, adverse environmental impacts.

1. Any activity located within a notified Eco Sensitive Zone (ESZ) and is prohibited from being implemented within an ESZ;
2. Any activity that converts or leads to conversion and/or degradation of significant areas of critical natural habitats (areas officially protected) and/or other natural habitats (including wetlands of significance) and designated forest areas;
3. Any activities involving construction within 100 meters from an cultural, historical and or archeological site/monument.
4. Any activity that violates the provisions of applicable National and State laws.

Chapter: 6 Resettlement Policy Framework

The Resettlement Policy Framework (RPF) provides a guide the preparation of the Resettlement and Rehabilitation Action Plan (R&R Action Plan) depending upon the scale and severity of impacts that may arise, temporary or permanent land acquisition or resettlement and rehabilitation is inevitable. Thus, the objective of the RPF is to ensure that the Project Affected Persons (PAPs) get compensation for their loss, are offered resettlement measures, and are supported in improving or at least restoring their levels of living and income after the project impact to pre-project levels. The RPF is intended to safeguard the interests of the population impacted by the project, especially the poor and vulnerable. The RPF is based on applicable Policies of Gol, State government (herein Govt. of Meghalaya) and the World Bank.

Both the RFCTLARR Act 2013, followed by State rules (2017) of the act and the World Bank Operation Policy on involuntary resettlement (discussed in detail in Chapter 3) aim to ensure that involuntary resettlement should be avoided or minimized, wherever feasible, exploring all viable alternative project designs. Where displacement is unavoidable, people losing assets, livelihood or other resources shall be assisted in improving or at a minimum regaining their former status of living at no cost to themselves.

Also, World Bank safeguards policy requires stakeholder consultation with PAPs (presented in Chapter 10 and Annex 2) during planning and implementation of resettlement action plan and indigenous/ tribal development plan. Once the draft is prepared it is to be made available at a place accessible to, and in a form, manner and language understandable to the displaced or affected people and local NGOs.

The project is likely to have broadly three type of impacts that require mitigation measures. These are:

- 1. Loss of immovable assets viz., land, house, commercial establishments, wells, ponds etc.**
- 2. Loss of livelihood or income opportunities viz, for agriculture labours, helping hands in commercial establishments etc.**
- 3. Impact on the community in terms of loss of common property resources.**

The first two categories represent direct impacts on an identified population. The people likely to be affected will be surveyed and registered, and project monitoring and evaluation will compare long term impacts against baseline socio economic data.

The third category represents a group impact, where gains and losses of a group-oriented nature are not quantifiable in terms of impact on the individual. Mitigation and support mechanism will be collectively oriented, and the monitoring will focus on impact on such groups.

This framework provides the following policy notes for preparation of R&R Action Plan:

1. All negative impacts including displacement should be avoided or minimized wherever feasible by exploring all viable alternative project designs.
2. Where negative impacts are unavoidable, efforts should be made either to improve the standard of living of the affected persons or at least assist them in restoring their previous standard of living at no cost to them.
3. All information related to resettlement and rehabilitation action plan preparation and implementation should be disclosed to all concerned, and community participation should be ensured in planning and implementation.
4. The principles of mutual consent and negotiated settlement may also be applied for land acquisition as required.
5. The persons affected by the project who does not own land or other properties but who have economic interest or lose their livelihoods will be assisted as per the broad principles brought out in this policy.
6. Before taking possession of the acquired lands and properties, compensation and R&R assistance will be made to those who are available and willing to receive the entitlements in accordance with this policy (given entitlement matrix presented at the end of this chapter).
7. Broad entitlement framework of different categories of PAP/ PAF as envisaged has been assessed and is given in the entitlement matrix. Provision will be kept in the project budget. However, anyone moving into the project area after the cut-off date will not be entitled to assistance.
8. Three tier appropriate grievance redress mechanism should be established at project level to ensure speedy resolution of disputes.
9. All activities related to resettlement planning, implementation, and monitoring should ensure involvement of women. Efforts should be made to ensure that vulnerable groups are included and people's participation during the course of the project cycle.
10. All consultations with PAPs shall be documented and continuous consultations to be carried out during the implementation of resettlement and rehabilitation works.
11. Support to be extended under the broad principles of this policy to meet the replacement value of the assets and loss of livelihood.
12. The policy further recognizes extension of support to non-titleholders for the loss of livelihood and replacement value for assets other than land.
13. The common property resources should be replaced as far as feasible and if not, then assistance should be provided at replacement value to the group.
14. Before taking possession of the acquired lands and properties, all compensation, resettlement and rehabilitation would be made in accordance with this policy. Contractor will ensure that access to residences or business or agricultural land is not blocked during construction or subsequently. The easement rights for the villagers shall be ensured while planning the layouts for the solar parks. The NGO responsible for R&R implementation and M&E consultants will bring it to the notice of project authorities if contractor fails to do so.
15. In case of displacement, resettlement sites will be developed as part of the project. In such circumstances care should be taken so that there is no/or minimum adverse social, economic and environmental effects of displacement on the host communities.
16. Before taking possession of acquired land, sufficient time would be provided to harvest the crop.
17. The implementation of the R&R Action Plan should be synchronized with the execution of works under the project.

For tribal the following provisions will be adhered to:

1. Each PAP/ PAFs of tribal category shall be given preference in allotment of land.
2. Tribal PAFs will be re-settled close to their natural habitat in a compact block so that they can retain their ethnic/linguistic and cultural identity

3. The Tribal Land Alienated in violation of the laws and regulations in force on the subject would be treated as null and void and-the R&R benefits would be available only to the original tribal land owner.

6.1 Some Common Definitions

The following definitions are used in the documents:

Cut-off Date: In the cases of land acquisition affecting legal titleholders or non-title holders, the cut-off date would be the date of issuing the publication of preliminary notification u/s 11(l) of RFCTLAR Act, 2013.

Project Affected Person (PAP): Person who is affected in respect of his/her land including homestead land and structure thereon, trade and occupation due to construction of the project.

Project Displaced Person (PDP): A displaced person is a person who is compelled to change his/her place of residence and/or work place or place of business, due to the project.

Projected Affected Family (PAF): Family includes a person, his or her spouse, minor children, minor brothers and minor sister's dependent on him. Provided that widows, divorcees and women deserted by families shall be considered separate families. Additionally, an adult of either gender with or without spouse or children or dependents shall be considered as a separate family for the purpose of this Act.

Land Owner: Land owner includes any person - whose name is recorded as the owner of the land or building or part thereof, in the records of the authority concerned; or Any person who is granted forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 or under any other law for the time being in force; or Who is entitled to be granted Patta rights on the land under any law of the State including assigned lands; or any person who has been declared as such by an order of the court or Authority.

Marginal Farmer: Marginal farmer means a cultivator with an un-irrigated land holding up to one hectare or irrigated land holding up to one half hectare, or as may be defined by the concerned state government.

Small Farmer: Small farmer means a cultivator with an un-irrigated land holding up to two hectares or irrigated land holding up to one hectare, but more than the holding of a marginal farmer, or as may be defined by the concerned state government.

Encroacher: A person who has trespassed Government/ private/community Land, adjacent to his or her land or asset to which he/she is not entitled and who derives his/her livelihood and housing there from prior to the cutoff date.

Squatter: A squatter is a person who has settled on publicly owned land for housing or livelihood without permission or who has been occupying publicly owned building without authority prior to the cutoff date.

Landless/Agriculture Labour: A person who does not hold any agriculture land and has been deriving his main income by working on the lands of others as sub-tenant or as an agriculture labour prior to the cut-off date.

Below Poverty Line (BPL): A household, whose annual income from all sources is less than the designed sum as fixed by the planning commission of India, will be considered to be below poverty line (BPL).

Vulnerable Person: Those people falling under BPL line category/ vulnerable community as defined by the central government. The Vulnerable group may include but not be limited to the following:

1. Member of Scheduled caste/tribe community/other backward community.
2. Women Headed households.
3. Senior citizen-person above the age of 60 years.
4. Landless
5. Village artisan

6.2 Process for RAP Preparation

The project roads include rural roads, major district roads and state highways. Different measures will be followed for different categories of road as explained below:

6.2.1 Rural Roads:

For rural roads, the existing PMGSY guidelines will be followed. The rural roads will be built under PMGSY guidelines and will be constructed along the existing tracks used by rural traffic. For a few roads, small quantities of additional land if required to improve the geometry at isolated locations, will be transferred by donation or directly purchased. The project will ensure that there is no relocation due to rural roads. The alignment will be finalized in consultation with the community through transect walk. The land will be transferred through a gift-deed on a non-judicial stamp paper and will be executed between the titleholder and State PWD.

6.2.2 Other Roads:

The project will use a structured approach to social management following the hierarchy of avoidance, minimization, compensation/mitigation for negative impacts and enhancement of positive impacts where practically feasible and advantageous. In order to do so, each sub project will be screened to identify any likelihood of adverse social impacts due to project intervention. The screening checklist will also help identify activities having limited or insignificant social impacts for which further assessment could be limited in scope or may not be required.

6.2.3 Details of the Screening Process

The steps to be followed include the following:

1. Confirm the presence of socially sensitive areas from secondary sources or preliminary site observations.
2. Verify the extent of applicability of GoI, state (GoM) and World Bank policies in project activities.
3. Identify potential negative and positive impacts; provide clarity on which issues need to be investigated more comprehensively during preparation of Social Impact Assessment that will be done during the design stage.

This should help with finalizing project alignments and factoring in timelines like those associated with regulatory clearance processes into project implementation.

The process of preparing the social screening checklist and scoping will typically cover:

1. Describing the proposed project activities and alternative options.
2. Identifying the potential social impacts of the options.
3. Undertaking a preliminary evaluation of the potential social impacts of the options.
4. Consulting local officials on the options, and the potential impacts.
5. Describing the preliminary consultation with relevant agencies and local community. The focus of these consultations would be informing the local community, reviewing the likely issues and problems.
6. Selecting a preferred option. The appraisal of the available DPR / Feasibility study reports should be included from social perspective.

The following checklist will help identify the components that need to be investigated during the screening process.

Table 34: Checklist to be used during Screening Process

Land Use, Resettlement, and/or Land Acquisition				
Sl.no	Components	Yes	No	Details
1	Does the project involve acquisition of private land?			
2	Alienation of any type of Government land?			
3	Clearance of encroachment from Government?			
4	Clearance of squatters/hawkers from Government/ Urban Local Body Land?			
5	Number of structures, both authorized and/or unauthorized to be acquired/ cleared/			
6	Number of households to be displaced?			
7	Details of village common properties to be alienated Pasture Land (acres) Cremation/ burial ground and others specify?			
8	Describe existing land uses on and around the project area (e.g., community facilities, agriculture, tourism, private property)?			
9	Will the project result in construction workers or other people moving into or having access to the area (for a long time period and in large numbers compared to permanent residents)?			
10	Are financial compensation measures expected to be needed?			
Loss of Crops, Fruit Trees, Household Infrastructure and livelihood				
Sl.no	Components	Yes	No	Details
11	Will the project result in the permanent or temporary loss of the following?			
11.1	Crops?			
11.2	Fruit trees / coconut palms? Specify with numbers			
11.3	Petty Shops/ Kiosks			
11.4	Vegetable/Fish/Meat vending			
11.5	Cycle repair shop			
11.6	Garage			
11.7	Tea stalls			
11.8	Grazing			

11.9 Loss of access to forest produce (NTFP)

11.10 Any others – specify

Welfare, Employment, and Gender

Sl.no	Components	Yes	No	Details
12	Is the project likely to provide local employment opportunities, including employment opportunities for women?			
13	Is the project being planned with sufficient attention to local poverty alleviation objectives?			
14	Is the project being designed with sufficient local participation (including the participation of women) in the planning, design, and implementation process?			

Historical, Archaeological, or Cultural Heritage Sites

Sl.no	Components	Yes	No	Details
Based on available sources, consultation with local authorities, local knowledge and/or observations, could the project alter:				
15	Historical heritage site(s) or require excavation near the same?			
16	Archaeological heritage site(s) or require excavation near the same?			
17	Cultural heritage site(s) or require excavation near the same?			
18	Graves, or sacred locations or require excavations near the same?			
Tribal Population/Indigenous People				
19	Does this project involves acquisition of any land belonging to Scheduled Tribes?			
Beneficiaries				
20	Population proposed to be benefitted by the proposed project			
21	No. of Females proposed to be benefitted by the proposed project			
22	Vulnerable households /population to be benefitted			
23	No. of BPL Families to be benefitted			

This Screening sheet must be completed for each of the proposed roads / project sites by respective PWD division and forwarded to the Social Specialist of PMU along with following enclosures.

Enclosures: Land details for the project sites, location, survey numbers, extent available and required, land use classification, current use of the site, land ownership, alienation/acquisition status, FMB extracts, as required along with a certificate giving availability of sites required for the project by the borrower.

The results of the above checklist will help identify the scope of the SIA.

6.2.4 Social Impact Assessment

The multi-tiered governance institutions in the state, the multiplicity of tribes, ideas and ideologies make it such that there cannot be a standardized or general idea of “Meghalaya”. This multi-faceted state requires a Social Assessment to be conducted so that social impacts of the project can be effectively managed.

1. SIA evaluates a project's potential social risks and impacts in the project area of influence, examines the alternatives (including no project scenario), identifies measures to mitigate the social impacts and improvement of benefits throughout project implementation. Wherever feasible, preventive measures would be undertaken.
2. The borrower is responsible for carrying out the SIA. SIA shall start by the preparation of draft project documents (DPRs)/ Feasibility Report (after pre-feasibility report) ideally so that the findings/mitigation measures can be incorporated early on into the design.
3. SIA will include collection of both secondary and primary data. The primary data will be collected through household surveys of potentially impacted persons, consultation and focus group discussions with the general public and other stakeholders.
4. The opinion of the stakeholders and public shall be incorporated in the project through specific public consultations with prior notice.
5. In addition, the draft SIA shall be made available in a public place in English and local language well; accessible to affected groups and local NGOs.
6. Implications of the available legislations and regulatory requirements and the requirements of the operational policies of the World Bank are also to be reviewed as part of the SIA. The SIA report shall meet the requirements of national and state level legislations and disclosure requirements of the World Bank.
7. SIA report shall include an Executive summary, Introduction / Project background, Project Description including review of alternatives (including no-project scenario), review of Legislations, Baseline social conditions, Impact Evaluation, Public consultation details, Management and Monitoring Plan, implementation schedule and budget.
8. The final SIA report in English with a non-technical summary in respective local language, shall be disclosed as per applicable disclosure policy; in the websites of the implementing agencies and will be made available in places accessible to the local people.

6.3 Resettlement and Rehabilitation Action Plan

Based on the findings of SIA and in case the project requires involves land acquisition against compensation or loss of livelihood or shelter, the project shall ensure that a satisfactory 'Resettlement and Rehabilitation Action Plan' (R&R Action Plan) be prepared under the Social Management Plan (SMP) and share with the affected person and the local community in the language understood by them. The contractor shall not start the work until compensation and assistance has been made available in accordance with this framework.

R&R Plan document should provide a link between the impacts identified in the ESIA study and proposed mitigation measures and clearly articulate the objectives of involuntary resettlement. The RAP should consider magnitude of impacts and accordingly prepare a resettlement and rehabilitation plan that is consistent with this framework for Bank approval before the project activities are accepted for Bank financing.

Projects that are not expected to have any land acquisition or any other significant adverse social impacts; on the contrary, significant positive social impact and improved livelihoods are exempted from such interventions.

Project basis R&R plans shall be developed based on the Government of Meghalaya published gazette notification "Meghalaya Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation (RFCTLAR&R) Rules, dated 25th Spetember, 2017 and World Bank Operational Policy 4.12 on involuntary resettlement.

Every Resettlement and Rehabilitation Action Plan (R&R Action Plan) thus prepared shall contain the following particulars:

- 1. Baseline:**
 1. Village-wise or municipality-wise list of project affected families and likely number of displaced persons by impact category.
 2. Family-wise and the extent and nature of land and immovable property in their possession indicating the survey numbers thereof held by such persons in the affected zone.
 3. Socio-economic survey of affected people including income/asset survey of PAPs.
 4. Information on vulnerable groups or persons for whom special provisions may have to be made
- 1. Impact:**

1. The extent of area to be acquired for the project, the name(s) of the corresponding village(s) and the method employed for acquiring land with the relevant documentation.
2. Adverse impact on common property resources including cultural properties
3. Impact on host community due to labour influx
4. Any indirect impact

1. Quantification of impacts in terms of number of:

1. Agricultural labourers in such area and the names of such persons whose livelihood depend on agricultural land to be acquired;
2. Persons who have lost or are likely to lose their employment or livelihood or who have been alienated wholly and substantially from their main sources of occupation or vocation consequent to the acquisition of land and / or structure for the project;
3. Occupiers on the government land, if any;
4. Number of public utilities, government buildings, cultural properties which are likely to be affected.

1. Mitigation Measures and Entitlements:

1. Comprehensive list of benefits and packages which are to be provided to project affected families by impact category.
2. Measures to address impact on host community due to influx of migrant labour.
3. Gender Action Plan

1. Relocation:

1. Details of the extent of land available which may be acquired in settlement area for resettling and allotting of land to the project affected families.
2. Details of the basic amenities and infrastructure facilities which are to be provided for resettlement.

1. Consultation Results and incorporation of community suggestions / feedback in project design

2. Implementation Arrangements

1. Institutional mechanism for RAP implementation.
2. Consultation strategy; a disclosure plan and a capacity building plan
3. Grievance redressal mechanism
4. The time schedule for shifting and resettling the displaced families in resettlement zones.

1. Monitoring and Evaluation

1. Mechanism for internal monitoring

2. Mechanism for external evaluation
3. Indicators for monitoring and evaluation; and

2. Budget

6.4 Entitlement Matrix for PAPs/ PAFs

Table 35: Entitlement Matrix for PAPs/ PAFs

S. No.	Application	Definition of Entitled Unit	Entitlement	Details
A. Loss of Private, Agricultural or Commercial Land				
1	Land for the Project	Titleholder of the land/ family/ families with legal holding rights and or traditional Land Rights	<p>In case of voluntary consent to gift land to the State for public purpose</p> <p>Compensation in accordance with the First Schedule and rehabilitation and resettlement specified in the Second and Third Schedules of the RFCTLARR Act 2013</p>	<p>In case of voluntary donation of land through mutual understanding, then a gift-deed on stamp-duty will be executed between the titleholder and State PWD and one-time subsistence allowance of equivalent to at a rate of three thousand rupees per month for a period of one year from the date of the deed executed will be granted.</p>
			<p>In case of request for compensation for lost of land providing livelihood</p> <p>Compensation in accordance with the First Schedule and rehabilitation and resettlement specified in the Second and Third Schedules</p>	<p>In such cases the title holder will be offered “land for land” if available and a gift-deed on stamp-duty will be executed between the titleholder and State PWD. The land if allotted will be in the same name. For a household it will be allotted to both husband and wife.</p> <p>In addition to this amount, in case of Scheduled Castes and the Scheduled Tribes displaced from Scheduled Areas shall receive an amount equivalent to fifty thousand rupees and, as far as possible, the affected families shall be relocated in a similar ecological zone, so as to preserve the economic opportunities, language,</p>

			of the RFCTLARR Act 2013	culture and community life of the tribal communities.
			<p>In case consented to part with the land at market value.</p> <p>Compensation in accordance with the First Schedule and rehabilitation and resettlement specified in the Second and Third Schedules of the RFCTLARR Act 2013</p>	<p>In case the titleholder of the land provides consent to give the land in lieu of “cost of the land to be paid”, then market value of the land will be paid to the concern person/ family.</p> <p>The market value of the land will be determined in followiing manner:</p> <p>–(1) The Collector shall adopt the following criteria in assessing and determining the market value of the land, namely:—</p> <p>(a) the market value, if any, specified in the Indian Stamp Act, 1899 (2 of 1899) for the registration of sale deeds or agreements to sell, as the case may be, in the area, where the land is situated; or</p> <p>(b) the average sale price for similar type of land situated in the nearest village or nearest vicinity area; or</p> <p>(c) consented amount of compensation as agreed upon under sub-section (2) of section 2 in case of acquisition of lands for private companies or for public private partnership projects, whichever is higher.</p> <p>Provided that the date for determination of market value shall be the date on which the notification has been issued under section 11.</p>

				In case it is a rural land, the final value of the land will be determined by multiplying the value of land with a factor of two(2).
	Residual land (in case only part of land requires to be acquired for the project)	Titleholder family and families with traditional land Right	Compensation in accordance with the First Schedule of the RFCTLARR Act 2013	In case residual land is found to be economically unviable, PAPs/ PAFs have the choice of: <ol style="list-style-type: none"> 1. selling off the residual land at the market value to the project 2. take 25% of the compensation value and retain the land parcel.
B. Loss of Private Structures (Residential/Commercial)				
2	Loss of Structure	Title Holder/ Owner	Compensation in accordance with the First Schedule and rehabilitation and resettlement specified in the Second and Third Schedules of the RFCTLARR Act 2013	<p>A cash compensation for the loss of structure will be offered at market value which would be determined as per as per section 29 of the RFCTLARR Act 2013.</p> <p>If a housing unit is lost in rural area, then a a constructed house shall be provided as per the Indira Awas Yojana specifications. If a house is lost in urban areas, a constructed house shall be provided, which will be not less than 50 sq mts in plinth area.</p> <p>The house if allotted will be in the name of both husband and wife.</p> <p>The benefits listed above shall also be extended to any affected family which is without homestead land and which has been residing in the area continuously for a period of not less than three years preceding the date of notification of the affected area and which has been involuntarily displaced from such area.</p> <p>Any affected family in urban areas which opts not to take the house offered,</p>

				<p>shall get a one-time financial assistance for house construction, which shall not be less than one lakh fifty thousand rupees.</p> <p>Any affected family in rural areas so prefers, the equivalent cost of the house may be offered in lieu of the constructed house.</p> <p>7. Each affected family which is displaced from the land acquired shall be given a monthly subsistence allowance equivalent to three thousand rupees per month for a period of one year from the date of award.</p> <p>8. In addition to this amount, the Scheduled Castes and the Scheduled Tribes displaced from Scheduled Areas shall receive an amount equivalent to fifty thousand rupees.</p> <p>9. Each affected family having cattle or having a petty shop shall get one-time financial assistance to a minimum of twentyfive thousand rupees for construction of cattle shed or petty shop as the case may be</p> <p>10.Each affected family of an artisan, small trader or self-employed person or an affected family which owned non-agricultural land or commercial, industrial or institutional structure in the affected area, and which has been involuntarily displaced from the affected area due to land acquisition, shall get one-time financial assistance to a minimum of twenty-five thousand rupees</p> <p>11.Each affected family shall be given a one-time —Resettlement Allowance of fifty thousand rupees only.</p> <p>B</p>
3	Structure	Tenants/ Lease Holders	Resettlement & Rehabilitation Assistance	Registered lessees/ tenants will be entitled to compensation payable to structure owner in case the lessee has erected any of the structure as per

				<p>applicable local laws.</p> <p>b) A three months vacating notice will be provided along with one-time Resettlement Allowance of fifty thousand rupees only.</p>
C. Loss of Trees and Crops				
4	Standing Trees, Crops	Owners and beneficiaries (Registered/ Un-registered tenants, contract cultivators, leaseholders & sharecroppers	Compensation at market value	<ol style="list-style-type: none"> 1. Three months advance notice to project affected persons to harvest fruits, standing crops and removal of trees. Compensation to be paid at the rate estimated by: <ol style="list-style-type: none"> 1. The Forest Department for timber trees 2. The State Agriculture Extension Department for crops 3. The Horticulture Department for fruit/flower bearing trees. 2. Registered tenants, contract cultivators & leaseholders & sharecroppers will be eligible for compensation for trees and crops as per the agreement document between the owner and the beneficiaries. 3. Un-registered tenants, contract cultivators, leaseholders & sharecroppers will be eligible for compensation for trees and crops as per mutual understanding between the owner and the beneficiaries.
D. Loss of Residential/ Commercial Structures to Non-Titled Holders				
5	Structures on Government land	Owners of Structures or Occupants of structures	Resettlement & Rehabilitation Assistance	<ol style="list-style-type: none"> 1. Non-titleholder shall be given three months' notice to vacate occupied land and provided with cash assistance at replacement cost for loss of structures as described in section 29 of the RFCTLARR Act 2013.

		identified as per Project Census Survey		2. All squatters (other than kiosks) will be eligible for one-time grant of rupees thirty-six thousand as subsistence allowance as per section 29 of the RFCTLARR Act 2013.
E. Loss of Livelihood				
6	Families living within the project area	Title Holders/ Non-Title holders/ sharecroppers, agricultural labourers and employees	Resettlement & Rehabilitation Assistance	<ol style="list-style-type: none"> 1. Subsistence allowance of rupees thirty-six thousand as one-time grant. 2. Training Assistance of rupees ten thousand for income generation per family. 3. Temporary employment in the project construction work to project affected persons with particular attention to vulnerable groups by the project contractor during construction, to the extent possible and preference in the employment of semi-skilled and unskilled jobs in the project with adequate training for the job/ or 4. One time payment of five lakhs rupees per affected family
F. Additional Support to Vulnerable Families				
7	Families within project area	As per definition of vulnerable	Resettlement & Rehabilitation Assistance	One-time additional financial assistance of rupees fifty thousand.
G. Loss of Community Infrastructure/Common Property Resources				
8	Structures & other resources (e.g. land, water, access to structures	Affected communities and groups	Reconstruction of community structure and common property resources	Reconstruction of community structure and Common property resources in consultation with the community.

	etc.) within the project area			
H. Temporary Impact During Construction				
9	Land & assets temporarily impacted during construction	Owners of land & Assets	Compensation for temporary impact during construction e.g. damage to adjacent parcel of land / assets due to movement of vehicles for transportation of equipment's, machinery and construction activities for infrastructure development.	Compensation to be paid by the contractor for loss of assets, crops and any other damage as per prior agreement between the 'Contractor' and the 'Affected Party'.
I. Resettlement Site				
10	Loss of residential structures	Displaced titleholders and non-titleholders	Provision of resettlement site/ vendor market	<ol style="list-style-type: none"> 1. Resettlement sites will be developed as part of the project, if a minimum of 25 project displaced families opt for assisted resettlement. Vulnerable PAPs will be given preference in allotment of plots/flats at the resettlement site. Plot size will be equivalent to size lost subject to a maximum of provision given in RFCTLARR Act 2013. 2. Basic facilities shall be provided by the project at resettlement site as per the provisions given in the Third Schedule of RFCTLARR Act 2013. 3. Similarly, if at least 25 displaced commercial establishments (small business enterprises) opt for shopping units, the Project Authority will develop the vendor market at suitable location in the nearby area in consultation with displaced persons. 4. Basic facilities such as approach road, electricity connection, water

				<p>and sanitation facility, will be provided in the vendor market by the project.</p> <p>5. Vulnerable PAPs will be given preference in allotment, of shops in vendor market. One displaced family will be eligible for only one land plot at resettlement site or shop in the vendor market.</p>
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Chapter 7: Tribal People's Development Framework

The Tribal People in India are categorized as indigenous community who often become vulnerable in development projects because of their cultural autonomy, economic status, and enduring specific disadvantages in terms of social indicators of quality of life, thus usually as subject of social exclusion. Because tribal communities live within varying and changing historical, cultural, political and economic contexts, no precise and coherent term has been found to define them. Under OP 4.10, the determination as to whether a group is to be defined as indigenous peoples is made by reference to the presence (in varying degrees) of four identifying characteristics:

1. Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
2. Collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories
3. Customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
4. An indigenous language, often different from the official language of the country or region.

7.1 Tribes of Meghalaya

Meghalaya is predominantly a tribal state with approximately 86 per cent of the total population being Scheduled Tribes. The tribes of Meghalaya can be classified into three major groups - Garos, Khasis and Jaintias (or Pnars). The other minor tribes include Rabha, Hajong, Koch and Bodo Kachari. The Khasi are the largest tribal group, followed by the Garo and the Jaintia. The most noteworthy feature of the tribes of Meghalaya is matrilineal lineage, whereby lineage is traced through the mother, and property and inheritance is given to the youngest daughter.

7.1.1 Khasi and Jaintia Tribes

The term "Khasi" generally is used to describe a group consisting of the Khyntiam, Pnar, Bhoi and War. The people who inhabit the Jaintia Hills are called the Synteng or the Pnar or simply Jaintia; the people who dwell in the upland of the central part of the state or the Khasi Hills are called the Khyntiam. On the other hand, the people who reside in the deep valleys and hill-sides of the southern part of the state are called War, while those occupying the low-lying hills on the north are called the Bhoi. Over the years the term "Khasi" has come to be synonymous with those occupying the Khasi Hills of Meghalaya. There are not many differences among the tribes and they observe the matrilineal system and are exogamous in their way of life.

The Khasi and the Jaintia are of common ethnic stock and social and cultural background. The society is matrilineal and lineage is through the mother. This is however, not to say that there is no role of the father in the family— he is the head of the family and a ‘kni’ or maternal uncle in his sister’s house. His earnings before marriage remain part of his mother’s or sister’s which he cannot take away to his wife’s house; while after marriage, his earnings become part of his wife’s household. Among the Jaintias, the practice differs to the extent that the son continues to remain a part of his mother’s or sister’s family (before or after marriage) and all earnings are towards them. If a wife were to retain the property of her husband, she must vow to never remarry or the property will revert back to her husband’s family. The matrilineal tradition which the Khasis follow is unique with principles emphasized in myths, legends, and origin narratives. Khasi kings embarking on wars left the responsibility of running the family to women and thus their role in society became very deep rooted and respected.

7.1.2 Garo

The Garos are a hill tribe currently inhabiting the Garo Hills district of Meghalaya. It is bounded on the north and west by the district of Goalpara in Assam; on the south by the district of Mymensingh in Bangladesh; and on the east by the Khasi Hills. Historically, they inhabited the outermost end of the mountain promontory which runs out into the rice lands of Bengal. The Garos may be roughly divided into the Plains Garo and the Hills Garo each inhabiting the district to which they owe their name to. The Plains Garos inhabit the plain areas like Mymensingh and it was believed that their ancestors crossed the Himalayas and settled in the plains at their foot; while the Hills Garos inhabit the hills of low elevation popularly known as the Tura range, rarely rising much above 2000 feet. The Garos, like the Khasis and Jaintias, also follow the matrilineal system. A man may marry as many women as he like, but usually it is limited to three; though for him to remarry, he must obtain the permission of his earlier wives. Originally, the Garos were divided into three katchis or exogamous septs or clans, namely, Momin, Marak, and Sangma. With time, there has been new addition to these clans and new clans like the Arengs, Ebang and Shira has been named as exogamous independent groups. Among the Garos, marriage within the same clan is taboo. The children belong to their mother’s clan “machong” or “motherhood”.

7.2 Objective of TPDF

The key objective of the TPDF is to give special attention and focus to the tribal issues and concern during the planning and implementation of the project. This Development Framework to be adopted on a full scale in the scheduled areas and as deemed necessary in the other areas.

Thus the objectives of the TPDF are to ensure that

1. The tribal populations are adequately and fully consulted by the project;

2. Tribal take part in the entire process of preparation, implementation and monitoring of project activities;
3. Project benefits are equally accessible to the tribal living in the project area; they are provided with special assistance as per prevailing laws and policies because of their culture identities and to minimize further social and economic imbalances within communities;
4. Developing an institutional and implementation arrangements as well as capacity building measures for the implementation of the TPDF, associated disclosure mechanisms and addressing any grievances; and
5. Monitoring and reporting arrangements, including mechanisms and benchmarks appropriate to the project. This includes a grievance redress mechanism has also been developed to resolve grievances, if any.

7.3 Process for preparation of TPP

Table 36: Steps for Preparation of TPP

<i>Action</i>	<i>Responsibility</i>
<p><i>Information disclosure</i></p> <p>Prior to the SIA, the project will disseminate project information to all stakeholders through various means, such as mass media, project brochures/posters and a dedicated project site on the internet.</p>	<p>PWD / MDIFC / PMU</p>
<p><i>Screening</i></p> <p>A screening will be conducted in order to determine if tribal families or communities are present or have collective attachment in the area of influence of the proposed projects. Where tribal communities are found to be present or have collective attachment in the area of influence of the project, it is to note that the OP 4.10 will be triggered and the following steps will be taken even if no negative impact is likely to occur.</p> <p>The identification of tribal families/communities will be as per OP 4.10. The determination as to whether a group is to be defined as indigenous peoples is made by reference to the presence (in varying degrees) of four identifying characteristics:</p> <ul style="list-style-type: none"> Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; Collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories; 	<p>Bank Staff</p>

Customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
An indigenous language, often different from the official language of the country or region.

Social Assessment (SA) and Free, Prior and Informed Consultations

PWD / MDIFC /
PMU

If based on the screening, the Bank concludes that Indigenous Peoples are present in, or have collective attachment to, the project area, social assessment will be conducted to evaluate the project's potential positive and adverse effects on the Indigenous Peoples, and to examine project alternatives where adverse effects may be significant. The social assessment will:

Identify key stakeholders of affected tribal community and establish an appropriate framework for their participation in the selection, design, implementation, and monitoring and evaluation of the relevant project activities;
Assess the demographic, socioeconomic, cultural and other relevant characteristics of affected ethnic on and near the project sites, establish social baseline and identify potential barriers to their full participation in benefiting from project activities;
Review relevant legal and institutional framework applicable to tribal community;
Assess, based on free, prior, and informed consultation with the affected tribal community, the potential impact of project activities and, where adverse impacts are identified, determine how they can be avoided, minimized, or substantially mitigated;
Propose specific measures to ensure that affected tribal people will, meaningfully and in a culturally appropriate manner, participate in project activities, benefit from the project, and mitigate and mitigate negative impacts; and
Develop institutional arrangements and implementation procedures to assist tribal farmers to voice grievances and have them addressed in ways that are socially sound, in line with the procedures described in this IPPF.
In case of any project which incorporates modernization/expansion or augmentation of any existing infrastructure which involved any displacement when constructed, the nature, scale and scope of displacement are to be assessed as part of the due diligence. The current state of the livelihood of the formerly displaced tribal population is also to be assessed.
The breadth, depth, and type of analysis in the social assessment shall be proportional to the nature and scale of the proposed project's potential effects on the tribal community, whether such effects are positive or adverse.

Free Prior Informed Consultation and Participation: To ensure such consultation, it is necessary to:

- (a) establish an appropriate gender and intergenerationally inclusive framework that provides opportunities for consultation at each stage of project preparation and implementation among the affected tribal communities, any organization that works for the tribal community if any, and other local civil society organizations (CSOs) identified by the affected tribal communities;
- (b) use consultation methods appropriate to the social and cultural values of the affected tribal communities and their local conditions and, in designing these methods, gives special attention to the concerns of tribal women, youth, and children

and their access to development opportunities and benefits; and

(c) provide the affected tribal communities with all relevant information about the project (including an assessment of potential adverse effects of the project on the affected tribal communities) in a culturally appropriate manner at each stage of project preparation and implementation.

The project before proceeding with the intervention will ensure that affected tribal communities provide their broad support to the project. Where there is such support, the project will prepare a detailed report that documents:

1. the findings of the social assessment;
2. the process of free, prior, and informed consultation with the affected tribal communities;
3. additional measures, including project design modification, that may be required to address adverse effects on the tribal and to provide them with culturally appropriate project benefits;
4. recommendations for free, prior, and informed consultation with and participation by tribal communities during project implementation, monitoring, and evaluation; and
5. any formal agreements reached with tribal communities.

Mechanism for FPIC:

When a project affects tribes, PMU will carry out free, prior, and informed consultation with affected communities about the proposed project throughout the project cycle, taking into consideration the following:

- (a) advanced notice will be given to the affected community along with project information that will include the scope of the proposed project; probable impacts (both positive and negative) in the local language. The date and timing of consultation will vary based on the availability of community members;
- (b) the consultation target audiences would be existing tribal organization or any CSO working for tribal community; tribal elders, community headmen, and tribal opinion makers, women, and youth. Consultations will be carried out in a public space that is accessible to all;
- (c) the consultation process will start once the sub project is identified and will be a continuous process to ensure that the tribal community fully understands the project and their concerns and recommendations are incorporated into the project design. The consultations may be repeated and will continue even during the construction stage; and
- (d) SPMU will maintain the record of the consultation process.

Preparation of Subproject specific IPPs: If the screening of an individual subproject identified in the IPPF indicates that tribal communities are present in, or have collective attachment to, the area of the subproject, project will ensure that, before the subproject is implemented, a social assessment is carried out and an IPP is prepared in accordance with the requirements of this framework.

PWD / MDIFC /
PMU

Disclosure: The social assessment report and draft IPP will be made available to the affected tribal communities in an appropriate form, manner, and language. Post finalization of the IPP, the document is also made available to the affected tribal communities in the same manner as the earlier draft documents. PWD / MDIFC / PMU

7.4 Tribal Inclusion Approach

The project will have exclusive strategic focus for greater inclusion and representation of tribal in scheduled areas and their active association in project interventions. The strategy proposed for inclusion of tribal communities is discussed below.

Table 37: Project Approach and Strategy for Tribal Development

Project Stages	Project Approach and Strategy	Expected Outcome
Preparatory Phase	<p>Discussion with tribal families / farmers of the project area in general and exclusively in scheduled areas on project component and activities;</p> <p>Identifying key issues in the way of their greater involvement and benefitting from the project intervention;</p> <p>Preparing a priority list of actions, based on the identified issues and interest of tribal farmers / families of the project area.</p> <p>Preparing cluster specific plan of action for better inclusion of tribal in different activities that are feasible for their greater participation.</p>	<p>Key intervention areas are identified and guidelines prepared for improved participation of tribal in general</p> <p>List of actions finalized for implementation to ensure greater involvement and participation of tribal by activities</p>
Implementation Phase	<p>7. Implementing priority actions that are finalized during preparatory phase;</p> <p>8. Initiatives for convergence with tribal development schemes of Government at the village / block level;</p> <p>9. Priority action in inaccessible scheduled areas (project village) for establishment of infrastructures (such as community market places, community toilets, safe playgrounds) that are planned under the project, based on feasibility;</p> <p>10. Equal opportunity to dispersed tribal (living in a mixed community) for accessing project benefits, as per the plan under entitlement coverage;</p> <p>11. Ensuring greater participation of tribal community in activities / sub-activities taken up under each component / sub-components of the project;</p> <p>12. Taking measures, adhering to the scope of the project, to build the capacity of tribal people in maintaining public assets as per the project requirements;</p> <p>13. Monitoring of actions taken under the project for inclusion of tribal by project component / sub-</p>	<p>15. Participation of tribal in different activities implemented under the project;</p> <p>16. Project supported infrastructure and services in less accessible scheduled areas / tribal dominated areas;</p> <p>17. Inclusion of tribes and their active involvement ensured with better operational and management capabilities;</p>

Project Stages	Project Approach and Strategy	Expected Outcome
	<p>components and initiating corrective measures accordingly;</p> <p>14. Documenting success and learning from different initiatives undertaken by the project that ensures greater participation of tribal.</p>	

7.4.1 Gender Issues among Tribes

The tribal women in Meghalaya play an important role in the community and family development. Women normally constitute half of the total population. These women mostly work as agricultural labourers and share equal burden with men. Meghalaya being the state with matriarchal society, women are empowered but not necessarily well educated about human and tribal rights.

In TPP, therefore, efforts should be made to create an institutional framework to make gender sensitive decisions. Project in consultation with Department of Women and Child Development should identify Women Self-help Groups (WSHGs) within project associated villages and together identify awareness programs on “women’s role in development and maintenance of public assets”.

7.5 Entitlement

Based on the Operational Policy 4.10 of the World Bank and as one of its significant R&R requirements; special provisions for the Scheduled Tribes (ST) has been made in the project R&R Policy (apart from the general compensation and assistance to be received as Project Affected Persons (PAPs) of proposed project activities for loss of assets. Apart from compensation at replacement value and R&R assistance for any adverse impact, each Tribal family will be entitled to additional benefits as a one-time grant.

7.6 R & R Benefits for Tribal Project Affected People

The resettlement and rehabilitation (R&R) benefits for tribal families is as under:

1. Each Project Affected Family of ST category shall be given preference in allotment of land.
2. Tribal PAFs will be re-settled close to their natural habitat in a compact block so that they can retain their ethnic/linguistic and cultural identity
3. The Tribal Land alienated in violation of the laws and regulations in force on the subject would be treated as null and void and-the R&R benefits would be available only to the original tribal land owner.

7.7 Tribal Peoples Plans (TPP)

On the basis of the SIA and free, prior and informed consultation conducted as part of the process, a Tribal Peoples Plan (TPP) should be prepared covering all project sites (could be regionally segregated – such as East and West Meghalaya). A TPP should include the following elements:

1. The description of the project objective and activities, in particular on project activities that will be conducted for the site;
2. A summary of the SIA including the results of the free, prior, and informed consultation with affected tribal communities and verification of their broad community support for the project;
3. Description of potential negative impacts and measures to address them;
4. A framework to ensure that affected tribal communities can meaningfully participate in the project activities, and in the process to minimize and mitigate negative impacts.
1. Mechanisms through which affected tribal communities are able to voice concerns and grievances and have them addressed;
2. Mechanisms and benchmarks for monitoring, evaluating, and reporting on the implementation of TPP; and
3. The financing plan for TPP implementation.

7.7.1 Suggested Format for TPP

The suggested format for the TPP is as follows:

1. Description of sub projects and implications for the indigenous community
2. Gender disaggregated data on number of tribal households by impact category
3. Social, cultural and economic profile of affected households
4. Land tenure information
5. Documentation of consultations with the community to ascertain their views about the project design and mitigation measures
6. Findings of need assessment of the community
7. Community development plan based on the results of need assessment
8. Modalities to ensure regular and meaningful consultation with the community and participatory approach
9. Institutional arrangement and linkage with other national or state level programmes
10. Institutional mechanism for monitoring and evaluation of IPDP implementation and grievance redress
11. Implementation Schedule and cost estimate for implementation

7.8 Approval and Disclosure

Once the draft TPP(s) and the associated SA Report(s) are drafted, they will be submitted to PMU for review and approval. PMU will translate them into relevant local languages, make them available on its website as well as in locations accessible to affected tribal communities, and consult them with affected tribal communities for comments. PMU will also disclose them on SPMU's webpage, finalize them considering the comment received, and submit them to the Bank for review and clearance. The Bank will disclose the TPP(s) through the Info shop as well as at the country office website.

7.9 Monitoring and Evaluation

Throughout the implementation of the project, the Social Expert will monitor the project compliance with Bank safeguard policies. The expert will visit at least on a monthly basis since the planning until two months after the completion of civil works the project sites and meet the affected tribal communities. Upon the completion of a TPP, the expert will carry out a TPP completion assessment to confirm that all measures under this TPP have been fully implemented and that the negative impacts on tribal communities have been adequately addressed.

Monitoring group will be created in each tribal inhabited project area which will ensure that all actions would be undertaken in line with this IPPF and, in case of irregularities, contact the PMU. The participatory social audit will be conducted facilitated by Social Expert, whereby community will be encouraged and facilitated to report outstanding issues and air grievances. The meeting is attended by other PMU members and village authorities. The minutes of the meeting will be prepared, and measures will be taken to address the recorded issues in the subsequent annual cycle.

All implementing agencies will have an IPPF focal point that will regularly supervise and monitor TPP implementation. These focal points will report to Project Director on IPPF related matters and request the support of the Social Expert if needed. S/he will travel to the sites and spot check if the actions are taken and information provided in conformity with the IPPF.

Chapter 8: Gender Equity and Social Inclusion

Mainstreaming gender equity and empowerment is already a focus area in the project. In the sub projects, activities related to livelihood restoration will address women's needs. A Gender Development Framework is being designed under the project as part of this SMF which will help in analysing gender issues during the preparation stage of sub project and design interventions. At the sub project level, gender analysis will be part of the social assessment and the analysis will be based on findings from gender specific queries during the primary data collection process and available secondary data. The quantitative and qualitative analysis will bring out sex disaggregated data and issues related to gender disparity, needs, constraints, and priorities; as well as understanding whether there is a potential for gender based inequitable risks, benefits and opportunities. Based on the analysis, the specific interventions will be designed and if required gender action plan will be prepared. The overall monitoring framework of the project will include sex disaggregated indicators and gender relevant indicators.

The participation of beneficiaries and focus on poverty reduction are two other key determinants of the effectiveness and sustainability of any project. Any project must address the constraints on women's participation in project design, construction, and monitoring and evaluation (M & E). The project must also focus on the linkage between gender and poverty, by identifying, for example, households headed by females and those households' special needs. An adaptive, learning and process-oriented approach works better than a blue print approach; continuous dialogue between the project and the beneficiaries / PAPs is therefore important. Project beneficiaries are likely to have a stronger sense of ownership when the project gives them enough time, design flexibility, and authority to take corrective action. In this way, they find it easier to incorporate their earlier learning and negotiate with project staff and service providers. Therefore, a mechanism must be built into the project to allow such two-way interactions between the beneficiaries and the service providers.

In order to make the project more inclusive and participatory, it is required that women associate themselves in different activities which they find feasible. This approach of inclusion and equity, specifically involvement and engagement of women will be helpful to attain social justice and reduce marginalization of women and empower them to avail maximum benefit from the project.

Thus, incorporating gender and other social issues in the development projects helps to improve project performance and facilitate the achievement of the Bank's goal of poverty reduction. A gender approach in the overall project framework takes care of key gender issues and brings in parity in association and participation of women and minimises the gap between males and females at the project level. A gender approach is also a way to comprehend the impacts on the women beneficiaries and ensures equality in project induced wellbeing.

During the social assessment, consultations will be organised with different stakeholders to understand gender issues and possible measures that can help women in ensuring their participation in the overall

process. The assessment helped to identify certain key issues pertaining to women and their involvement in different livelihood activities as well as other activities which will directly or indirectly impact their lives.

1. Policy Provision

Directions in Constitution

The constitution of India provides provisions to secure equality in general and gender equality in particular. Various articles in the Constitution safeguard women's rights by putting them at par with men socially, politically and economically. The Preamble, the Fundamental Rights, Directive Principles of State Policies (DPSPs) and other constitutional provisions provide several general and special safeguards to secure women's human rights. The Preamble to the Constitution of India assures justice, social, economic and political; equality of status and opportunity and dignity to the individual. Thus, it treats both men and women equal.

The policy of women empowerment is well entrenched in the Fundamental Rights enshrined in our Constitution. For instance:

1. Article 14 ensures to women the right to equality;
2. Article 15(1) specifically prohibits discrimination on the basis of sex;
3. Article 15(3) empowers the State to take affirmative actions in favour of women;
4. Article 16 provides for equality of opportunity for all citizens in matters relating to employment or appointment to any office. These rights being fundamental rights are justifiable in court and the Government is obliged to follow the same.

Directive principles of State Policy also contains important provisions regarding women empowerment, and it is the duty of the government to apply these principles while making laws or formulating any policy. Though these are not justifiable in the Court but these are essential for governance nonetheless. Some of them are:

1. Article 39 (a) provides that the State to direct its policy towards securing for men and women equally the right to an adequate means of livelihood.
2. Article 39 (d) mandates equal pay for equal work for both men and women.
3. Article 42 provides that the State to make provision for securing just and humane conditions of work and for maternity relief.

Fundamental Duties

Fundamental duties are enshrined in Part IV-A of the Constitution and are positive duties for the people of India to follow. It also contains a duty related to women's rights. Article 51 (A) (e) expects from the citizen of the country to promote harmony and the spirit of common brotherhood amongst

all the people of India and to renounce practices derogatory to the dignity of women.

Other Constitutional Provisions

Through the 73rd and 74th Constitutional Amendment of 1993, a very important political right has been given to women which is a landmark in the direction of women empowerment in India. With this amendment, women were given 33.33 percent reservation in seats at different levels of elections in local governance i.e. at Panchayat, Block and Municipality elections. Thus, it can be seen that these Constitutional provisions are very empowering for women and the State is duty bound to apply these principles in taking policy decisions as well as in enacting laws.

Specific Laws for Women

Some specific laws, which were enacted by the Parliament in order to fulfil the Constitutional obligation of women empowerment are;

1. The Equal Remuneration Act, 1976.
2. The Dowry Prohibition Act, 1961.
3. The Immoral Traffic (Prevention) Act, 1956.
4. The Maternity Benefit Act, 1961.
5. The Medical termination of Pregnancy Act, 1971.
6. The Commission of Sati (Prevention) Act, 1987.
7. The Protection of Women from Domestic Violence Act, 2005
8. The Prohibition of Child Marriage Act, 2006.
9. The Pre-Conception & Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994.
10. The Sexual Harassment of Women at Work Place (Prevention, Protection and) Act, 2013.

Above mentioned and several other laws are there which not only provide specific legal rights to women but also give them a sense of security and empowerment.

International Commitments

India is a part of various International conventions and treaties which are committed to secure equal rights of women. One of the most important among them is the Convention on Elimination of All Forms of Discrimination against Women (CEDAW), ratified by India in 1993. Other important International instruments for women empowerment are: The Mexico Plan of Action (1975), the Nairobi Forward Looking Strategies (1985), the Beijing Declaration as well as the Platform for Action (1995) and the Outcome Document adopted by the UNGA Session on Gender Equality and Development & Peace for the 21st century, titled "Further actions and initiatives to implement the Beijing Declaration and the Platform for Action". All these have been whole-heartedly endorsed by India for appropriate follow up.

National Policy for Woman

In the year 2001, the Government of India launched a National Policy for Empowerment of Women which was revised in the year 2016. The National Policy for Women, 2016 (draft) having the vision of “A society in which, women attain their full potential and are able to participate as equal partners in all spheres of life and influence the process of social change”. The objectives of the policy are

1. Creating a conducive socio-cultural, economic and political environment to enable women enjoy de jure and de facto fundamental rights and realize their full potential;
2. Mainstreaming gender in all-round development processes/programs/projects/ actions;
3. A holistic and life-cycle approach to women’s health for appropriate, affordable and quality health care;
4. Improving and incentivizing access of women/ girls to universal and quality education;
5. Increasing and incentivizing work force participation of women in the economy;
6. Equal participation in the social, political and economic spheres including the institutions of governance and decision making;
7. Transforming discriminatory societal attitudes, mindsets with community involvement and engagement of men and boys;
8. Developing a gender sensitive legal-judicial system;
9. Elimination of all forms of violence against women through strengthening of policies, legislations, programs, institutions and community engagement;
10. Development and empowerment of women belonging to the vulnerable and marginalized groups;
11. Building and strengthening stakeholder participation and partnerships for women empowerment;
12. Strengthen monitoring, evaluation, audit and data systems to bridge gender gaps.

World Bank’s Approach

The World Bank’s approach to promoting gender equality makes all staff responsible for ensuring that the Bank’s work is responsive to the differing needs, constraints, and interests of males and females in client countries. Gender equality is now a core element of the Bank’s strategy to reduce poverty. There is a clear understanding that until women and men have equal capacities, opportunities and voice, the ambitious poverty-reduction agenda set out in the Sustainable Development Goals will be difficult to achieve.

1. Issues of Significance

Mainstreaming gender equity and empowerment is already a focus area in the project. In the sub projects, activities related to diversification of livelihood and improvement of basic services will address women’s needs. A Gender Development Framework has been designed under the project as part of SMF which will

help analyse gender issues during the DPR preparation stage of sub project and design interventions. At the sub project level, gender analysis will be part of the social assessment and the analysis will be based on findings from gender specific queries during the primary data collection process and available secondary data. The quantitative and qualitative analysis will bring out sex disaggregated data and issues related to gender disparity, needs, constraints, and priorities; as well as understanding whether there is a potential for gender based inequitable risks, benefits and opportunities. Based on the analysis, the specific interventions will be designed and if required gender action plan will be prepared. The overall monitoring framework of the project will include sex disaggregated indicators and gender relevant indicators.

The participation of beneficiaries and focus on poverty reduction are two other key determinants of the effectiveness and sustainability of any project. Any project must address the constraints on women's participation in project design, construction, and monitoring and evaluation (M & E). The project will also focus on the linkage between gender and poverty, by identifying, for example, relation between the household income and occupation of the women of the household. Three major tools are used to identify and deal with gender issues in the project cycle: gender analysis, project design, and policy dialogue.

1. Gender analysis should be an integral part of the initial social assessment at the screening stage itself. The issues identified can be scaled up during the feasibility and detailed analysis can be carried out during the project preparation stage.
2. The project designs should be gender responsive based on gender analysis and should be included in the SIA document. The findings and recommendations from the gender analysis during project planning and feedback from beneficiaries during implementation must be discussed thoroughly to determine the need for further action.
3. Consultations will be organised with different stakeholders to understand gender issues and possible measures that can help women in ensuring their participation in the overall process. The consultations helped to identify certain key issues pertaining to women and their involvement in the proposed interventions.

8.3 Gender Action Plan

Three major tools are used to identify and deal with gender issues in the project cycle: gender analysis, project design, and policy dialogue. Gender analysis will be an integral part of the initial social assessment at the screening stage itself. The issues identified can be scaled up during the feasibility and detailed analysis can be carried out during the project preparation stage. The project designs will be gender responsive based on gender analysis and will be included in the SIA report. The findings and recommendations from the gender analysis during project planning and feedback from beneficiaries during implementation will be discussed thoroughly to determine the need for further action. Listed below are the key action points:

1. General Check list

1. Identify key gender and women's participation issues.
2. Identify the role of gender in the project objectives.
3. Prepare terms of reference (TOR) for the gender specialist or social development specialist of the client
4. Conduct gender analysis as part of the overall Social Assessment.
5. Draw up a socioeconomic profile of key stakeholder groups in the target population and disaggregate data by gender.
6. Examine gender differences in knowledge, attitudes, practices, roles, status, wellbeing, constraints, needs, and priorities, and the factors that affect those differences.

7. Assess men's and women's capacity to participate and the factors affecting that capacity.
8. Assess the potential gender-differentiated impact of the project and options to maximize benefits and minimize adverse effects.
9. Identify government agencies and nongovernmental organizations (NGOs), community-based organizations (CBOs), and women's groups that can be used during project implementation. Assess their capacity.
10. Review the gender related policies and laws, as necessary.
11. Identify information gaps related to the above issues.
12. Involve men and women in project design.
13. Incorporate gender findings into the project design.
14. Ensure that gender concerns are addressed in the relevant sections (including project objectives, scope, poverty and social measures, cost estimates, institutional arrangements, social appendix, and consultant's TOR for implementation and M & E support).
15. List out major gender actions.
16. Develop gender-disaggregated indicators and monitoring plan.

17. Core Requirement for Mainstreaming Gender

1. All data should be disaggregated by gender, caste, ethnicity, location, and age
2. Issues of division of labour, access to resources and decision-making power (who is doing what, who has access to what, who makes the ultimate decision) have to be assessed for their gender differential impact on women and men of different social identity groups.
3. Assessment of policies, programs, institutional arrangements, human resources issues, and M&E system has to be done from a gender perspective of the project, project authorities and community groups.

1. Key Activities in Project Cycle

The involvement of women groups in the identification of impacts and opportunities through project activities shall form the basis for the preparation of gender sensitive project activities. The procedure to be followed and process and outcome are presented in the following matrix.

Table 38: Opportunities for Involvement of Women during Project stages

Project Stages	Key Activities	Responsibility
Planning Stage	<ol style="list-style-type: none"> 1. Identify gender concerns/issues related to the project with due consultation with women group 2. Organize women stakeholders' meetings to inform about the project activities, its benefits and key expectations from the project. 3. Sensitize and discuss the project and its components. 4. Sensitize other stakeholders on gender concerns/issues; 5. Identify key areas of constraints that may be improved through the project; 6. Prepare project component wise activity plan where women can be 	<p>Social Development</p> <p>Specialist; implementing agencies; PMU</p>

Implementation Stage	engaged in different project activities.	
	7. Implementation of provisions of project activity specific plan addressing gender concerns as per the GAP;	Social Development Specialist; implementing agencies; PMU; M&E Agency
	8. Monitoring engagement of women in different project activities, skilled and unskilled works;	
	9. Monitor safety and security measures of women in work and camp sites;	
	10. Monitor women specific provisions and facilities created in the project site and camps.	
Post-Implementation Stage	11. Supervising adherence to wage payment norms	
	12. Continuation of activities initiated under the project;	Social Development
	13. Monitoring sustenance of project inputs and its benefits accessed by women	Specialist, PMU

1. Monitoring Gender Action Plan

The indicators, frequency, and agency recommended for monitoring are presented in the table below.

Table 39: Monitoring Indicators for Gender Action Plan

Aspects	Monitoring Indicators (Process and Outcome)	Frequency	Monitoring Responsibility
Economic	14. No. of women engaged in different activities and their proportion to the total workforce;	21. Planning Stage: for the base line data	PMU
		22. Half yearly Monitoring	
	15. Days of engagement of women in different wage / non-wage activities and proportional days of engagement in comparison to their male counterpart;	23. Mid Term Review (MTR)	Third party Monitor along with PMU
		24. Final Impact Assessment	
	16. Growth in income of women due to such engagements;		
	17. Reduction in no. of days of migration (if migrating earlier);		
	18. No. of women having additional/new market oriented employable skills for self-engagement;		

	19.	No. of women accessed different govt. schemes/provisions including beneficial enrolment in agricultural interventions;	
	20.	Improvement in asset holding of women (productive and household assets).	
Social	25.	Improvement of association of women in local institutional and decision-making process (membership, management position, etc.);	26. Planning Stage: for PMU the base line data
			27. Half yearly Monitoring
			28. Mid Term Review (MTR) Third party Monitor along with PMU
			29. Final Impact Assessment

1. Implementation Arrangements

The preparation, implementation, and monitoring of the Gender Action Plan (GAP) is the responsibility of the project implementing entities. The Social Development specialist, at the PMU level, will facilitate and supervise this process of preparation and implementation of the Action Plan. All efforts will be made to coordinate and work with associated line departments and other department, more specifically the Women and Child Development department, State Livelihood Mission, Panchayati Raj, and Rural Development department to help dovetailing with their development programs for the socio-economic development of women.

Chapter 9: Labour Management Framework

Since project involves construction work that will demand a constant supply of labourers, the influx of migrant workforce will put additional pressure on existing resources. The workforce normally consists of solitary migrant males and that can be a potential risk for the host population. However, in many cases, the migrant male member of the family might relocate his family with him. Specifically, the influx of labour force can lead to:

1. Risk of conflict and social unrest due to cultural differences between the labour force and local community
2. Risk of spread of communicable diseases due to interaction of the labour and the local community
3. Risk of gender-based violence
4. Risk of violation of child-safety measures
5. Health hazard for host community due to lack of sanitation facilities and waste management
6. Additional pressure on the local resources and social infrastructures

1. Construction Labour Management Plan

Since the construction activities are mostly labour intensive by nature, therefore, it is also envisaged that many of the labourers will be employed from outside the State and hence, accommodation will be provided. These migrant labourers will be accommodated in a temporary campsite within the project area.

9.1.1 Objectives

The influx of migrant labour will have both negative and positive impacts on the nearby community and local environment. The labour will be accommodated in a temporary campsite within the project area which can have a significant interface with the host community. The influx of migrant workers would lead to a transient increase of population in the immediate vicinity of the project area for a limited time. This would put pressure on the local resources such as roads, fuel for cooking, water, etc. Hence, a plan has been designed to demonstrate the:

1. Potential impacts associated with influx on the host population and receiving environment are minimized;
2. Provision of safe and healthy working conditions, and a comfortable environment for migrant labour; and
3. To ensure compliance with the national labour laws.

9.1.2 General Requirements

All migrant workers are envisaged to be accommodated in a proper temporary campsite within the project area. If migrant workers are accompanied by their families, provisions should be made accordingly. As per the National Acts, the inclusion of requirements for labour camp to be established by contractors during construction phase of the project. Contractor(s) shall ensure implementation of the following measures to minimise the potential negative impacts of worker accommodation and workers on local communities:

1. Cleanliness: Pest extermination, vector control, and disinfection are to be carried out throughout the living facilities in compliance with local requirements and/or good practice.

2. Complaints and incident reporting: A formal Complaints Procedure will be implemented to ensure timely and transparent response to complaints as received from labour.
3. Labour education: The workforce will be sensitized to local social and cultural practices through the provision of an induction course for all employees that stipulates expected behaviour;
4. Labour behaviour in the campsite provided: A Code of Behaviour governing appropriate behaviour in the accommodation facilities to be kept in place and to be strictly enforced. The contractor shall ensure implementation of the “rules of engagement” between labourers living in campsite and community and shall be implemented by construction contractors for all engaged labourers.
5. Labour Compensation and Accommodation: The client shall ensure that labourers are provided with benefits such as leave, weekly rest day, etc. Accommodation to be provided for the construction labour which covers facilities (including catering facilities, dining areas, washing and laundry facilities, etc.) and supporting utilities.

9.1.3 Hiring and Recruitment Procedure

The manpower contractor shall, wherever possible, locally recruit the available workforce and shall provide appropriate and requisite on job and EHS training as necessary. The following general measures shall be considered for the workforce during their employment tenure:

1. The implementing agency in consultation with the PMU will include a code of conduct relating to the accommodation to be signed with the contract document of contractors.
2. The contractor shall not employ any person below the age of 18 years nor will have any forced labour;
3. The construction labourers will be provided with documented information regarding their rights under national labour and employment law such as but not limited to Factories Act, Minimum Wages Act, Trade Unions Act, and Workmen’s Compensation Act;
1. First priority for employment of labour should be given those impacted by the project such as landowners who have lost land / donated land;
2. No discrimination shall be done by the construction contractor with respect to recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, termination of employment or retirement, and disciplinary practices;
3. The contractor to ensure that work hours are set at eight hours a day, 48 hours a week, with a weekly rest day for all engaged labour;
4. Every labour is entitled to a maximum of only two hours a day as Overtime (OT) work. OT pay is twice the hourly remuneration;
5. The project will ensure that equal wages for male and female workers for work of equal nature or value is maintained;
6. A grievance redress mechanism for workers will be put in place by the contractor to raise workplace concerns. The workers will be informed about the grievance mechanism at the time of recruitment; and
7. The Contractor will ensure that they develop and implement a procedure to review the performance of their sub-contractors.
8. The procedure developed should include regular inspection of the camp sites, maintaining information pertaining to labour sourced by sub-contractors;

9.1.4 Worker’s Accommodation

The Contractor will supervise and monitor the activities performed by their contractor and accommodation facilities provided in the campsite. The following measures shall be provided:

1. The labour will be provided with accommodation made of insulating material and locally available building material, etc.;
2. The migrant workers with families will be provided with individual accommodation comprising bedroom, sanitary and cooking facilities;

3. The units will be supported by common latrines and bathing facilities duly segregated for male and female labour;
4. Adequate number of toilets will be provided in the accommodation facilities. A minimum of 1 unit to 15 males and 1 unit for 10 females shall be provided;
5. The contractor shall provide a canteen facility for the construction workers and the food will be of appropriate nutritional value and will consider religious/cultural backgrounds;
1. All doors and windows shall be lockable and mobile partitions/curtains shall be provided for privacy;
2. Facilities for the storage of personal belongings for workers shall be provided within the campsite only;
3. Dustbins shall be provided for collection of garbage and will be removed on a daily basis;
4. It is also required to provide first aid box in adequate numbers; and
5. Ventilation should be appropriate for the climatic conditions and provide workers with a comfortable and healthy environment to rest and spend their spare time.

9.1.5 Security

The contractors shall put in place the following security measures to ensure the safety of the workers. The following measures shall be incorporated:

1. Access to the campsite shall be limited to the residing workforce;
2. The contractor shall be responsible for deploying an adequate number of guards;
3. Adequate, day-time night-time lighting shall be provided;
4. The security personnel shall be provided with training to respect the community traditions and in dealing with, use of force, etc.; and
5. The rental accommodation shall be provided with firefighting equipment and portable fire extinguishers.

9.1.6 Provisions for Drinking Water

Access to an adequate and convenient supply of free potable water is a necessity for workers. The domestic water supply shall be made available by the contractor.

1. Safe drinking water conforming to the IS 10500:2012 for drinking water shall be provided;
2. Private tanks can be utilized for provision of drinking water for the migrant labours;
3. The direct usage of water from bore well should not be allowed and water shall be adequately treated;
4. The Contractor(s) should regularly monitor the quality of drinking water available. In case of non-compliance with the Drinking Water Specifications, additional treatment shall be provided, or alternative sources of water supply shall be arranged; and
5. All tanks used for the storage of drinking water are constructed and covered to prevent water stored therein from becoming polluted or contaminated.

9.1.7 Cooking Arrangements

The construction phase will involve the engagement of a large number of migrant labourers in the project area for a limited time. Hence, there shall be a requirement of the provision of cooking facilities (kitchen) as listed below:

1. Places for food preparation are designed to permit good food hygiene practices, including protection against contamination between and during food preparation;
2. Adequate personal hygiene including a sufficient number of washbasins designated for cleaning hands with clean, running water; and

3. All kitchen floors, ceiling and wall surfaces adjacent to or above food preparation and cooking areas are built using durable, non-absorbent, easily cleanable, non-toxic materials;
4. Food preparation tables are equipped with a smooth, durable, easily cleanable, non-corrosive surface made of non-toxic materials.
5. To ensure that the fuel need of labourers in the project area does not interfere with the local requirements, necessary arrangements for supply of fuel to the labourers shall be done by the contractor.

9.1.8 Wastewater Generation

There will be generation of wastewater from the campsite. About 80% of water used shall be generated as sewage/wastewater. Contractors shall ensure that the campsite is equipped with the septic tank and soak pit for disposal of sewage. It is also recommended that the storm water and sewage system should be separate. The surface water drainage shall include all necessary gutters, down pipes, gullies, traps, catch pits, manholes, etc. Sanitary and toilet facilities are constructed of materials that are easily cleanable. Sanitary and toilet facilities are required to be cleaned frequently and kept in working condition.

9.1.9 Solid Waste Management

The municipal solid waste generated from the campsite will mostly comprise compostable wastes like vegetable (kitchen waste) and combustible waste like paper, cans, plastic and some non-degradable waste like glass/glass bottles. Improper disposal of solid waste will lead to health hazards to labourers as well as the nearby communities.

The following measures shall be adopted by contractors for ensuring effective management of solid waste:

1. The solid wastes of domestic nature generated shall be collected and stored separately in appropriate containers with proper sealing on them;
2. Separate bins with proper markings in terms of recyclable or non-recyclable waste shall be provided in the houses and kitchen premises in sufficient numbers for collection of garbage;
3. Food waste and other refuse are to be adequately deposited in sealable containers and removed from the kitchen frequently to avoid accumulation; and
4. The contractor shall identify the nearest municipal solid waste storage facility and tie up with the concerned urban local body for disposal of waste at frequent intervals.

9.1.10 Medical Facilities

Effective health management is necessary for preventing the spread of communicable diseases among labour and within the adjoining community. The following medical facilities shall be provided by contractors for the construction workers:

1. A first aid centre shall be provided for the labour within the construction site equipped with medicines and other basic facilities;
2. Adequate first aid kits shall be provided in the campsite in an accessible place. The kit shall contain all type of medicines and dressing material;
3. Contractor shall identify and train an adequate number of workers to provide first aid during medical emergencies;
4. Regular health check-ups shall be carried out for the construction labourers every six months and health records shall be maintained;

5. Labours should have easy access to medical facilities and first aider; where possible, nurses should be available for female workers;
6. First aid kits are adequately stocked. Where possible a 24/7 first aid service/facility is available.
7. An adequate number of staff/workers is trained to provide first aid; and
8. Information and awareness of communicable diseases, AIDS, etc. shall be provided to workers.

9.1.11 Recreation Facilities

9. Basic collective social/rest spaces are provided to workers.
10. Facilities like a common television can be provided in labour camps

9.1.12 Inspection of Accommodation Facilities

The campsite shall be inspected at frequent intervals to ensure that the facilities are well organized and maintained to acceptable and appropriate standards by the Contractor. The key areas are:

11. Daily sweeping of rooms and houses shall be undertaken;
12. Regular cleaning of sanitary facilities shall be undertaken;
13. The kitchen and canteen premises shall be established under good hygiene conditions;
14. Daily meal times shall be fixed for the labour;
15. Smoking and alcohol consumption shall be prohibited in the workplace;
16. Water logging shall be prevented at areas near the accommodation facilities and adequate drainage is to be provided; and
17. Checklists pertaining to the daily housekeeping schedule shall be maintained and displayed at houses, toilets, and kitchen.

To limit the impact due to cumulative labour onsite during the construction phase, contractors shall provide adequate labour camp which should be appropriate for its location and be clean, safe and, at a minimum, meet the basic needs of workers.

18. Contractors should assess the location of labour camp, that it should not be constructed in the immediate vicinity of any drainage channel;
19. It should be ensured that the labour camp(onsite)should have basic amenities such as electricity, drinking water, health& sanitation facility, kitchen and rest room;
20. All tanks used for the storage of drinking water are constructed and covered as to prevent water stored therein from becoming polluted or contaminated and all the migrant workers will be instructed accordingly;
21. Employers should ensure that accommodation which is provided is not overcrowded and does not pose a risk to the health and safety of workers;
22. The labour camp will be equipped with septic tanks and soak pits and avoid the presence of stagnant water is a factor of the proliferation of potential disease vectors such as mosquitoes;
23. Contractors should ensure that the disruption of local communities is minimum, in particular, local communities' transport infrastructures and if required limit the worker's movements in nearby areas;
24. Security staff have a clear mandate and have received clear instruction about their duties and responsibilities, in particular, their duties not to harass, intimidate, discipline or discriminate against workers;
25. Contractors should ensure that workers and members of the surrounding communities have specific means to raise concerns about security arrangement and staff;
26. Where possible, an adequate transport system to surrounding communities will be provided. It is good practice to provide workers with free transportation to and from local communities

Specifically:

27. The contractor and labourers will sign a code of conduct by contractors and workers to maintain good manners with the community and avoid gender based violence;
28. Project will undertake awareness raising program for the workers and community on the risk of labour influx; and
29. To the extent possible, the local workforce will be engaged to minimize the influx of workers

9.1.13 Impact of influx of migrant labourer

1. The contractor will preferably engage the local labour force except for the labourer's requiring special skills and the non-availability of such skilled laborers from the local area.
2. Awareness raising of laborers/ workers on societal norms, taboos, and other cultural practices
3. Organise awareness creation and educational programmes for all workers and the general public on the behavioural changes required to prevent the spread of HIV/AIDS and other STDs
4. The 'Labour Influx and Construction Workers Campsite Management Plan' will be implemented
5. Project to assess and manage labour influx risk based on risks identified in the ESIA. Depending on the risk factors and their level, appropriate site-specific Labour Influx Management Plan and/or a Workers' Camp Management Plan.
6. The project will incorporate the ESMP into the civil works contract. The responsibilities for managing these adverse impacts will be clearly reflected as a contractual obligation, with a mechanism for addressing non-compliance.
7. Employment of any person under 18 years of age will be strictly prohibited. The contractor will maintain a labour register with name, age, and sex with supporting document (preferably copy of Aadhar card or voter's ID card). This will be monitored by the Environmental and Social office of contractors.
8. Contractor and labourer will sign a code of conduct to maintain good manners with the community and avoid GBV
9. Project will undertake awareness raising program for the workers and community on the risk of labour influx

Avoiding Gender Based Violence

10. Contractor will prepare and implement robust measures to address the risk of gender-based violence that include
 1. mandatory and repeated training and awareness raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women;
 2. informing workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted;
 3. introducing a Worker Code of Conduct as part of the employment contract and including sanctions for non-compliance (e.g., termination), and (iv) contractors adopting a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence.
4. Additional measures can aim to reduce incentives to engage with the local community by providing workers with the opportunity to spend their time off away from the host community, where feasible with a small transport allowance, ideally allowing workers to regularly return for brief visits to their families, spouses, and friends, or to visit nearby urban centers that provide a variety of legal social opportunities. For workers who need to travel further it may be attractive to forego weekends off in exchange for longer breaks that would allow for such home leave travel

1. Contractor's responsibility

Within 30 days from the appointed date, the Contractor shall prepare and submit 4 hard copies and 1 soft copy of Labour Influx and Worker's Camp Management Plan to the concerned PEA that addresses specific

activities that will be undertaken to minimize the impact on the local community, including elements such as worker codes of conduct, training programs on HIV/AIDS, etc. A Workers' Camp Management Plan addresses specific aspects of the establishment and operation of workers' camps.

This Labour Influx and Worker's Camp Management Plan will include:

1. mandatory and repeated training and awareness raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women;
2. informing workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted;
3. introducing a Worker Code of Conduct as part of the employment contract and including sanctions for non-compliance (e.g., termination), manual scavenging, engagement with local residents, child labour, non-discrimination, harassment of co-workers including women and those belonging to SC and STs and other minority social groups,
4. contractors adopting a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence.
5. training programs on HIV/AIDS and other communicable diseases,
6. workers' Camp Management Plan addressing specific aspects of the establishment and operation of workers' camps provided the Local Body/ Executing Agency is unable to cater to the demand for affordable housing for this additional workforce in terms of rentals, hostels, apartments, etc.; and
7. complaint handling Mechanism at the project level

Additional measures that aim to reduce incentives to engage with the local community by providing workers with the opportunity to spend their time off away from the host community, where feasible with a small transport allowance, ideally allowing workers to regularly return for brief visits to their families, spouses, and friends, or to visit nearby urban centres that provide a variety of legal social opportunities. For workers who need to travel further, it may be attractive to forego weekends off in exchange for longer breaks that would allow for such home leave travel.

While clear and decisive measures by the contractor are critically important, the effectiveness of these measures often depends on complementary actions by the Borrower. Those are typically focused on public administration and law enforcement, such as: (i) reinforcing local police in a remote setting, where services may not be sufficiently staffed or equipped to maintain public order after the influx, (ii) ensuring that complaints about gender-based violence are taken seriously by local law enforcement, which may be supported by (iii) deploying female officers to the project area, and (iv) participating in preventive training with workers to demonstrate the presence of government authority in the project area.

Chapter 10: Institutional Arrangement for Implementation of ESMF

Due to its wide scope, the project activities will be implemented by many agencies: Public Works Department (PWD), Urban Affairs (UA) Department, Department of Tourism, Transport Department and Community and Rural Development Department. Each of the mentioned departments, will depute a Project Director (PD) preferably at the level of a Chief Engineer/Superintending Engineer along with the required supporting staff with the overall responsibility for project implementation with the involvement of the various field divisions and other units at the head-quarters (HQ – Shillong).

PDs will work under the overall guidance and oversight of a Project Advisory Committee headed by the Secretary of the respective departments. In addition, nodal officers will be deputed from the beneficiary departments like Tourism, Agriculture, Police, Health, Education and C&RD. All civil works component will be implemented mainly by PWD, and involvement UA and Transport departments will be mainly for the technical assistance and pilot projects on improving mobility. When functional, the Transport Sector Board will also be constituted to provide high level policy guidance and oversight for project implementation.

Meghalaya Infrastructure Finance Development Corporation (MIFDC) set up under the Planning Department will be responsible for overall planning, coordination, implementation and monitoring of the project along with various departments. It will also be responsible for mobilizing private sector finance for the development works. The State Planning Department will be the nodal department for the Project. MIDFC will be responsible for overall planning and implementation of the entire project. It will ensure that ESIA is conducted and ESMPs are prepared and that the ESMF is followed during project implementation. Additionally, a project management unit (PMU) will be mobilized under MIDFC to support the implementing agencies during project preparation and subsequent implementation. The overall institutional arrangement for the implementation of the project is outlined in the following diagram.

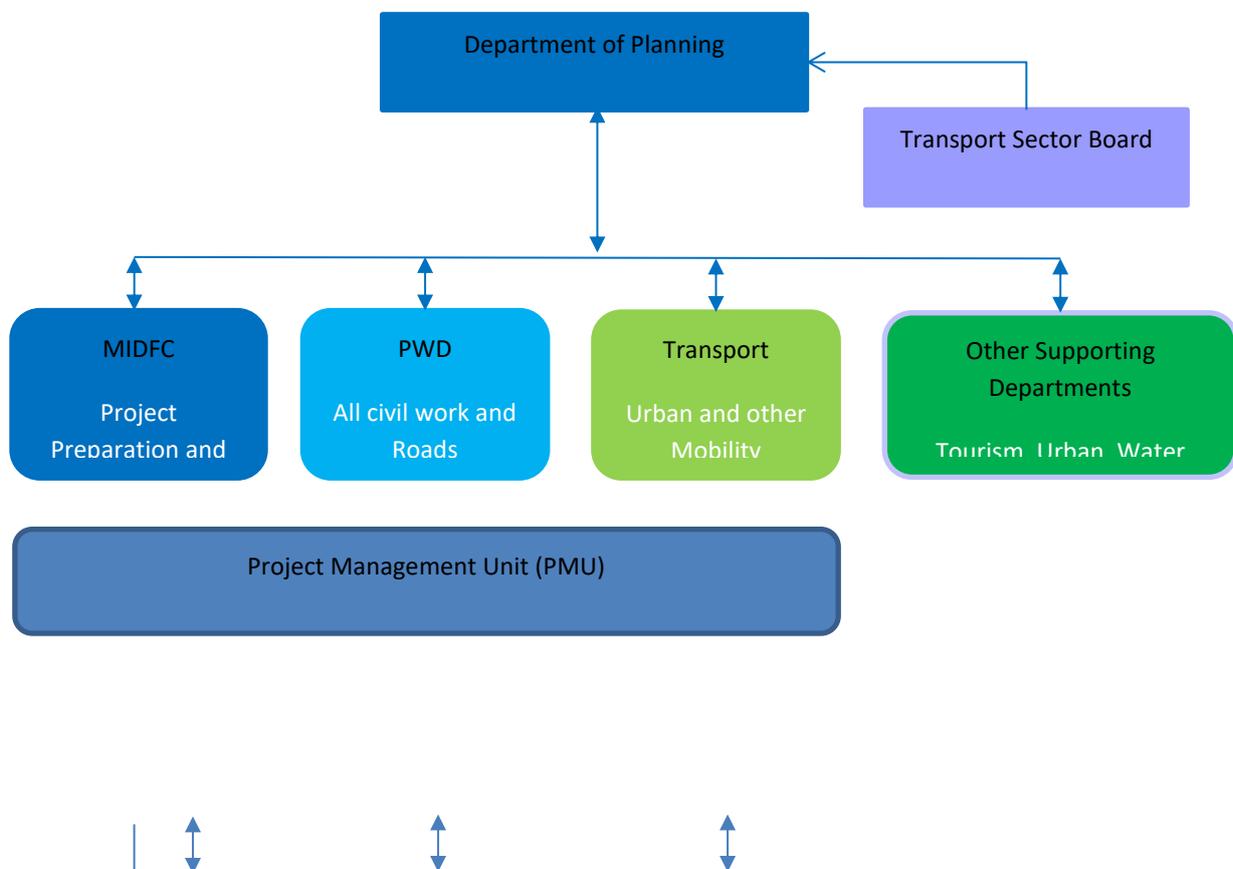


Figure 13: Project Implementation Arrangement

10.1 Project Management Unit (PMU)

The Project Management Unit (PMU) will engage a consulting firm, as Project Management Consultant (PMC) for providing technical support to the project and facilitate implementation of project framed activities. The experts of the PMC will assist MIDFC in preparing and updating ESIA (including E&SMPs). The PMC will also assist MIDFC in preparing semi-annual safeguards monitoring reports. Specific roles of the PMC with regard to ESMF implementation would include the followings.

Preparatory Stage:

1. Initial field visit to project sites and assessment of environmental and social aspects of project activities;
2. Discussion with different stakeholders, including implementing agencies on safeguard measures and their expected role;
3. Preparing / finalizing assessment framework in line with the Environment and Social indicators;
4. Finalizing TOR of the contractors incorporating safeguard measures to be taken;
5. Facilitate / organize training / workshops on safeguard measures for the stakeholders;
6. Designing study / assessment tools for periodic assessment, its piloting and finalization.

Implementation Stage:

1. Conducting periodic site visits and observe the measures taken as per the safeguard norms;
2. On the spot guidance to contractor/s / implementing agencies on safeguards;
3. Preparation of site specific reports and sharing with MIDFC;
4. Documentation of learning cases for sharing and dissemination;
5. Visual documentation of site specific safeguard measures;
6. Tracking activity specific environmental and social monitoring indicators;
7. Organizing / facilitating refresher training courses for stakeholders;
8. Monthly and quarterly progress report preparation and submission to MIDFC.

Post-Implementation Stage:

1. Consolidation of periodic monitoring reports;

2. Support in conducting environment and social audit;
3. Consolidation of good practice documents and its submission to MIDFC;
4. Final sharing workshop on environment and social safeguard practices and its outcome.

The PMU shall have following experts for implementation of ESMF and E&SMPs:

Social cum Gender Expert

The Social cum Gender Expert at the PMU level will guide the overall process related to social and gender aspects. The district / sub-district level implementing agencies will execute and monitor the social / gender components in consultation with the said Expert. She / he will be associated in the screening process of such activities that require acquisition of land and/or involvement of women and/or need special focus on tribal involvement. She/he will monitor the social processes followed in execution of the planned activities and realisation of the social / gender inclusion parameters. She / he will be looking after social / gender aspects of the project, including monitoring of social / gender indicators and coordinating with different agencies / institutions. The expert will be guided by the Project Director from MIDFC and reporting to the Project Director directly.

Environmental Expert

The environment expert will look after environmental aspects. She / he will guide the project team on environmental aspects and support in building environmental parameters to be built in the bids. She / he will also guide the contracts and monitor their works from time to time. In case of requirement, she/he will prepare a detail environment management plan for different activities to be executed by the project. The expert will be guided by the MIDFC Project Director and reporting to the Project Director directly.

10.2 Capacity Building Strategy

The concerned officials within the project implementation agencies will be oriented on different social and environment aspects by which they will be equipped well to manage the related issues effectively and efficiently. The capacity building would take in to account the current issues that may influence the project activities, measures that are required to be taken to ensure greater involvement of socially and economically backward families and deprived sections of the society. A capacity building plan on social and environmental aspects to be prepared by PMU in consultation with all implementing agencies.

1. Institutional Capacity to Manage Social Development Aspects

10.3.1 Autonomous District Councils

As mentioned earlier, ADCs were established under the Sixth Schedule of the Constitution of India (Articles 244(2) and 275(1)) with a view to preserve and protect tribal institutions. It is a system of local administration to give greater autonomy to tribal societies, to preserve and safeguard tribal groups' traditional practice and to act as a conduit between the formal state government and the informal grassroots tribal institutions. Moreover, the powers for the regulation and management of natural resources have been conferred on the Councils. Despite the fact that the District Councils manage and control the land, water and forest, the management of these resources is a weak link of the Councils. Due to their decisive role in local governance, the project aims to build their capacity in sustainable management and safeguarding of state's natural resources. The project will offer technical assistance, skill-development and financial resources to the ADCs, with the aim to empower them.

There are, at present, three ADCs in the state of Meghalaya, Khasi, Jaintia and Garo Hills Autonomous District Councils. They are constitutional bodies and all laws, rules and regulations made by them are enforceable. The ADC has the right to constitute village councils or courts for the trial of suits and cases between the parties all of whom belong to Scheduled Tribes within their own jurisdiction and may appoint suitable persons to be members of such village councils or presiding officers of such courts, and may also appoint such officers as may be necessary for the administration of the laws of the Sixth Schedule. They may also act as courts of appeal from the decisions made by village councils. As per paragraph 8 of the Sixth Schedule, the ADC also has the power to assess and collect revenue in respect of all lands within the district except those lands which are in the areas under the authority of regional councils, if any, in accordance with the standard followed by the State government. It also has the power to levy and collect taxes on lands and buildings, and tolls from persons, falling within their jurisdiction. The ADCs also has the power to make laws on matters such as inheritance of property, marriage and divorce as well as on social custom. Notwithstanding the power and authority extended to the ADCs by the Constitution, in the matters as mentioned earlier, they are however, bounded by paragraph 12(A) of the Schedule. This paragraph gives onus to the State laws over that of the laws made by the ADC. It states that if any law made by the ADC is repugnant to any provision of a law made by the State Legislature, then the formers' will be void and the State law will prevail.

10.3.2 Grassroots Institutions

The third centre of authority is the grassroots tribal institutions and practices. In the Khasi and Jaintia Hills, these are powers that rest at the village level's elected members to govern the village. The members mainly belong to the ruling clan called *Ki Bakhrav*. The elected members organise themselves into a village council or *Dorbar Shnong* that is headed by a Chief. The council has significant power and legitimacy rooted in the un-codified customary laws and practices. The primary function of the *Dorbar Shnong* is to undertake development works and to manage local assets. It also functions as a court trying petty cases such as land disputes. The decisions of the *Dorbar* are considered legitimate and are usually adhered to.

In the Garo Hills, there is the institution of the *Nokma*. The *Nokma* holds *a-king* (clan) land in the village as head of the motherhood. As head, the *Nokma* is to preserve the customs but the real owner of the *a-king* land is in his wife's' name. The administration of the village is carried out through by the *Nokma*. In the

Garo Hills there are 70 village courts with a *laskar*. If there is no *laskar* a member of the village council nominated by the District Council. The *laskar* of the village is the ex-officio president of the Village Court. The President and Vice-President is elected by the members of the council from amongst themselves by a majority of votes. The *Nokmas* and the *laskar* try all cases connected to customary laws. The community led project will provide training and capacity building to all the traditional institutions and stakeholders based on traditional laws and the existing government Acts for the protection and management of land, water and forest.

10.3.3 Grievance Redress Mechanism

Effective grievance redressal mechanism gives an opportunity to the organization to implement a set of specific measures to ensure good governance accountability and transparency in managing and mitigation of environmental and social issue of a particular project. This consists of defining the process for recording/receiving complaints and their redressal in respect of environmental and social matters.

An integrated system will be established with Grievance Redressal Cell (GRCs), with necessary officers, officials and systems at MIDFC. Grievances, if any, may be submitted through various mediums, including in person, in written form to a noted address, e-mail, or through direct calls to concerned official/s. The Social and Environmental Expert within PMU shall be responsible for coordination of grievance/complaints received

The grievance redress mechanism should be in place at the time of initiating the implementation of R&RAP and civil construction activities in the project area. A platform for grievance redressal should be organized and its regular meetings may be conducted so as to allow people to put forth their grievances. It will help the appropriate authority to find solutions and amicably address the issues. The project, apart from web-based mechanism, will have three-tier grievance redressal mechanism, i.e., (1) at the project site level, (2) State level (PMU level) and (3) Judiciary level.

Web based grievance mechanism¹¹: In case of grievances received through toll free number or web-based system, a person should be made in-charge of screening and resolution of the same/communicating with the concerned divisions for resolution of the same. The person in-charge based on nature of complaint, should forward the same to the concerned official. A ticket or a unique number will be generated for all such complaints. The complainant should follow up based on that unique number. All calls and messages should be responded within 15 days. If response is not received within 15 days, the complaint should be escalated to the Project Director.

¹¹ MIDFC website will include a link where affected person(s) can register their complaints online. A telephone number will also be on the website of MIDFC and the project sites, so that the general public can register their complaint with the PMU office.

Tier I: Under this project, the local VECs and community level organizations will serve as the first-tier mechanism to handle complaints and grievances. The local Headman will be the focal point who will receive, address, and keep record of the complaints and feedbacks. The grievance focal point will first review the grievances submitted. If grievances or disputes cannot be solved at the VEC's level within 30 days of the submission of the grievances, the issue will be brought to PMU level for mediation. PMU is expected to inform aggrieved persons or parties to disputes of the resolution in 30 days.

Tier II: If the aggrieved person is not satisfied with the verdict of site level grievance cell, he or she can escalate the grievance to state level grievance cell. The tier II cell will be under the Chairmanship of Secretary, Department of Planning. The other members will include Chief Engineer; Project Director and Social Expert of the Project. The second level of grievance cell will provide its view within 30 days of receiving the grievance.

Tier III: The aggrieved person if not satisfied with the verdict given by State level grievance cell, will have the right to approach the Judiciary. Project will help the aggrieved person in all respect if person wants to approach the judiciary. This would include the District Commissioner and Legal courts. If the issue cannot be addressed or is outside the purview of the GRC, then it may be taken by the Office of the District Commissioner or a Legal Court.

10.4 Grievance management through Electronic Mode

A simplified mobile based technology feedback system can be used at community level to capture and feed data into the Management Information System of the PMU. A toll-free Helpline number will also be established to make the mechanism widely accessible and gender friendly.

1. World Bank Grievance Redressal System

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Chapter 11: Monitoring and Evaluation Framework

The M&E framework of ESMF is designed to assess the progress and achievements against the said management plans – both Environment and Social as well as other plans such as R&R, TPP, and GAP. By providing a feedback loop, the M&E plans enable decision makers to take up mid-course corrections if required. The M&E framework is designed to measure the impacts that have taken place, ensure compliance with the legal obligations, evaluate the performance of the mitigation measures applied, and suggest improvements in management plans, if so required.

The M&E is to be undertaken at two levels:

1. Monitoring and Evaluation of the ESMF application: i.e. the application and effectiveness of ESMF elements including screening, assessment, formulation and implementation of the ESMPs, monitoring, capacity building and institutional arrangements; and
2. Monitoring and Evaluation of E&S management plans at each project site: i.e. to monitor the effectiveness of implementation of the identified mitigation measures, the environmental quality parameters and social management plans relevant to each project activity.

11.1 M&E of the ESMF application

The PMU's Social cum Gender Expert and Environment Expert will undertake ongoing monitoring of the ESMF implementation in order to identify issues, good practices and required actions. Reports based on the monitoring will be prepared by the PMU at least every quarter and submitted to the Project Director. The reports will be shared with the other implementing agencies. The monitoring of the ESMF implementation will cover the following aspects:

Screening of project activities:

1. Has the categorization of the project activities been done accurately and or changed (A to B)?
2. Has the Environmental and Social Screening Checklist been used in all applicable activities?
3. Has the scoping for further assessment been done comprehensively for all applicable activities?

Monitoring of E&S aspects in project activities:

4. Are the contractors and implementing agencies undertaking periodic and regular monitoring of the E&S implementation in the project activities?

Capacity building arrangements for management of E&S aspects:

5. What training programs on E&S aspects have been organized for the staff of implement agencies?
6. What training programs on E&S aspects have been organized for the contractors?

11.2 M&E of E&S Management Plans

Monitoring and evaluation of the project is significant for achieving the project development objective (PDO) within the stipulated time period. The key environmental and social aspects, those that have been highlighted in each E&SMPs at site level are to be monitored periodically. The approved E&SMPs will give the direction and indicate the milestones achieved as per the national / state benchmarks / norms. The following specific environmental and social parameters should be quantitatively and qualitatively measured and compared over a period of time to understand the impacts.

The PMU through the respective district level offices of PWD will monitor all projects roads to ensure conformity to the requirements of the ESMF. The monitoring will cover all stages of planning and implementation. The monitoring will be carried out through the safeguard compliance reports that will form a part of Quarterly Progress Reports (QPR) for all sub projects and regular visits by the Social cum Gender and Environmental specialists of the PMU.

1. Concurrent Monitoring

The PMU’s Social cum Gender Expert and Environment Expert will undertake ongoing monitoring of the ESMF implementation in order to identify issues, good practices and required actions. Reports based on the monitoring will be prepared by the PMU at least every quarter and submitted to the Project Director. The reports will be shared with the other implementing agencies.

The PMU will review these reports and identify technical, managerial, policy or regulatory issues with regards to the ESMF compliance. The identified technical issues will be duly incorporated. Policy and regulatory issues will be debated internally by PMU and the need for appropriate interventions will be determined. These interventions could include appropriate revision of ESMF in consultation with the Bank or suitable analytical studies to influence policy or programs of the state, if found necessary / warranted. The table below provides the milestones and process to be followed for monitoring at different stages of project:

Table 40: Monitoring Protocol

Milestones	Objectives	Process	Responsibility	Decision/Target/ Deliverable
Environment				
				1.
				2.
Social				

Sub- Project Screening	To approve categorization of proposed sub-projects	<ol style="list-style-type: none"> a. Discussions with implementing agencies to assess eligibility of project based on project's priorities and identify scope of project report b. Consultants to submit report along with proposed impact categorization 	PMU and PIU	<ol style="list-style-type: none"> 3. Decision to proceed or not 4. Identification of impact category
Sub- Project Appraisal	To ensure satisfactory compliance with SMF	<p>Detailed appraisal (including RAP, GAP and TPP where relevant), including site visits/ investigations if necessary, assess suitability of site, adequacy of safeguard measures, risk analysis and regulatory clearances).</p> <p>DPR to be submitted for approval</p>	PMU	<ol style="list-style-type: none"> 1. Review report and decide to <ul style="list-style-type: none"> - accept - accept with modifications - reject and instruct to resubmit
Approval	Approvals from PMU	<ol style="list-style-type: none"> 1. PIU to recommend to PMU 2. PMU to review and approve 	PIU and PMU	<ol style="list-style-type: none"> 1. Approval of RAP, GAP and IPDP if required
Implementation of RAP, GAP and IPDP, Monitoring and Review	Ensure Implementation of agreed RAP, GAP and IPDP where applicable)	<ol style="list-style-type: none"> 1. Prepare quarterly progress reports 2. Schedule field visits as required 3. Midterm and end term evaluation 	PIU, PMU, NGO	<ol style="list-style-type: none"> 1. Quarterly Progress Report

Project monitoring will be the responsibility of the PMU who will submit Quarterly Progress Reports. The reports will compare the progress of the project to targets set up at the commencement of the project. The list of impact performance indicators will be used to monitor project objectives. The socio-economic survey conducted will provide the benchmarks for comparison.

11.4 Periodic Evaluation

An external evaluation of the safeguard implementation prepared for sub projects will also be undertaken twice during the implementation of the project – midterm and at the end of the implementation. During

implementation, meetings will be organized by PMU inviting all PIUs for providing information on the progress of the project work.

1. **Mid-term Assessment Study** – this would be undertaken mid-way through the project to ascertain the progress achieved and any mid-course corrections which need to be introduced. It would include indicators to measure progress towards log frame goals and objectives.
2. **End-Term Assessment Study** – this will be undertaken at the end of the project period (around the time of project completion) and will assess the achievement of the project during the tenure.

Chapter 12: Consultation and Information Disclosure

Stakeholder consultation is an integral part of any environmental and social assessment including preparation of ESMF and E&SMPs. The overall objective of such consultations is to document the concerns of the stakeholders with specific reference to the project planned interventions. In order to carry out consultation, the first step is to identify relevant groups of stakeholder and analyse what should be their role play in preparation and implementation of project activities as well as mitigation measures.

12.1 Stakeholder Identification and Analysis

The proposed project is likely to influence a large section of the society in the project areas. Thus, the stakeholders, identified in the process are either the individuals or group/s of individuals or their institutions in the project area that will be influenced by the activities of the proposed project and vice versa. Different stakeholders were identified in the process who have a direct or indirect stake in the project.

Table 41: Identified Stakeholders in Different Execution Levels

Project Level	Stakeholders	
	Direct	Indirect
State Level	<p>All concerned department and implementing agencies who directly involved in project planning, implementation, and monitoring, such as:</p> <ol style="list-style-type: none"> 1. Planning Department 2. MIDFC 3. PWD 4. Transport department 5. Tourism Department 6. Urban Affairs Department 7. PMU 8. Others as progressively found relevant 	<ol style="list-style-type: none"> 9. All other supporting government departments those whose participation will be partially/ intermittently required. Such as: <ol style="list-style-type: none"> 1. Forest 2. Water Resources 3. Disaster 4. MBDA 5. Revenue 6. Community and Rural Development 7. Others as progressively found relevant 10. Academic institutes 11. NGOs

Project Level	Stakeholders	
	Direct	Indirect
District Level	1. District Collector's office	1. ADCs (Khasi, Jaintia, Garo) 2. Academic institutes 3. NGOs
Village / Cluster	1. Village Employment Councils (VECs) 2. PAPs and PAFs 3. Scheduled Tribe (ST) 4. Farmers of other Marginalized Section (Scheduled Caste) 5. Land Lease Holders 6. Fishery Community	1. Headmans of Villages (Nokmas, Daurbars, Syiemships, Dollois, others) 2. Community as a whole benefiting from the project 3. Daily Wage Labourers 4. Contractors 5. Community Organizations 6. NGOs working in the locality

12.2 Stakeholder's Consultation Framework

This section describes the stakeholder consultation process that needs to be undertaken during the detailed assessments of the project activities or as and when needed.

The MIDFC through the ESIA consultants should consult all key stakeholders on the project safeguard documents at least once during the process of assessment. The stakeholder consultation should provide a summary of the proposed project's objectives and a summary of the ESIA conclusions.

The key stakeholders to be consulted during project activity preparation and implementation include:

1. Project beneficiaries, and PAPs/ PAFs
2. Elected representatives, community leaders, and representatives of community-based organizations; business and industrial associations, etc.,
3. Relevant local NGOs;
4. Local government and relevant government agencies, including the authorities responsible for land acquisition, protection and conservation of forests and environment, archaeological sites, religious sites, and other relevant government departments (regulatory, administration and infrastructure services related)

5. Residents, shopkeepers, business people, farmers, fisheries (owners and workers) who live and work alongside the project area and near sites where facilities will be built; custodians, and users of socially and culturally important buildings;
6. Vulnerable groups, women groups etc.

At the minimum, the proponent must meet with the principal stakeholders to inform them about the proposed project activity and to solicit their views about it. More extensive consultations are required for specific project activities that have significant impacts. The methods and results of the consultations shall be documented in the ESIA Report.

All consultations need to be a two-way dialogue with the aim of informing the stakeholders about the potential impacts (positive/negative) and obtain their feedback and views about the project activities and the proposed mitigation measures. All consultations need to be inclusive of all groups and gender, transparent and documented.

The implementing agencies will conduct meaningful consultations with all relevant stakeholders who are directly or indirectly affected. For this purpose, PMU will prepare a consultation plan with all stakeholders. The proceedings and outcomes of these consultations to be archived. For the ESIA, the PMU should, with the support of participants, summarize how the consultations were conducted, key topics discussed, and the decisions arrived at. These decisions will be incorporated into the ESIA and EMP. Photographic records and signatures of participants to be archived in the ESIA report.

Consultations should be conducted in an atmosphere that is conducive to the project development and beneficial to the community and local population. The PMU should ensure that the consultations are free of coercion and intimidation, are gender-inclusive, and tailored to the needs of disadvantaged and vulnerable groups. All relevant stakeholders will be informed in advance about the timing and format of the consultations. This will be done through advertisements in local newspapers and / or written letters to the district magistrates, representatives of relevant departments, heads of the local village councils, representatives of urban local bodies, and NGOs in the vicinity of the project sites. During the consultations, information about the project, its rationale, scope, benefits, and costs, including potential environmental impacts and mitigation measures, to be presented by the PMU with the support of the ESIA consultants.

A variety of approaches as follow for stakeholder consultation can be adopted as deemed appropriate.

Table 42: Stakeholder's Consultation Approaches

Project Stage	Consultation Activities	Remarks
Project preparation	Household level consultations through sample questionnaire surveys on service levels, needs, priorities for project preparation	At the start of the project
	Consultation with all line departments	At the start of the project
	Focus group discussions with people residing/working near the project sites	During the visits to project sites
	Consultations with PAPs and PAFs:	At various stages, especially during, the preparation and implementation of resettlement plan
Project Implementation	Focus group discussions with the people residing/working near the project sites	During the EMP monitoring at work sites
	Informal discussions with the construction workers and construction supervision staff (contractor, consultants and PMU)	During the EMP monitoring at work sites
	Informal discussions with commuters and general public along the roads where works are implemented	During the EMP monitoring at work sites

12.3 Stakeholder's Consultation on ESMF

The consultation meetings were organized basically for two important purposes, i.e., (1) to share project objectives and proposed project interventions with the identified stakeholder groups and (2) to consult with the stakeholders and document their concern, with particular reference to social and environmental impacts of the proposed project interventions.

The field visit and stakeholder consultations were conducted in both at East and West regions of Meghalaya covering the following road projects:

Table 43: Stakeholder Consultation on ESMF

Meghalaya East (Khasi and Jaintia Hills)					
SI No.	Name of Road	Category	Total Length in Km	Length Proposed in Km	Date of Consultation
1	Shillong - Diengpasoh Road	MDR	21.73	11.30	21.10.2019

2	Laitkor-Pomlakrai, Laitlyngkot Road (5th - 16th Km)	MDR	15.52	11.51	21.10.2019
3	Pasysih - Garampani Road	MDR	48.00	48.00	22.10.2019
4	Nartiang Jonglwit Barato Road	MDR	38.00	23.00	22.10.2019
5	District Level Consulation with all concerned departments and other stakeholder groups				23.10.2019
Meghalaya West (Garo Hills)					
6	Bajengdoba - Resubelpara Mendipahar Damra road (0-14th km upto Bajengdoba to Resubelpara)	MDR	37.00	37.00	21.10. 2019
7	Parallel Road to existing Dalu Baghmara road	MDR	18.00	18.00	23.10. 2019
8	Rongram Rongrenggre Darugre (RRD) road	MDR			24.10.2019

12.3.1 Stakeholder's Concerns / Opinion

The key concerns and or opinion of the stakeholders captured during consultation is presented here. Detail minutes are given at Annex 4.

Road Safety – As most of the road passes through villages, villagers consulted reflected on the safety issues and requested for segregation of traffic at residential and commercial areas. The area having infrastructures such as schools, playgrounds, PHCs adjoining the roads should be treated as safety zones and proper signage should be implanted. Some of the villagers suggested to upgrade those infrastructures along with road project and move the entrance to such infrastructure offsetting the road. This will reduce road-safety conflicts.

Provision of Footpath and street lighting – Community thus consulted has also raised the importance of both-side footpath and adequate street lighting along the roads passing through residential and commercial areas. At the rural areas of the State, people walk to the common areas such as market places, often located adjoining the roads. In absence of footpath and street lighting often road-safety issues arises. Thus, villagers requested for keeping space for footpath and acquire land if need be.

Similarly, to avoid conflict at night, the residential and commercial areas should be adequately illuminated with proper signage. Few of the community members also suggested improvements of blind curves to avoid accidents and for overall betterment of the area.

Market Places – Most of the roads under the project leads to weekly market *huts*. In absence of adequate space within the legal structure of the market area, many of the vendors are forced to lay their stall on the road-side, thus blocking the road and creating road-safety issues. Thus, it was requested by many villagers to create adequate market places, taking account of increased agri-production and consumption pattern of the area. Some of the villagers suggested that in absence of land, two-storey market place can be created to accommodate all.

Parking Places – Most the market place, whether in villages and or in urban areas, are devoid of adjoining parking facilities. This is same as in front of NEGRIMS, one of the largest public health infrastructures for the north-eastern states of the country. Thus, people often park their private vehicles and goods van on the road, leading to temporary road blockage and disturbing the traffic flow in those stretches. Thus, the commuters and market suppliers request for additional parking place to be created as part of the project.

Community Toilets - Some of the roads cover long length, often connecting the neighbouring states and or connecting two national highways. Thus, it is expected that the people traveling on those roads may travel long distance and require public amenities. Thus, few of the head-men echoed the need for community toilets (bio-toilets) adjoining the roads. Some of them suggested that same facilities thus created can be managed by the women of the areas and earnings can be utilized for community development.

Eligibility for Compensation – During each consultation, communities attending the discourse volunteered to gift their land for widening and or improving road alignment. Infact, few of the headmen in different consultation areas pointed out that through-out history communities have been donating land for creating of public facilities. Compensating through one project could create unnecessary dispute among community and a feeling of being deprived in other project areas where compensation is not possible. People are of the opinion that person/ family whose house gets affected should only be compensated to construct another house. Private land-holders in the state are likely to have huge portion of land under their name, and therefore it is easier to volunteer land for them for creation of public facilities.

Communities were informed about the compensation matrix being available at all PWD office for their reference and awareness.

State level Consultation on ESMF

A state level workshop on the ESMF was held in the state headquarter on October 23, 2019 chaired by the Secretary, P.W.D.(R&B). Public Works Department explained the objectives of ESMF and provided information on the proposed project. The role of other concerned Departments and how that will be coordinated was also explained. The department also informed that in certain places community is willing to donate their land for widening of roads and are more concerned with the provision of footpath especially in school and market junction. Others who are having agricultural land and paddy fields, are demanding proper drainage and retaining walls. Community has also demanded that existing temporary market to be replaced with permanent sheds and for long stretch of roads, community toilets cum bus shed be provided and these toilets will be maintained by the women members of the community. PWD

informed that these requirements will be incorporated in the DPR accordingly. The participants agreed with the process adopted and provisions made in the ESMF. Specifically, they raised the following issues:

1. The Forest Department informed that ESMF should clearly mention that in case road is passing through forest land, forest land needs to be diverted and in case the alignment falls within the private land, permission for felling of trees has to be obtained from the department.
2. The Agriculture Department informed the members that if the alignment of the road falls within the paddy field of the private party, the department is to be informed so that assessment of crops can be done by the Agriculture Department for compensation to the party affected. However, for voluntary donation of land, no provision of assessment is required to be done by Agriculture Department.
3. The Transport department raised the issue of coordination said for handing over of land belonging to Urban Affairs for construction of Helipad to Transport Department may be initiated at the earliest so that construction process of the same can be taken up by the PWD(Roads).
4. Where acquisition of land is necessary for widening of Roads, Revenue Department informed that department will carry out assessment of land and identify land owners.
5. MeECL and PHED requested for early submission of estimates for shifting of utilities.

12.4 Framework for citizen engagement

Unlike traditional types of engagement – Communication and Consultation, Citizen Engagement is an interactive two-way process that encourages participation, exchange of ideas and flow of conversation. It reflects the willingness to share information and make citizens a partner in decision making.

Active engagement gives the right to hold others accountable, and accountability is the process of engaging in participation. It seeks greater accountability from the service providers through increased dialogue, consultation and monitoring and assessing performance externally and mutually.

Ways of Citizen Engagement: A variety of mechanisms may be adopted to incorporate and promote citizen engagement in Projects.

a) Information sharing: In order to generate awareness and to prepare the citizens, elected representatives and other stakeholders, a wide range of information should disseminate. It includes display of Citizen's Charter with listing services and service levels, roles and responsibilities of officials and escalation mechanism, etc. In addition, regular meetings and interfaces may also be used to share information. For many departments and services, mobile based voice or text services and web-based presence also serves as an additional channel for information sharing.

b) Consultation: Consultative meetings with the stakeholders are to be undertaken at different stages of the project cycle at regular intervals. Each intervention should be discussed with the citizens, elected representatives, local civil society groups and other stakeholders to get their perspectives included in the designing of the interventions, and thereby increasing the chances of ownership among various stakeholders. Such consultations may be undertaken both online as well as face to face.

c) Joint assessment: Participatory assessment and monitoring with the stakeholders, particularly the identified service seekers, are used as tools for enhancing citizen engagement. These include the use of a variety of techniques such as joint citizen monitoring, meetings with the elected representatives, etc.

12.5 Information Disclosure

12.5.1 Information Disclosure on ESMF

The draft and final versions of the ESMF will be disclosed for public knowledge through the website of the MIDFC and the World Bank.

12.5.2 Information Disclosure Procedures

Project related information shall be disclosed through public consultation and making relevant documents available in public locations. The PMU and associated line departments shall provide relevant safeguards information in a timely manner, in an accessible place and in a form and languages understandable to affected person and other stakeholders. For illiterate people, other suitable communication methods will be used.

At minimum, the following documents shall be made available at the offices of PMU, district level offices of line departments, State and District Libraries, Local municipal and ADCs, VECs offices and other public places for public reference, and shall also be uploaded on respective websites.

1. Draft ESMF Report (in English)
2. Final ESMF Report (in English)
3. Updated/amended ESMF (in English)
4. E&SMPs (in English)
5. R&R, TPP, GAPs (in English and vernacular language)
6. M&E Reports (in English)

Chapter 13: Budget for ESMF Implementation

As the technical details have not yet been finalized for the project investments, an estimated lump sum amount has been designated to for ESMP implementation. This is an estimate and will need to be updated once all the components of the project is finalized. the proeject design of project investments has been finalized during project implementation. An implementation period of 60 months is considered for the preparing following costs. One SPMU,two DPMUsand four DPIUs are considered.

Table 44: Indicative Cost of Environmental and Social Management Framework Implementation

SN	Budget Heads	Unit	Qt.	Unit	Qt.	Unit Cost (INR)	Total Cost (INR)
A	Human Resource						
	PMU-Social & Gender Expert	No.	1	Month	60	100000	6,000,000.00
	PMU-Environment Expert	No.	1	Month	60	100000	6,000,000.00
	PMU-Social & Gender Asst.	No.	1	Month	60	50000	3,000,000.00
	PMU-Environment Asst.	No.	1	Month	60	50000	3,000,000.00
	Sub-Total						18,000,000.00
B	Capacity Building on E&SS						
	PMU	Days	1	Person	10	3500	35,000.00
	Contractors	Days	2	Person	50	1000	50,000.00
	With Traditional Heads/ VECs	Days	3	Person	100	500	50,000.00
	Sub-Total						135,500.00
C	Demonstration						
	INM	No.	25	Blocks	41	15000	15,375,000.00
	IPM	No.	25	Blocks	41	15000	15,375,000.00
	Climate Resilient Farming Tech.	No.	50	Blocks	41	15000	30,750,000.00
	Sub-Total						61,500,000.00
D	Awareness Drive						
	Workers / Labour Force	No.	2	Camps	41	15000	1,230,000.00
	Villages / Community	No.	5	Blocks	41	25000	5,125,000.00

	IEC Materials	No.	3	Copy	50000	10	1,500,000.00
	Sub-Total						7,855,000.00
	Sub-Total (CB)						80,172,500.00
E	ESMF Monitoring (Quarterly)	Quarter	4	Year	5	50000	1,000,000.00
	Environment & Social Audit	No.	2	Days	25	25000	1,250,000.00
	Sub-Total						2,250,000.00
	Total						109,422,500.00

Note: Budget is tentative and to be finalized during finalization of project cost. There are certain activities which will be the line activity of the project. Such activities will be part of the overall project budget, such as Waste management, compensatory tree plantation, cost toward temporary relocation and etc.

Annexures

Annex 1: Terms of Reference for Environment and Social Impact Assessment

This assignment is designed to assess the impact of the proposed MITP project and recommend a set of measures and criteria for managing impacts in the project area and its surrounding; as per the requirements of the Government of India, State Government and the World Bank, as applicable for the proposed program.

1. Background:

To overcome the abovementioned challenges in a holistic and all-inclusive manner, the Government of Meghalaya, with financing and technical support from the World Bank, is preparing a project titled “Meghalaya Integrated Transport Project”. The objective of the project is to “provide a well-connected efficient, good quality and safe transport network on long-term basis in a cost-effective manner maximizing economic and social outcomes”. This will involve taking a whole-of-the-state approach of the entire transport sector and introduce innovations, efficiency, and new ways of doing business at various stages of service delivery, ensuring value for money. This will involve:

2. Integrating transport and development agenda thus resulting in more job-creation, better incomes, and realization of the SDGs;
3. Integrating various modes of transport – such as roads, ropeways, waterways, and urban transport to operate as part of one system for optimal performance;
4. Integrating climate resilience, green growth, asset management, and safety in the transport sector thus making the sector more resource efficient, reducing carbon footprint, minimizing GHG and contributing to health outcomes

2. Scope of Work

In line with the requirements of the World Bank’s applicable Operational Policies and Central and State government laws, MPWD wishes to engage a Consultant (hereafter named “the Consultant”) for the preparation of an Environmental and Social (E&S) assessment and preparation of management/mitigation instruments to address project’s E&S risks and impacts for roads in proposed Meghalaya Integrated Transport Program (MITP). The scope of work to be carried out by the Consultant shall include but is not limited to the following:

1. Conduct a comprehensive Environmental and Social Screening for Phase I roads totaling 266.82 kms and minor bridges. Details will be provided by MPWD on request.
2. Conduct detailed Environmental and Social Impact Assessment (ESIA) for Phase I roads as per applicable Operational Policies and Central and State government laws. While conducting ESIA, the Consultant shall closely coordinate with the DPR Consultant and PWD to obtain all available baseline and other information as required. For the concerned stretches of the road length, third-part DPR Consultants have already been deployed for baseline survey, finalization of alignment and need for any geometric design correction. Thus, consultant shall also ensure integration of ESIA findings and ESMP budget in engineering feasibility studies being completed by DPR Consultants. In addition, the Consultant will prepare as necessary any Environmental and Social Management Plan (ESMP), Resettlement Action Plan (RAP), Tribal (Indigenous) Peoples Development Plan, Gender Action Plan; Labor Management Procedure and Stakeholder Engagement Plan (SEP) etc. as appropriate.

3. The Consultant will support the client in complying with requirements such as preparation of application and supplementary reports (survey and preparation) required per local regulatory requirements for obtaining project's clearances like forest /environmental/wildlife clearances, if applicable, and presentation before expert panel committees of MoEF & CC, Govt. of India.
4. The Consultant shall conduct consultations with identified stakeholders and project-affected parties/community from early project planning and design stages of the assignment. The Consultant shall support the client in developing Stakeholder Engagement Plan (SEP) for entire project cycle and its disclosure before project appraisal.

3. Detailed Scope of Work

A. Screening

The consultant shall undertake steps for the initial screening of project area and prepare a screening report detailing out the scope of ESIA. The outcomes of environmental & social screening shall be an objective evaluation of project corridors and fit in to overall criteria for selection of project corridors (technical, environmental, social and economic criteria) and the outputs shall provide: (a) exclusion of project corridors i.e. consistent with E&S Safeguards criteria; (b) specific environmental criteria for prioritization of project corridors; (c) scope of corridor specific ESIA's including stakeholder engagement and consultation to be undertaken based on project's potential risks and impacts; (d) identification of associated facilities and primary supplier of project that need to be assessed in detail during ESIA; (e) identify scope for integrating green corridors concepts (use of local materials, recycled aggregates, use of innovative materials, creating carbon sink, soil and water conservation (managing watershed of river/stream & water harvesting), climate resilient measures etc. as suited to local needs and challenges; (f) set out project boundary and identify project activities for GHG emission estimation;

1. **Define project's 'study area' or project influence area and associated stakeholders:** The Consultant shall define the 'study area' considering different environmental & social settings along corridor, project activities and associated facilities¹². Specify the boundaries of the study area for the assessment: watersheds, enhanced access to sensitive/remote areas such as parks/reserves/forests, in-migration and settlement, natural resource exploitation and commercial development; and identify all stakeholders within the project area towards preparing a stakeholder engagement plan that shall be applicable throughout the project cycle.
2. **Surveys:** The Consultant shall collect information on the existing environment & social setting from authentic secondary sources, and identify gaps to be filled, relevant to the environmental & social screening needs. In addition, the Consultant, while planning baseline data collection shall ensure (a) relevance of baseline data to predict impact and design mitigation measures; (b) identify data gaps and uncertainties associated with prediction;(c) based on current information, assess the scope of the area to be studied based on physical, biological, and socioeconomic conditions; (d) takes into account current and proposed development activities within the project area but not directly connected to the project. (This section should indicate the accuracy, reliability and sources of the data and consequences for assessing impacts and their mitigation). This section will address the separate Project influence Area (PIA) of each of the route under assignment (i) and will present GIS map, as appropriate. The Consultant shall survey the environmentally & socially sensitive locations on and along the project road, as well as within the project's study area. All regionally or nationally recognised environmental resources and features

¹²Refer ESF, 2016 of the World Bank

within the project's study area shall be clearly identified, and studies in relation to the proposed scope of the project. Typically, these will include stretches of congested habitation/densely built up areas, roadside trees; environmental and common property resources such as forests, water bodies; land use types; archaeological sites and major/minor physical cultural properties such as temples, shrines, mosques, etc. All these parameters for impact assessments shall be depicted using on a strip map along the chainage. The information of longitude, latitude should be recorded. In addition, the consultant is to ascertain presence of tribal – whose characteristics match with requirements as listed under OP 4.10 on Indigenous People and thereby assess need for identify project corridors preparing Tribal Development Plans for those specific corridors.

3. **Review of Environmental & Social Legal Requirements:** Taking cognizance of existing state and national's social and environmental acts, rules and regulations, the Consultant shall review environmental and social legal requirements set forth per local regulations to assess their applicability to the project. The permissions and clearances required shall be listed beforehand for implementation of the project.
4. **Scoping of ESIA:** The Consultant shall define boundaries of the project ESIA after careful consideration of the baseline scenario, likely potential environmental risks and impacts on the identified sensitive environmental receptors/VECs, and the proposed mitigation and enhancement measures. The scoping shall include a listing of potential environment issues that do not deserve a detailed examination in the project ESIA (covering induced impacts that may be outside the purview of the client) along with a justification. The scoping needs to identify potential environmental risks and impacts that should be studied during ESIA and recommend additional studies needed to comply the requirements of Environmental and Social Operational Polices of the World Bank. If extensive study is recommended in future which is beyond the scope of the project, the draft ToR should be attached in the Annex.
5. **Stakeholder Engagement Plan:** The Consultant shall develop a draft Stakeholder Engagement Plan that shall be applicable throughout the project cycle. In preparing this plan, the Consultant shall carry out preliminary consultations with communities that are likely to be affected, NGOs, selected Government Agencies and other stakeholders to (a) collect baseline information, (b) obtain a better understanding of the potential risks and impacts and capacities (c) appreciate the perspectives/concerns of the stakeholders. Consultations shall be preceded by a systematic stakeholder analysis, which would (a) identify the individual or stakeholder groups relevant to the project and to social and environmental issues including affected parties, other interested parties, disadvantaged/vulnerables or groups (b) determine the nature and scope of consultation with each type of stakeholders, (d) determine the tools to be used in contacting and consulting each type of the relevant stakeholders (e) mode of consultation and time of consultation (f) management functions and responsibilities (g) monitoring and reporting. Consultation with the stakeholders shall not be treated as a project information dissemination session but be used to improve the plan and design of the project and shall continue through project implementation. The Stakeholder Engagement Plan shall specify what is required for information disclosure and to achieve meaningful consultation. The plan will be such that it shall ensure appropriate project information is disclosed to stakeholders in a timely understandable, accessible, and appropriate manner.

B. Environmental and Social Impact Assessment

The Consultant shall determine all relevant direct, indirect and cumulative environmental and social risks and impacts (both positive and negative) such as, but not limited to (a) construction impacts such water and soil contamination from wastewater generated from construction/workers camps; spillage and handlings of chemical and hazardous materials; damage to vegetation; potential inducement of landslides, landslips, erosion from cut faces of hill slopes; disposal of spoils from hill cutting and tunnelling; air pollution due to fugitive dust from hill cutting and earthwork, and emission from operation of vehicle, equipment and plants; cutting of trees for widening of road; reduction of natural resources base and

degradation due to extraction/quarrying; land degradation from project induced development; change in aesthetic of landscape; impacts on archaeological and historical sites/assets, culturally and socially important common properties, religious properties/sites, sacred groves on or near the project roads; distress of public/community due disruption of utility services; and likely direct, indirect and induced impacts on ecological functions of forests, other natural habitats including protected areas; community health and safety risks and issues; (b) occupational health and safety risks and issues during construction and operation; (c) operation stage safety concerns and risks, considering increased speed and traffic volumes and community/ pedestrian safety issues; (d) environmental impacts during operational e.g. air pollution, noise, traffic safety, and impacts on wildlife, etc. The detailed scope of the ESIA is provided below.

1. **Environmental Impact Assessment:** The Consultant will (a) collect information from secondary sources that are relevant to understand the baseline, as well as the design of mitigation measures pertaining to physical, biological and socio-cultural environments; (b) carry out site visits and identify environmentally sensitive features locations within direct or indirect project area and document them on the base maps to identify conflict points with preliminary designs (including verification of these from authentic sources of information, such as from the revenue and forest records); and (c) prepare detailed specific maps showing details of candidate sites with opportunities to enhance positive impacts of project. All surveys shall be carried out in compliance with the GoM, GoI standards/guidelines/norms. Wherever such guidelines/norms are not available, the techniques, tools and samples employed for the surveys shall conform to the International practices. Whenever directly relevant secondary data is available, these should be used, while indirectly relevant data should be verified through primary survey. Environmental quality (air, water, noise and vibration) monitoring shall include an adequate number of samples, as established on a sampling network to provide a representative picture of pollution levels along all the road corridor. Additional data for sensitive environmental / ecological receptors, if any, shall be collected such as to analyze and predict the possible risks and impacts to a degree and precision of acceptable standards. The surveys shall necessarily cover inventory of trees, streams/rivers, historical/cultural sites, construction material sources, settlements, land use, sensitive receptors etc. in project corridors, including preparation of tree cutting schedules and forest land diversion case. Further, additional specialized surveys, such as biodiversity assessment survey, and hydrological surveys shall be conducted, if and when required as part of environmental scoping. As part of EIA, the Consultant shall collect information on all regionally or nationally recognized environmental resources and features within the project area, which shall be clearly identified and studied in relation to activities proposed under the project. These will include all protected areas (national parks, wildlife sanctuaries, reserved forests, biosphere reserves, wilderness zones), unprotected and community forests and forest patches, all wetlands, rivers, rivulets and other surface water bodies. The Consultant shall consolidate all this information on maps of adequate scale (1:250,000 minimum), superimposed with the project's roads corridor.

2. **Social Impact Assessment:** The Consultant will carry out (a) Consultations with each stakeholder category and present a Stakeholder Analysis of local stakeholders such as local government, associations, who could play a role in the project implementation process (including R&R) with positive/negative influence on the outcomes. These consultations will also cover issues relating to Gender Based Violence (GBV) and GBV-related concerns about the project. It shall record and analyze people's perception of the project, its adverse impacts, and minimum acceptable mitigation measures (relocation options, if any are required assistance offered) that will enable them to cope with displacement or loss of livelihoods – temporary or permanent in nature, if any. As part of this process, disadvantaged and vulnerable groups will be identified and separate focused group discussions (FGDs) with such groups besides women will be held. (b) In case of tribal, the Consultant shall conduct consultations and identify if the project impacts are result in loss of land, livelihood, relocation; and has

significant impacts on indigenous peoples' cultural heritage that is material to their identify and /or the cultural/ceremonial/spiritual aspects of their lives and in such cases carry out Free Prior and Informed Consultation of the affected indigenous persons/tribal. Summarize the concerns, suggestions by stakeholder for consideration by project authorities during design. (c) Quantitative and qualitative surveys: This shall involve identification of adverse (on the finalized alternative) and positive impacts of the project through consultations and quantitative survey. Survey should cover all categories of impacted persons and results of the Census and Socio-economic survey on affected households, should be presented segregated by gender and social category. It will help to establish impact categories that is critical to the determination of potential adverse impacts and help analyze the relative vulnerability of, and risks to, the affected communities. The assessment should analyse key impacts on different groups of people (such as land owners, small, farmers; small businesses, shopkeepers; commercial establishments, disadvantaged and vulnerable groups and women), and communities (common properties, lands). The impacts should be segregated by pre-construction and construction stage (such as disruption, loss of access, loss of livelihood, debris disposal following hill cutting, impact on host community, if any, issues arising due to labour influx, etc.). Besides all the affected community assets such as worship place, drying up of drinking water source, impacts to schools and the community facilities need to be recorded. As some of the districts and possibly some sub-project corridors have presence of scheduled tribes, and if the Screening exercise indicates the need, the SIA needs to assess the current socio-cultural living style of the tribal communities in line with the World Bank's OP 4.10 and ascertain required measures. (d) Entitlement policy and assistance package: As MPWD proposes to use Direct purchase /Negotiated award method for land taking under this project, consultant should further assess the approach to better understand the processes and whether the method meets the requirements of OP 4.12 on involuntary resettlement. Also, the gap analysis between this method and OP 4.12 requirements will cover the treatment of non-title holders, such as squatters and encroachers. Hence, based on discussions with GoM and WB, the study will help establish the criteria for eligibility of compensation and other resettlement assistance and present entitlements by type of impacted assets and category of impacted persons including disadvantaged and vulnerable persons. (e) Identification of gender concerns/gaps: In order to meet the Bank's requirements on gender, the project should carry out sub-project specific assessment of access, safety, benefits from increase in mobility, access to water points (often along the roads), fuel and fodder paths, etc. shall help inform the projects through gender perspective; hold separate FGDs with women households and road users; and explore areas for skill development/enhancement. The exercise is expected to formulate commensurate actions relating to gender and help devise suitable monitoring indicators. (f) Identify modes for citizen engagement: As persons and communities would be impacted/influenced by the project activities, identify all the relevant stakeholders, revise the preliminary stakeholder analysis and plan, to identify means to engage with citizen/communities in respect to design and mitigation measures, monitoring, grievance mechanisms. (g) Institutional Capacity Building & Training: Assess the role of the key institutions, departments, and stakeholders involved in the project and describe their roles, responsibilities and relationship with the project activities in specific relation to implementation of RAP/ARAP, TDP. Provide an assessment of the strengths, weaknesses, and opportunities for capacity enhancement to address social and gender issues. (h) Grievance Redressal Mechanism and procedures: Assess existing grievance redressal mechanisms (available for MPWD, road related grievance mechanisms and for the state as a whole) to help develop a GRM. (i) Labor related aspects: Assess applicability of labour laws and, non-discrimination and equal opportunity, potential risks of child labor and forced labor, including the workers to be brought to the project by brokers (sub-contractors); grievance mechanism to all workers, occupation health and safety aspects, etc. The assessment will scope out impact and absorptive capacity on host communities to address risks that arises from labour influx and identify measures that need to be incorporated in the bid documents for the civil works contractor.

3. **Cumulative Impact Assessment** of the proposed project activities, and of the induced effects due to construction and operational activities of the project along with other actual or planned development activities in the project area. For this analysis, the Consultant will identify Valued Environmental Components specifically relevant to the Cumulative Impact Assessment based on inputs from stakeholders and will assess the potential impacts of multiple development activities on the VECs.

4. **Analysis of Alternatives:** The Consultant while doing analysis of alternatives shall compares feasible alternatives to the proposed project site, technology, design, and operation—including environmental and social risks and impacts “with project” and “without project” scenarios. The Consultant shall quantify and provide estimated budget for the alternative mitigation measures; and suggest institutional, training and monitoring requirements for implementation. The Consultant shall suggest on efficient use of environment friendly construction materials and technologies, energy and resource efficiency, water conservation and management, reduction of GHG emission and increasing carbon sink, climate resilient measures etc. The Consultant to the extent possible shall attaches economic values where feasible. The Consultant need to suggest nature-based options (if available) to minimize the geohazards/enhancing slope stability due to the road construction during construction and operation period.

5. **Environmental inputs to Engineering Feasibility Studies:** The Consultant shall make location-specific design recommendations, wherever possible or required related to alignment (major/minor shifts or bypass or altogether different route alternative), road cross-sections, construction material use, slope stabilisation, erosion control, and mitigation & enhancement measures. For all the different alternative improvement proposals under consideration, using acceptable/established valuation techniques, the Consultant shall prepare {a} an estimate of economic costs of the environment damages, and economic benefits from the direct positive impacts that the project is likely to cause, and {b} an estimate of financial cost on the mitigation and enhancement measures that the project is likely to require, and financial benefits, if any. The Consultant shall consult with the engineering team and familiarize themselves with the project’s overall feasibility analyses models, so that the ESIA inputs are in conformity to the needs of the overall feasibility study. In addition, wherever economic and financial costs of the environmental impacts cannot be satisfactorily estimated, or in the cases of significant irreversible environmental impacts, the Consultant shall make recommendations to avoid generating such impacts.

C. Environment and Social Management Plan

Based on the environmental and social impacts assessed, separate ESMPs, RAP, TDP (as required) for each road corridors shall be prepared that consists a set of mitigation, monitoring, and institutional measures required to eliminate/address adverse environmental and social risks and impacts. These instruments shall be prepared as per the requirements of WB’s OPs and should identify responses to potentially adverse impacts; determine requirements for ensuring timely responses; and describe the means for meeting those requirements. The technical details for each mitigation measure shall include the type of impact to which it relates, the conditions under which it is required (e.g., continuously or in the event of contingencies), as well as preliminary design, equipment descriptions, and operating procedures, as appropriate. This should include the following:

1. Estimate the impacts and costs of the mitigation measures for each of the activities separately and of the institutional and training requirements to implement them. Assess compensation to affected parties/persons for impacts that cannot be mitigated. However, this assessment and subsequent

- compensation plan are to be more strongly addressed in the Social Impact Assessment (SIA) document.
2. The Consultant shall recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Apart from mitigation of the potential adverse impacts on the environmental component, the ESMP shall identify opportunities that exist to induce positive impacts of project along the corridor. Residual impacts from the environmental measures shall also be clearly identified. Include measures for emergency response to accidental events (land slide during construction or operation.), as appropriate
 3. The ESMP shall include: a) specific or sample plans, such as for management and redevelopment of quarries, borrow areas and construction camps; b) detailed specification, bill of quantities (BoQ), execution drawings and contracting procedures for execution of the environmental mitigation and enhancement measures suggested, separate for pre-construction, construction and operation period; c) actions identified based on assessment of potential quarry sites if any are identified, conditions of primary supply workers with a focus on child, forced labor and OHS; and d) good practice guides that relates to construction and upkeep of plant and machinery.
 4. Responsibilities for execution and supervision of each of the mitigation and enhancement measures shall be specified in the ESMP.
 5. The Consultant for unanticipated incidents arising from both natural and man-made hazards, shall prepare Emergency Response Plan (ERP) particularly during construction stage.
 6. The Consultant shall also prepare a detailed management plans with specific actions to be taken by the contractors and sub-contractors with regard to working conditions and management of workers, management of chemical, hazardous and non-hazardous material/waste, noise, occupational health and safety of workers and community, labor influx (workers accommodation, HIV/AIDS prevention etc.) and other key impacts under contractors' control.
 7. ESMPs should include provisions/actions relating to construction stage social impacts, gender mainstreaming, citizen engagement, management of labor influx¹³, HIV/AIDS and gender-based violence, etc.
 8. The Consultant shall provide assessment on existing institutional/organizational status to support timely and effective of environmental and social project components. The findings shall be basis to identify measures and actions to strengthen environmental and social management capability in MPWD. The ESMPs shall describe the implementation arrangement needed for capacity building proposals including the staffing of the environment unit adequate to implement the environmental mitigation and enhancement measures. For each staff position recommended to be created, detailed job responsibilities shall be defined. Equipment and resources required for the environment unit, training plan and modules shall be specified, and bill of quantities prepared..
 9. The Consultant in the ESMP shall provide implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and estimated cost and sources of funds for implementing the ESMP (integrated into the total project cost tables).
 10. The relevant sections of ESMP prepared shall be incorporated into the bidding document. The Consultant shall ensure implementation costs of mitigation measures and actions is integrated into the project's overall planning, design, budget, and implementation.
 11. Prepare Resettlement Action Plan: The scope and level of detail of the resettlement plan vary with the magnitude and complexity of resettlement. The plan shall be prepared based on social assessment survey and should cover the impacts on the community and other adversely affected groups and mitigation measures. (See Annexure X for indicative contents of RAP).

¹³Guidance note on managing the risks of adverse impacts on communities from temporary project induced Labour Influx, 2016

12. Prepare Tribal Development Plan: On the basis of the social assessment and in consultation with the affected Indigenous Peoples' communities, Consultant shall prepare an Tribal Development Plan that sets out the measures through which the project will ensure that (a) tribal affected by the project receive culturally appropriate social and economic benefits; and (b) when potential adverse effects on tribal are identified, those adverse effects are avoided, minimized, mitigated, or compensated for. (See Annexure X for indicative contents of TDP).
13. Develop Labor Management Procedures. The consultant shall help MPWD to develop and implement written labor management procedures applicable to the project. These procedures will set out the way in which project workers will be managed, in accordance with the requirements of national law and this ESS. It will cover the following aspects: a) Provisions on the treatment of direct, contracted, community, and primary supply workers; b) Requirements on terms and conditions of work, non-discrimination and equal opportunity and workers organizations; c) Provisions on child labor and forced labor; d) Requirements on occupational health and safety, in keeping with the World Bank Group's Environmental, Health, and Safety Guidelines (EHSG); e) grievance mechanism for these workers and f) Estimate the total number of workers including contracted and migrant workers, the skill requirement and timing and the associated risks and the facilities to be provided as per the World Bank Group occupational health and safety requirements.

D. Environmental Social Monitoring and Evaluation Framework

To monitor implementation of ESMP, for different stage of project (pre-construction, construction, post construction), the Consultant shall identify the performance indicators, approach of monitoring, and frequency as part of Monitoring & Evaluation Framework. The performance indicators should include both quantitative and qualitative types, but the Consultant shall consider practicality aspect and provide approach for monitoring each identified indicator.

The Consultant while designing the M&E framework should also bring out and suggest practicable corrective measures to remediate any non-compliance in the project. The Consultant shall ensure integration of identified performance indicators and corrective measures in the bid document, along with design drawings, specification, BoQ, and budget for environmental mitigation and enhancement measures.

The M&E shall specify the environmental supervision, monitoring and auditing requirements. The monitoring program shall specify performance indicators, monitoring parameters (air, water, noise, soil and vibration), reference standards, monitoring method, frequency, duration, location, and reporting on progress and results of mitigation. In addition, the program will specify what action should be taken and by whom in the event that the proposed mitigation measures fail, either partially or totally, to achieve the level of environmental protection expected.

Deliverables 1: Environmental & Social Screening Report. The reports will be revised in consideration of the comments of the Client and the World Bank.

Deliverables 2: Stakeholder Engagement Plan (along with screening report)

Deliverables 3: Environmental and Social Impact Assessment Report

Deliverable 4. Corridor specific ESMP, RAP and TDP (as required) and M&E Framework

Deliverables 5. Labor Management Procedures (See Annexure for outline)

E: Public Disclosure

The Consultant will prepare a plan for in-country disclosure, specifying the timing and locations; translate the key documents, such as the executive summary of Environmental and Social Impact Assessment, Environmental and Social Management Plan, RPF, TDF, RAP, TDP, or any other documents in local language and draft advertisement for the newspaper announcements for disclosure; and help the client to place all the related Environmental and Social Impact Assessment reports on the client's website. The draft ESIA and management plans should also be available in a public place accessible to affected groups and local NGOs for appropriate consultation.

Relevant materials will be provided to affected groups in a timely manner prior to consultation and in a form and language that is understandable and accessible to the groups being consulted. The Consultant should maintain a record of the public consultation and the records should indicate: means other than consultations) eg, surveys) used to seek the views of affected stakeholders; the date and location of the consultation meetings, a list of the attendees and their affiliation and contact address; a video of the consultation workshop and summary minutes.

F: Environment, Social, Health and Safety Requirements for Bidding Document

Based on the special environmental clauses (SECs) identified from the EIA study – which require to be included in the Bidding documents, the Consultant shall prepare detailed specifications for environmental, social, health and safety (ESHS) requirements for the bidding documents. These would also cover MPWD's ESHS policies that will apply to the project, minimum requirements for bidder's code of conduct, and requirement of contractors ESHS staff and other aspects identified as relevant to civil works

G: Other Assistance to the Client

The Consultant shall support the client to furnish any relevant information required for obtaining clearance from various state and central government agencies. This may include {a} assisting the client in the submission of application for the Clearance of Reserved or Protected Forests to the State Forest Department, which shall include marking boundary pillar of proposed right-of-way, conduct tree counting survey and its enumeration, preparation of forest land diversion map and delineate its boundary by conducting DGPS survey, coordinate verification of trees for cutting and forest area to be acquired, presentation of case before MoEF & CC, preparation of forest diversion proposal, coordination and follow-up with forest departments till obtaining FC approvals; {b} completion and submission of the MoEF & CC questionnaire for Environmental Appraisal for the project, if applicable; {c} assistance in presentation to the Wildlife Board of the MoEF & CC in obtaining clearance for any section or road passing through the Wildlife Reserves or Sanctuaries or other protected areas, if any; {d} assistance in submission for any other clearance requirements with respect to the environmental components relevant to the project; {e} to prepare presentation, brochures, pamphlets for any kind of stakeholder consultation and disclosure; {f} consultation with WB Mission as and when required upon instruction of client; {g} to attend all progress review meetings with Team Leader as and when called by the client as well as to prepare progress review reports.

3. Reporting Requirements/ Deliverables and Payment Schedule: -

SN	Deliverables	No. of copies	Due date for submission from the start date of contract signing (Days)	Payment Schedule
1	Inception report and work plan (including methodology and site visits)	5	5	10%
2	Environmental & Social Screening Report along with Stakeholder Engagement Plan (SEP)	5	10	
3	Environment Impact Assessment Report and Social Impact Assessment Report	5	30	60%
4	Corridor specific ESMP, RAP and TDP (as required) and M&E Framework	5	45	
5	Final Labor Management Procedure	5	45	
6	Review, update/revise the RPF and TPPF and completion of feasibility studies.	5	50	30%

Note: all above payments shall be made after review and approval by the client and the World Bank and submission of pre-receipted bills by the Consultant in quadruplicate for respective stages.

Review of reports:-

Following members of the review committee will review all reports of Consultant and suggest any modifications/changes considered necessary within 15 days of receipt.

1. Engineer-in-chief (MPWD)
2. Chief Engineer-Cum-Project Director (MPWD)
3. Superintending Engineer (MPWD)
4. Nodal Officer Environment (MPWD)
5. Social development officer (MPWD)

Duration of the Assignment:

The total duration of the assignment would be about 6 months.

Accordingly, the total man-month requirements for the assignment would be as follows:

Subject Expert	No. of Experts
Environment Expert	2
Social Expert (SIA & R&R)	2

Bio-diversity Expert	1
Bio-engineering Expert	1
Gender Expert with specific knowledge and experience on GBV	1
Community Consultation Expert	1
Road Engineer	1
Geotechnical Engineer	1
Support Staff – Social and Environment	As required

The Consultant team would be required to undertake at least three visits (and more as required to perform the task envisaged in ToR) to the project in each phase. The Consultant with their industry experience and in close consultation with the MPWD would be required to deploy/demobilize its personnel in accordance with the progress of preparation work by Consultant to ensure that total man-months are not exceeded.

Key Qualifications of Experts and Specialists

1. ENVIRONMENTAL SPECIALIST

Educational Qualifications

Minimum – Master’s Degree or equivalent in Environment Sciences or related field

General Experience

Minimum total work experience after post-graduation – 15 years

Relevant Experience

1. Minimum 7 years of total work experience on carrying out environment impact assessments of road development projects.
2. Desirable - Environmental Expert in at least two World Bank funded projects

Essential Knowledge and Experience

(i) The candidate must have knowledge of the World Bank’s guidelines, procedures and operational policies/directives.

1. Candidate should be conversant with all the activities expected to be undertaken for Environmental / Forest / Wild life clearance procedures and pertinent guidelines of Ministry of Environment & forests (MoEF), Government of India.
2. The candidate must have the experience of preparing environmental management plans and supervising & monitoring implementation of the plans.
3. Working in hilly terrain will be given performance.

4. **SOCIAL DEVELOPMENT SPECIALIST**

Educational Qualifications

Minimum – Master’s Degree or equivalent in Social Sciences or related field

General Experience

Minimum total work experience after post-graduation – 15 years

Relevant Experience

(i) Minimum 7 years of total work experience on carrying out Social impact assessments and preparation of Resettlement Action Plans of road development projects

(ii) Desirable - Social/resettlement expert in at least two World Bank funded projects

Essential Knowledge and Experience

1. The candidate must have knowledge of the World Bank’s guidelines, procedures and operational policies/directives.
 2. Experience in preparation of RAP, gender plan, LAP, community consultations and IPDP is required.
3. Familiarity with project area and local language will be advantageous

4. **BIODIVERSITY SPECIALIST**

Educational Qualifications

Minimum – Master’s Degree or equivalent in biology or natural resource management or related field

General Experience

Minimum total work experience after post-graduation – 15 years

Relevant Experience

1. Minimum 7 years of total work experience on carrying out conducting biodiversity impact assessment for roads located in areas with similar types of biodiversity values and should be conversant in preparing management/mitigation measures for at least two projects of similar type; working knowledge of ecosystem services analysis would be an advantage.
2. Desirable – Biodiversity Expert in at least two project funded by World Bank or international financial institutions funded projects is required

Essential Knowledge and Experience

(i) The candidate must have knowledge of the World Bank’s guidelines, procedures and operational policies/directives.

(ii) Candidate should be conversant with all the activities expected to be undertaken for Environmental / Forest / Wild life clearance procedures and pertinent guidelines of Ministry of Environment & forests (MoEF), Government of India.

3. The candidate must have the experience of preparing Biodiversity management plans and supervising & monitoring implementation of the plans.

4. BIOENGINEERING SPECIALIST

Educational Qualifications

Minimum – Master’s Degree or equivalent in Horticulture, arboriculture or botany or related field.

General Experience

Minimum total work experience after post-graduation – 15 years

Relevant Experience

1. Minimum 7 years of total work experience on community forestry and landscape development programme.
2. Desirable – Bio-engineering Expert in at least two about 2 highway projects and 2 landscape development projects funded by World or international financial institutions is required

Essential Knowledge and Experience

- (i) The candidate must have knowledge of the World Bank’s guidelines, procedures and operational policies/directives.
 - (ii) Candidate should be conversant with all the activities expected to be undertaken for Environmental / Forest / Wild life clearance procedures and pertinent guidelines of Ministry of Environment & forests (MoEF), Government of India.
3. The candidate must have the experience of preparing Biodiversity management plans and supervising & monitoring implementation of the plans.

Annexures

Annexure A - Indicative Outline of ESIA

1. Executive Summary
 - Introduction
 - Project Description
 - Baseline Environment
 - Anticipated Environmental Impacts and Mitigation Measures
 - Alternatives

Public Consultation and Information disclosure

1. Consultation to Date
2. Disclosure of documents
Environmental Management Plan

Conclusion and Recommendations

3. Introduction
Background/Overview
Purpose of the document/ESIA
4. Legal and Institutional Framework
Government Policy
World Bank ESF
International Treaties
Policies Applicable to the Project
5. Project Description
Location
Key Project Components
Description of Road Alignment
Project Design
 1. Traffic Volume
 2. Road Design
 3. Overpasses
 4. Tunnels
 5. Interchanges
 6. Corridors
 7. Special Curves
 Volume of Civil Works
Quarries and Borrow Sites
Construction Camps
Construction Process
Project Costs
Implementation Schedule
8. Baseline Data
Physical Resources
 1. Climate
 2. Topography and Landscape
 3. Geomorphology

4. Geodynamics process along the project road
 5. Geological hazards of the project area
 6. Hydrology
 7. Hydrogeology
- Ecological Resources
1. Flora
 2. Fauna
 3. Protected Areas
 4. Bird migration
- Environment Quality
- Social Economic and Cultural Resources
5. Environmental and Social Risks and Impacts
- Approach to Screening of Environmental Impacts
1. Preconstruction
 2. Construction
 3. Operation
- Spill Contingency Plan
- Road Safety Measures
- Preliminary assessment of climate change impact
- Induced cumulative impacts
4. Mitigation Measures: Impact Specific ECoPs
 5. Analysis of alternatives
- Overview
- Without Project Alternatives
- Alternative Analysis in Feasibility Study
- Alternative Analysis during Detailed Design
1. Improvement of Project Route of Feasibility Study Stage
 2. Study of Alternative Alignment
- Selection of Design and Construction Standard
3. Grievance Redress Mechanism
 4. Information on Disclosure
 5. Environmental Management Plan
1. Objective of EMP
 2. Methodology for EMP preparation
 3. Environmental and social risk and impacts
 4. Mitigation Measures
 5. Monitoring timing and performance indicator
 6. Capacity Building and Training
 7. Implementation Schedules and cost estimates
 8. Integration of EMP with Project
 9. Emergency Response Plans

10. Reporting responsibility
11. Cost and Estimate
12. Special Clause for the BoQ/Bid Document
13. Measures and Actions for the Environmental and Social Commitment Plan (ESCP)
14. Key Appendices

For details refer to www.worldbank.org/esfProject Description

Annexure B - Elements of Resettlement Action Plan

1. Description of the project.
2. Potential impacts.
3. Objectives of the resettlement program.
4. Census survey and baseline socioeconomic studies.
5. Legal framework
6. Institutional framework
7. Eligibility
8. Valuation of and compensation for losses
9. Community participation
10. Implementation schedule.
11. Costs and budget
12. Grievance redress mechanism.
13. Monitoring and evaluation
14. Arrangements for adaptive management.

Additional planning requirements where resettlement involves physical displacement

15. *Transitional* assistance.
16. Site selection, site preparation, and relocation.
17. Housing, infrastructure, and social services.
18. Environmental protection and management.
19. Consultation on relocation arrangements.
20. Integration with host populations.

Additional planning requirements where resettlement involves economic displacement

21. Direct land replacement.
22. Loss of access to land or resources.
23. Support for alternative livelihoods.
24. Consideration of economic development opportunities
25. Transitional support

Annexure C - Outline of Tribal Development Plan (TDP)/Indigenous Peoples Development Plan (IPDP)

1. Summary of the Targeted Social Assessment, including the applicable legal and institutional framework and baseline data;
2. A summary of the results of the meaningful consultation tailored to IP, and if the project involves the three circumstances, then the outcome of the process of FPIC carried out with the affected IP during project preparation;

3. A framework for meaningful consultation tailored to IP during project implementation;
4. Measures for ensuring IP receive social and economic benefits that are culturally appropriate and gender sensitive and steps for implementing them;
5. Measures to avoid, minimize, mitigate, or compensate IP for any potential adverse impacts that were identified in the social assessment, and steps for implementing them;
6. The cost estimates, financing plan, schedule, and roles and responsibilities or implementing the IP Plan;
7. Accessible procedures appropriate to the project to address grievances by the affected IP arising from project implementation; and
8. Mechanisms and benchmarks appropriate to the project for monitoring, evaluating, and reporting on the implementation of the IP Plan, including ways to consider input from project-affected IP in such mechanisms

Annexure D – Stakeholder Engagement Plan

1. Objectives of Stakeholder Engagement Plan
2. Stakeholder Identification and Analysis
 1. Affected parties
 2. Other interested parties
 3. Disadvantaged / vulnerable individuals or groups
 4. Summary of project stakeholder needs
3. Stakeholder Engagement Plan
 1. Proposed Strategy for Information Disclosure
 2. Proposed Strategy for consultation with groups
 1. Affected parties
 2. Other interested parties
 3. Disadvantaged / vulnerable individuals or groups
 3. Engagement during Project preparation
 1. Proposed Activities
 2. Timelines – to provide information for project phases, key decisions and feedback
 4. Engagement during Project Implementation
 1. Proposed Activities
 2. Timelines – to provide information for project phases, key decisions and feedback

5. Grievance Redressal Mechanism
6. Organizational Capacity and Commitment
7. Monitoring and Reporting
 1. Involvement of stakeholders in monitoring activities
 2. Reporting back to stakeholder groups
8. Budget & Costs

Annexure E – Labor Management Procedure

1. Overview of Labor Use On The Project: This section describes the following, based on available information: Number of Project Workers, Characteristics of Project Workers, Timing of Labor Requirements, Contracted Workers, Migrant Workers
2. Assessment of Key Potential Labor Risks: This section describes the following, based on available information: **Project activities, Key Labor Risks:** The key labor risks which may be associated with the project. These could include, for example:
 1. The conduct of hazardous work, such as working at heights or in confined spaces, use of heavy machinery, or use of hazardous materials
 2. Likely incidents of child labor or forced labor, with reference to the sector or locality
 3. Likely presence of migrants or seasonal workers
 4. Risks of labor influx or gender based violence
 5. Possible accidents or emergencies, with reference to the sector or locality
 6. General understanding and implementation of occupational health and safety requirements
7. Brief Overview of Labor Legislation: Terms and Conditions: This section sets out the **key aspects** of national labor legislation with regards to term and conditions of work, and how national legislation applies to different categories of workers .
8. Brief Overview of Labor Legislation: Occupational Health and Safety: This section sets out the **key aspects** of the national labor legislation with regards to occupational health and safety, and how national legislation applies to the workers.
9. Responsible Staff: This section identifies the functions and/or individuals within the project responsible for (as relevant): engagement and management of project workers, engagement and management of contractors/subcontractors, occupational health and safety (OHS), training of workers and addressing worker grievances
10. Policies and Procedures: This section sets out information on OHS, reporting and monitoring and other general project policies. Where relevant, it identifies applicable national legislation.
11. Age of Employment: This section sets out details regarding: (i) the minimum age for employment on the project (ii) the process that will be followed to verify the age of project workers (iii) the procedure that will be followed if underage workers are found working on the project (iv) the procedure for conducting risk assessments for workers aged between the minimum age and 18
12. Terms and Conditions: This section sets out details regarding:
 1. Specific wages, hours and other provisions that apply to the project
 2. Maximum number of hours that can be worked on the project
 3. Any collective agreements that apply to the project. When relevant, provide a list of agreements and describe key features and provisions
 4. Other specific terms and conditions

5. Grievance Mechanism: This section sets out details of the grievance mechanism that will be provided for direct and contracted workers and describes the way in which these workers will be made aware of the mechanism.
6. Contractor Management This section sets out details regarding:
 7. The selection process for contractors,
 8. The contractual provisions that will put in place relating to contractors for the management of labor issues, including occupational health and safety,
 9. The procedure for managing and monitoring the performance of contractors.
10. Community Workers: Where community workers will be involved in the project, this section sets out details of the terms and conditions of work, and identifies measures to check that community labor is provided on a voluntary basis,
11. Primary Supply Workers: Where a significant risk of child or forced labor or serious safety issues in relation to primary suppliers has been identified, this section sets out the procedure for monitoring and reporting on primary supply workers.

Annex 2: Terms of Reference for Environmental and Social Audit

1. Background

To overcome the abovementioned challenges in a holistic and all-inclusive manner, the Government of Meghalaya, with financing and technical support from the World Bank, is preparing a project titled “Meghalaya Integrated Transport Project”. The objective of the project is to “provide a well-connected efficient, good quality and safe transport network on long-term basis in a cost-effective manner maximizing economic and social outcomes”. This will involve taking a whole-of-the-state approach of the entire transport sector and introduce innovations, efficiency, and new ways of doing business at various stages of service delivery, ensuring value for money. This will involve:

2. Integrating transport and development agenda thus resulting in more job-creation, better incomes, and realization of the SDGs;
3. Integrating various modes of transport – such as roads, ropeways, waterways, and urban transport to operate as part of one system for optimal performance;
4. Integrating climate resilience, green growth, asset management, and safety in the transport sector thus making the sector more resource efficient, reducing carbon footprint, minimizing GHG and contributing to health outcomes

To facilitate the process laid down within its ESMF, project intends to appoint consultants to audit projects taken up under MITP.

5. Objectives

1. To audit the conformity of environmental and social categorisation of projects with respect to the categorisation prescribed in the ESMF.
2. To audit the compliance of the environmental, climate and social aspects of approved projects, which are under implementation; and,
3. Review and comment on how the recommendations of the previous audit have followed so far.

4. Scope of Work

5. To carryout environmental and social audit with respect to the subprojects taken up under this project

6. Outline of the tasks to be carried out:

The selected Consultant will essentially provide services to the project as required, for the following tasks.

1. Audit the Environmental and Social Categorisation of Projects:

The consultants will audit the conformity of environmental and social categorisation of roads based on the ESMF. The consultants will also review the adequacy of screening procedures to identify the possible issues; considerations of incorporating the social and environmental issues identified during the screening process into the engineering designs and action plans.

This audit will cover all the project roads.

2. Auditing the compliance of the Projects:

The consultants will

1. Cover the compliance aspects with reference to the agreed process at different stages of project development as well as the technical content of the EAs/ESMPs and RAPs/TPPs. Such an exercise shall

include the effectiveness in translating the ESMPs into contract conditions and technical specifications.

2. Critically review and report the compliance on Bank's recommendations during various supervision missions;
3. Undertake field visits to ascertain actual level of compliance in implementing the ESMPs and RAPs;
4. Audit and confirm that the payment of compensation and assistance has been paid in accordance with ESMF procedures wherever payment of compensation and assistance is involved for the projects affected people,
5. Undertake field visits to interact with the beneficiaries on sample basis to assess their levels of satisfaction with the process followed in delivering the entitlements;
6. Review the process followed for redressing the grievances filed by the affected people with regard to compensation, R&R assistance or any other related complaints.
7. Review and confirm that the disclosure of documents has been carried out in accordance with the established procedures; and,
8. Review the internal monitoring followed by PMU in managing the social and environmental impacts during the implementation of the sub-projects and suggest suitable measures for improving the process as needed.

The consultant will audit the compliance of environmental and social aspects during pre – construction and construction of all roads under MITP.

9. Adequacy of the ESMP/SMP

The consultant will audit the adequacy of the ESMP/SMP and recommend practicable measures to include/improve the management measures and the agency responsible for carrying out the measures, wherever found inadequate. The consultant will also document the best practices and possible environmental and social enhancement measures with respect to the audited projects. Apart from documenting the good practices, shall discuss the deviations in following the ESMF and corrective measures (project level and in overall process).

10. Reporting

The consultant shall review the status report submitted by the PMUs / Implementing Agencies on the implementation of ESMF / SMP and the process adopted by design consultants in identification and mitigation measures while preparing the DPRs. To report on the adequacy and timely submission of the Quarterly Progress Reports including the process involved in addressing the risk management.

11. Documentation

The consultant shall document the good practices and lessons learnt with respect to Environmental and Social Safeguards implementation and it's management.

12. Preparation of Audit Report

The findings of the review and audit should be summarized in a tabular form to include compliance, noncompliance, best practices and enhancement measures along with the name of the agency responsible for each of the above. This matrix should be provided as an attachment to the main report. In case of non-compliance, the consultants need to undertake a follow up visit after giving sufficient time (depending on the type of corrective measures) for the agency responsible to take corrective actions.

13. Data, services and facilities to be provided by the Client:

A copy of the ESMF and details of the projects sanctioned, Copy of ESIA's / RAP/TPP available, monitoring reports if any will be shared by the client.

14. Composition of review committee to monitor consultants' work

- 1.
- 2.
- 3.
- 4.
- 5.

The consultant would be required to submit __copies of each of the reports besides providing a soft copy of all reports, etc. All the pages in reports shall be printed in duplex mode except for A3 pages.

15. Procedure for review of reports:

The review committee will review the progress of work during each stage of the assignment and as and when required. The decision / suggestion of the review committee will be communicated in the form of minutes, for taking action.

16. Outputs, Payments and Time Schedule

Reports	Duration	Payment
On submission and acceptance of Initial Report on Compliance	Within 3 weeks from the date of award of contract.	15 percent of the contract value
On submission and acceptance of Draft Audit Report	Within 10 weeks from the date of award of contract	55 percent of the contract value
On submission and acceptance of Submission of Final Report	Within 12 weeks from the date of award of contract	30 percent of the contract value

17. List of key positions, whose CV and experience would be evaluated.

Sl.No	Key Professional	No. of persons	Experience
1.	Environmental Specialist	1	Post Graduate in Environmental or Public Health Engineering, Environmental Planning/ Environmental Science with about 5 years of experience in preparation of EIA Reports, carrying out Environmental Audit, experience on Climate Change Adaptation and Mitigation etc.
2.	Social Development	1	Post Graduate in any of Social Sciences work with 5 years of experience preferably in social auditing, experience in land

Annex 3: Key Role and Responsibilities of the Environmental and the Social Specialist

The key role of the specialist is as under:

1. To ensure that potential environmental/ social risks arising out of the project's support has been adequately addressed; identify the gaps, if any and suggest measures for addressing the same.
2. To ensure that the (i) consultation process at various levels includes all possible stakeholders as part of consultations and has access to the benefits and opportunities; (ii) key issues that has been identified and addressed in terms of ecological/ socio-cultural, historical, institutional and political context; (iii) grievance redress mechanism is accessible, functional and useful to the aggrieved person.
3. To ensure that the affected households have been identified and mitigation measures implemented.
4. To ensure that process followed has been transparent and intended goal has been achieved and project implementation secured positive environmental/ social development outcomes and minimized the negative effects.

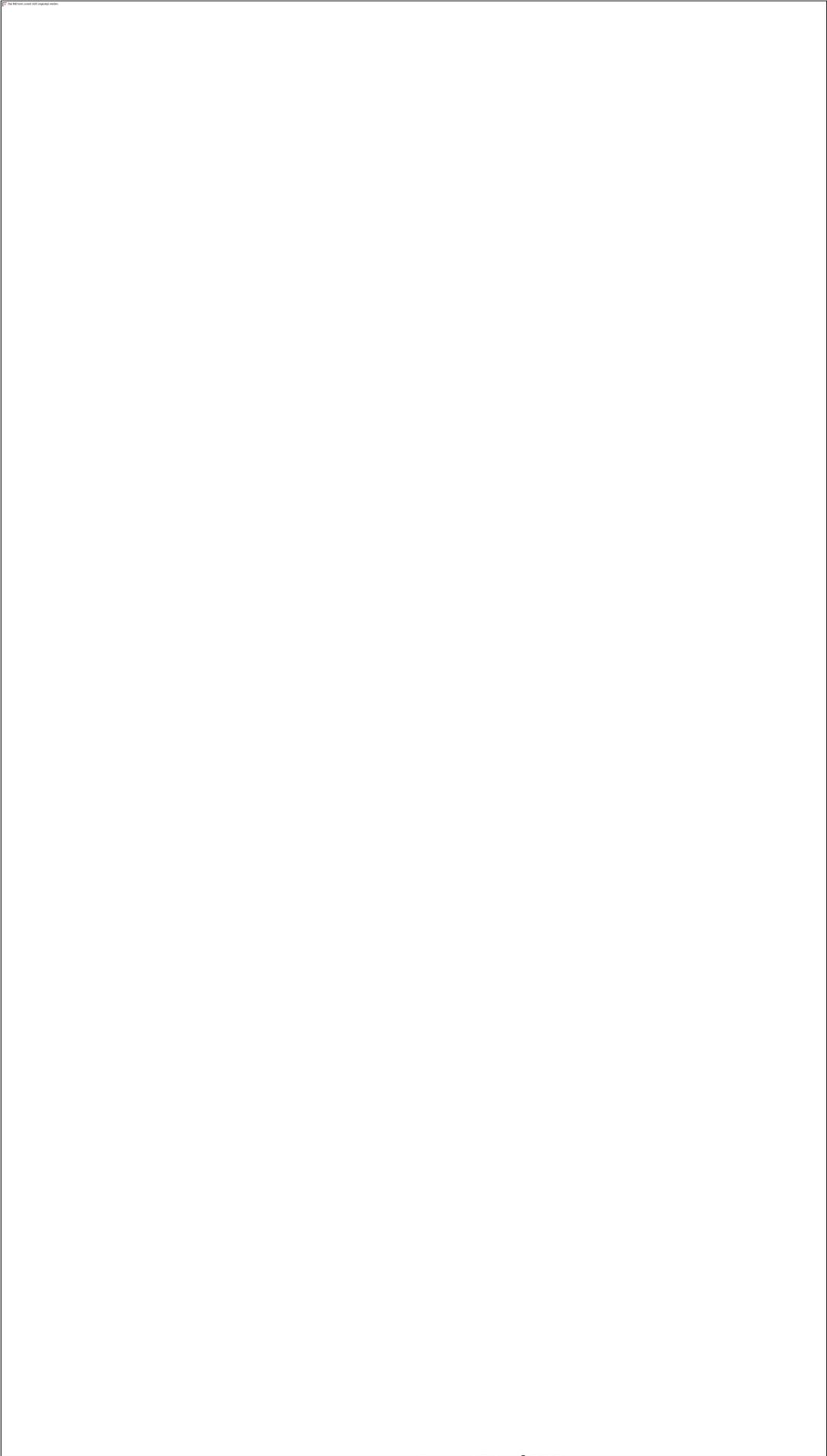
1. Scope of Work

The Specialist will have the following scope of work:

1. Review the project documents to understand the rationale behind the interventions; the process adopted for the selection; choice of intervention and implementing agency; and feedback mechanism.
2. Finalize terms of reference for hiring agency for social assessment, environmental/ social impact assessment and preparation of safeguard tools.
3. Assist PMU/consultants in identifying stakeholders and draw up a stakeholder's table delineating the interest in terms of expectation, benefits, and ability to commit resources, goal conflicts, etc. Engage with all stakeholders and identify tailor-made activities that are relevant in the project area / region. Finalize stakeholder engagement plan
4. Advice PMU on various national and state level laws and regulations; relevant World Bank environmental safeguard operational policies and requirements that are applicable in the context of the project interventions related to land acquisition / land taking; vulnerable community such as women headed households, tribal population; households below poverty line, etc. if any.
5. Help implement E/SMF. Specifically, screen all proposed interventions to identify any adverse impact on the community, if any. In case of any adverse impact, suggest instruments (such as EMP/ SIA, RAP, GAP, etc.) and measures to address adverse social impacts in line with project ESMF. Guide preparation of safeguard documents and disclose the same at PMU level before the start of civil works.
6. Review the adequacy and impact of project interventions on livelihood enhancement opportunities and make suggestions accordingly. Ensure that social assessment is an integral part of planning of all project supported schemes
7. Supervise implementation of social safeguard measures in project interventions and ensure that social development goals are met.
8. Liaise with various concerned State Government agencies on land and other regulatory matters
9. Be part of grievance redress cell and review types of grievance and the functioning of grievance redress mechanisms by reviewing appeals at all levels and interviewing aggrieved PAPs.

10. Periodical updating of data on social issues including grievance redressal
 11. Prepare periodical social monitoring reports to be submitted to PMU.
 12. Prepare TOR for any activities or studies required and other social safeguard documents as and when required.
 13. Facilitate appointment of and co-ordination with consultants/agencies to carry out activities or studies if required and co-ordinate them.
 14. Develop, organize and deliver training/capacity building programs on social issues and plans for the staff of implementing agency, the contractors and others involved in the project implementation.
 15. Carry out other responsibilities as required from time to time.
- 16. Required Qualification:**
17. The candidate must hold master's degree in environmental/ social science (namely sociology; social anthropology; any other subject field) from a recognized university.
 18. Should have at least 15 years of experience of working independently as environmental/ social development specialist in large infrastructure projects in India.
 19. Must have worked in at least two World Bank funded large infrastructure projects
 20. Must have experience of both national regulations as well as multi-lateral agency's policies related to land acquisition, resettlement and indigenous community. The candidate should also have experience of carrying out and managing community consultations; preparation and implementation of livelihood enhancement strategy and plans; working with rural and peri-urban communities; and managing large scale socio-economic database.
 21. The candidate should be willing to travel across the state.

Annex 4: Proceedings of all stakeholder consultations







MINUTES OF THE CONSULTATION MEETING
RELATED TO ENVIRONMENT & SOCIAL STUDY UNDER
Meghalaya Integrated Transport Project

ON THE 21ST OCTOBER 2019 AT 9.30A.M AT MAWKASIANG VILLAGE WHICH IS LOCATED AT 8TH KM OF SHILLONG DIENGPASOH ROAD.

At the outset of the Consultation meeting, the Superintending Engineer National Highway Circle P.W.D. (Roads) Shri. L. Kharmawlong, chaired the meeting and welcomed the local representatives who have spared their valuable time to attend the brief consultation meeting which was convened in a very short notice.

Smti. Aditi Paul Coordinator World Bank has highlighted the important of the proposed road project for widening to two lane standard of Shillong Diengpasoh road from Km 2.22 to 14.00 Km covering a length of 11.78Km which will benefited many educational institutions, hospitals such as NEIGRIMS, IIM, NIFT, IHM besides providing better road infrastructure for the people residing within the area.

This road is the main arterial road of the proposed new Shillong city which connects Shillong NH bypass at Diengpasoh. Considering the importance of this road, the PWD official has invited the cooperation and assistant of the village authority from the area for successful implementation of the upcoming project. PWD also requested all the village authority to cooperate with the consultant in compiling environmental data and with the PWD in case of additional land requirement, if any.

The villagers were also informed the likelihood of the presence of water pipe line and water tap in some location along the proposed project which requires to be relocated properly. PWD also emphasized on the importance of this road for safety of traffic.

During the interaction with the village authorities, the following issues have been discussed:

Issue No-1 :- Mawpdang headman enquired about the existing R.O.W and the proposed pavement width. The PWD official informed that the existing R.O.W is 14.00m (Average=12.00m) and the proposed project is for widening the existing single lane pavement to double lane standard i.e. 7.00m pavement width. The headman welcomes the proposal and agreed to cooperate in implementation in the project. He also requested to construct footpath near the educational institution to prevent from any untoward accident to school going children.

Issue No-2:- Mawkasiang headman in welcoming the proposed project offers his cooperation and requested the survey team of the consultant to coordinate with the village authority in finalizing the requirement within the village such as proper drainage system footpath, etc. that can be cooperated in the project proposal. The headman also requested the department to match the grade/level different if any arising due to improvement work on all approach roads and access roads to different localities or residential in the area.

Issue No-3:- Diengiong headman agreed to cooperate in the project.

Issue No-4:-Tynring village headmen has requested the PWD to intimate the village authority in case of any new alignment or if improvement works are being taken up beyond the existing R.O.W.

Issue No-5:- Itshyrwat headmen has raised the issue on land compensation if improvement work are being taken up beyond R.O.W. He requested the department that in case of additional land requirement the compensation should be made as per the current market value. He also requested the department to intimate the village authority for any future survey within the village.

Issue No-6:- Chairman of VEC Siejiong village has requested the department to properly relocate the existing pipeline and electric poles from the area and incorporate installation of street light in the DPR.

The Coordinator World Bank thank the village authorities for their participation and their present in the meeting and requested them to assist the department in maintenance of drainage system and cleanliness in built-up area within their respective village on completion of the proposed project.

The meeting ends with the vote of thanks from the SE NH Circle Shillong.





MINUTES OF THE CONSULTATION MEETING

RELATED TO ENVIRONMENT & SOCIAL STUDY UNDER

Meghalaya Integrated Transport Project

ON THE 21ST OCTOBER 2019 AT 02.30 P.M AT LAITLYNGKOT VILLAGE

At the outset of the Consultation meeting, the Superintending Engineer P.W.D. (Roads) National Highway Circle Mr. L Kharmawlong chaired the meeting and welcomed the local representatives who have spared their valuable time to attend the brief consultation meeting which was convened in a very short notice.

Mr. L Kharmawlong, further explained to the local villagers and representatives of the villagers about the project. He also mentioned the State and PWD is thankful to World Bank for providing the money to upgrade and rehabilitate these roads. PWD has selected many roads across the State so that all part of the State is benefited from the World Bank support.

Smt. Aditi Paul Coordinator World Bank highlighted the importance of selecting the Laitkor Pomlakrai Laitlyngkot road for the benefit the residents of the villages of Pomlakrai, Mawpynthih, Umthli, Iewmawiong and other villages for marketing the agricultural products to the nearby markets at Smit, Laitlyngkot, etc. and also ease the tourists to reach the intended tourist areas at Sohra (Cherrapunjee), Mawlynnong, Dawki and Laitlum, etc. under Mawkynew C&RD Block without routing through the Shillong City.

She also informed the members that the improvement works will include the (i) Road safety measures (ii) Improvement of curves, (iii) Reconstruction of damaged culverts and Construction of additional culverts as per the requirement (iv) Providing of preventive measures to protect the Agricultural areas, etc.

During the interaction with the village representatives, the following issues were discussed:

No 1 : Shri. Bralsing Sohtun, Headman of the Myllem Mawkhar enquired the starting point and ending point of the proposal which was clarified by the Executive Engineer P.W.D. (Roads) NH Shillong Bye Pass Division, Shillong that the proposal starts from the 5th Km upto Laitlyngkot village covering a total length of 11.52 Kms.

No.2 : Shri. Tarcisius Dkhar, Headman of Nongthymmai Laitlyngkot also wanted to know the tentative date/time for the project to commence.

It was informed that the proposal of this road is already being taken up with the Government of India and it is expected that the commencement will be within 6(Six) months.

No.3 : Shri. Ryngkatlang Lyndem, Headman of Iewshyllong Laitlyngkot expressed that the present condition of this road has caused a great inconvenience to the public particularly the residents who needed immediate medical treatment, increases in the cost of transportation of Agricultural produces etc.

He further cited that the areas and the villages mentioned in the aforesaid paragraphs are rich in agricultural produces where the type of crops grown are mostly potatoes, radish, cauliflower, cabbage, etc.

It is clarified that a good road will be constructed as per the specification of the IRC Standards where the consultant preparing the DPRs was also advised to incorporate the pave shoulder, as the number of vehicles will increase on completion of the project and being a single lane road.

No.4 : Other members from the Local/Village representatives also raised few issues as follows:

1. Safety of road users after the completion.
2. Protecting the agricultural areas, etc.

It is clarified that road safety measures will be taken care of and road signages will be incorporated in the DPR which will be provided after the completion of the project. It is high time that Awareness/Seminar be conducted for the drivers of the areas to enable them to read and understand the road signs for the safety of all including the pedestrians.

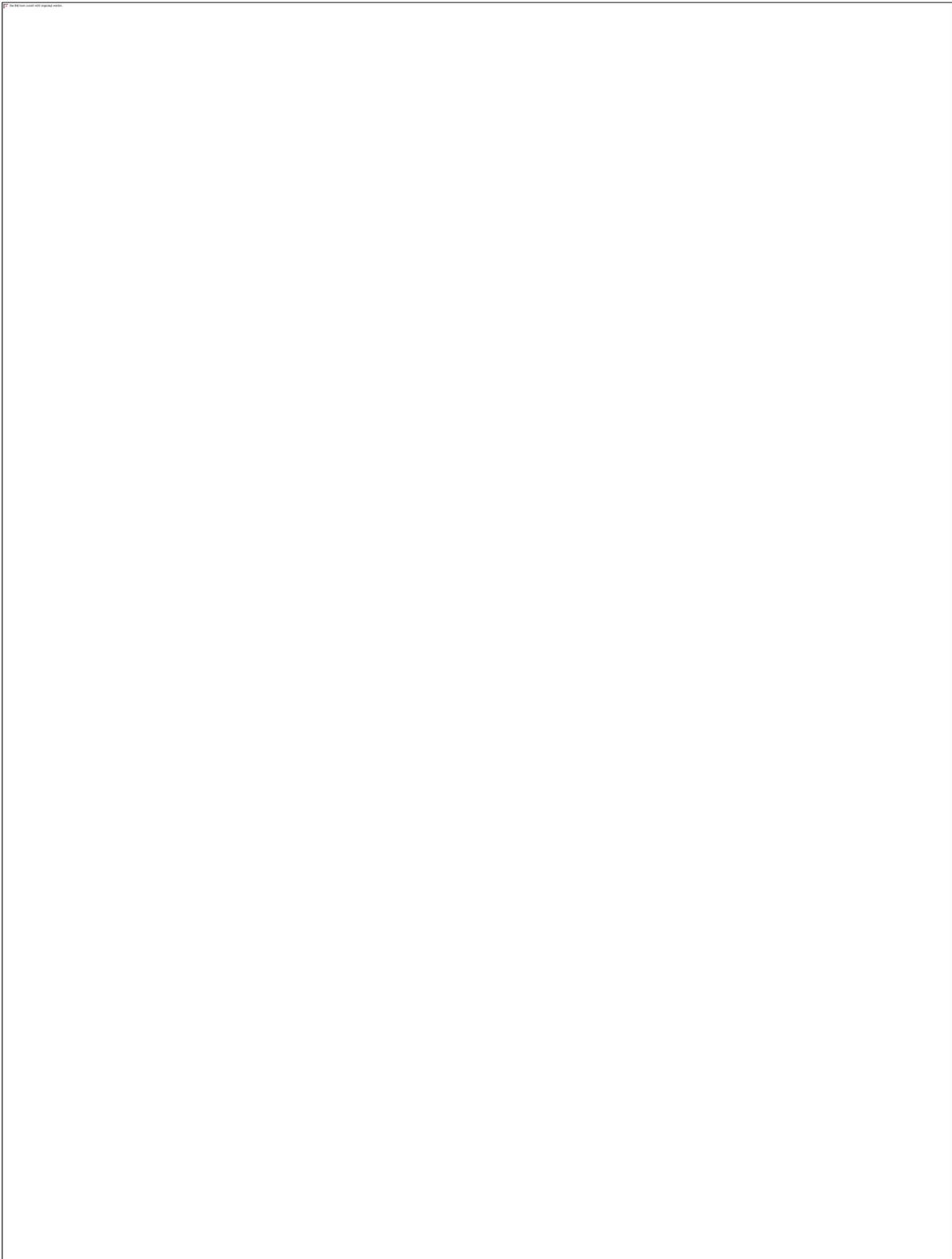
The farmers including the village representatives were requested to identify the agricultural areas which are prone to damages due to landslides, discharge of surface run of from the culverts, soil erosion if any, so that the Consultant in consultation with the PWD officials can incorporate the provision in the DPR.

No.5 : Shri. Ryngkatlang Lyndem, Shri. Tarcisius Dkhar and all the representatives also informed that the proposal for notifying the River Umiew which is at the 11th Km of the road as the Fish Sanctuary of the area has been proposed and requested to consider an approach road to the sanctuary if it can be incorporated in the project proposal so that the road will benefit the farmers for transportation of their produces. The approximate length of the road is about 500.00metres. It was clarified that the proposal will be discussed and if feasible included as part of the project.

No.6 : It was also suggested from the members of the village representatives to provide street lighting and foot-paths in built up areas of each villages as facilities to the pedestrians. The official Department informed that the matter will be investigated taking into consideration the availability of land along the stretches of the road.

The Co-ordinator of the World Bank thanked the village authorities for their active participation and their presence in the meeting. She requested all the village representatives to co-operate with the Consultant in compiling the environmental data and also with the PWD officials to ensure that the culvers constructed by the Department are not obstructed for the free flow of rainwater, etc.

The meeting ended with a vote of thanks from the Executive Engineer P.W.D. (Roads) NH Shillong Bye Pass Division, Shillong.



Stakeholder Consultation on
Meghalaya Integrated Transport Project (MITP) funded by World Bank

Venue: Nartiang Presbyterian Higher Secondary School, Jaintia Hills

Date: 22nd October 2018

Minutes of the Meeting:

At the very outset, the meeting was chaired and called into order by Smt. Anumanda Sumer, Assistant Executive Engineer, PWD, North Jowai Division, Jowai. She then informed the audience on the purpose of the stakeholder meeting being hosted by PWD in presence of World Bank.

The purpose of the meeting is to inform the locals about the project undertaken by the State for Rehabilitating and Strengthening of few Roads across the State. Not all roads will be done under the World Bank funding. The roads have been selected by PWD from proposals, which are long due for maintenance. Hence, World Bank has agreed to fund these roads. And to fund the roads World Bank according to their procedures consult with stakeholders to understand their say and whether they are likely to be benefited and or they have any issues with the roads.

Smt. Anumanda Sumer, welcomed the World Bank Consultant, Smt. Aditi Paul, Environment and Social Safeguard Specialist, other PWD Officials and all the stakeholders present for the consultation at the meeting venue. Smt. Sumer than request Smt. Aditi if the consultation can be carried out in local language (Khasi) for benefit of all present and suggested that she will translate all discourse in English for others.

The chair, then gave an introduction on Meghalaya Integrated Transport Project (MITP) under World Bank Funding. She mentioned that the roads are the arterial of our life. We do not have other modes of transport for our goods and services; thus, we are very thankful to the World Bank for funding our roads. Smt. Sumer then explained that the NJB Road will be undertaken in the second phase of funding as currently survey has not been completed for the road. PWD has proposed this road to be widened to intermediate lane as single lane is not adequate enough for the villagers. This road connects at least 20 villages and all of them access the road to reach to the nearby market to sell their produce. Smt. Anumanda then explained to the local representatives that widening will mean requirement of land as PWD do not have land beyond the current formation. In this regard, the World Bank is interested to know from the villagers and local representative what are their feedback and if they have any suggestion.

The forum was then opened for all to share their views and the following points were noted during the course of discussion: -

1. Shri H Khysiem, Chairman Presbyterian Higher Secondary School, applauded PWD to have come over and hearing the voices of the people. He informed PWD that it is a good idea to widen the road as too much of goods van ply over the road and due to no maintenance, the road is getting damage. Good road will also encourage more children to come attend classes. This school has been upgraded under ADB funding. The new building with all facilities including toilet for the children has been good for all of us. Now if World Bank will make good road for us this area will flourish.

2. Shri Power Dhar, Member Shrong Modop, mentioned that he is very happy to know that development will take place in the region. He then said that in few kilometres from here the road has narrow bend and there are houses and farmers living. What will happen to them?

PWD responded that department will see if other side land can be taken to avoid to move someone from their house. Smt. Aditi Paul added that as per law people who will get affected will compensated as per the law of the land. She also mentioned that an Environmental and Social Management Framework has been developed and will be available at all PWD office with detail of entitlement. Those who are interested are requested to visit the nearest PWD by next month for more detail.

3. The Dolloi of the area, Mr. Hep Dhar, suggested to PWD that they should first complete the blue-print of the road, where and how much land is required and then to inform the village-head men. We will then form a committee and help PWD determine who are the legal people of the land. As there are community land and private land.

He further informed that those staying adjacent to the road have huge plot of land, thus for them to give away few meters will not be an issue. There have been cases when many of us has donated land to PWD for building road. We cannot make roads by ourselves hence we will cooperate will PWD and donate land.

Those whose house will be destroyed should only be compensated. The Bank should not announce compensation so openly as there maybe people taking undue advantage and claim money. I being the area representative of the villages here, request all villagers to cooperate and come forward to share land with PWD.

4. One of the school teacher suggested that if some facilities can be provided to the school, such as playground. Smt. Aditi Paul was responded that the request has been noted and will be shared with PWD secretary and other dignitaries of the State. If funding is available and is relevant to the project, some community facilities can be provided.

5. One more villager suggest that there are many weekly markets along the NJB road, but there are no parking areas. People park their vehicle along side and close the road. Thus, parking space should be created for the vehicles.

World Bank consultant requested the DPR consultant to look into the matter and see if it is feasible. She also mentioned that land will be of issue. To this the Dolloi of the elaka suggested that there are many community lands available, he along with other headman can help identify the same.

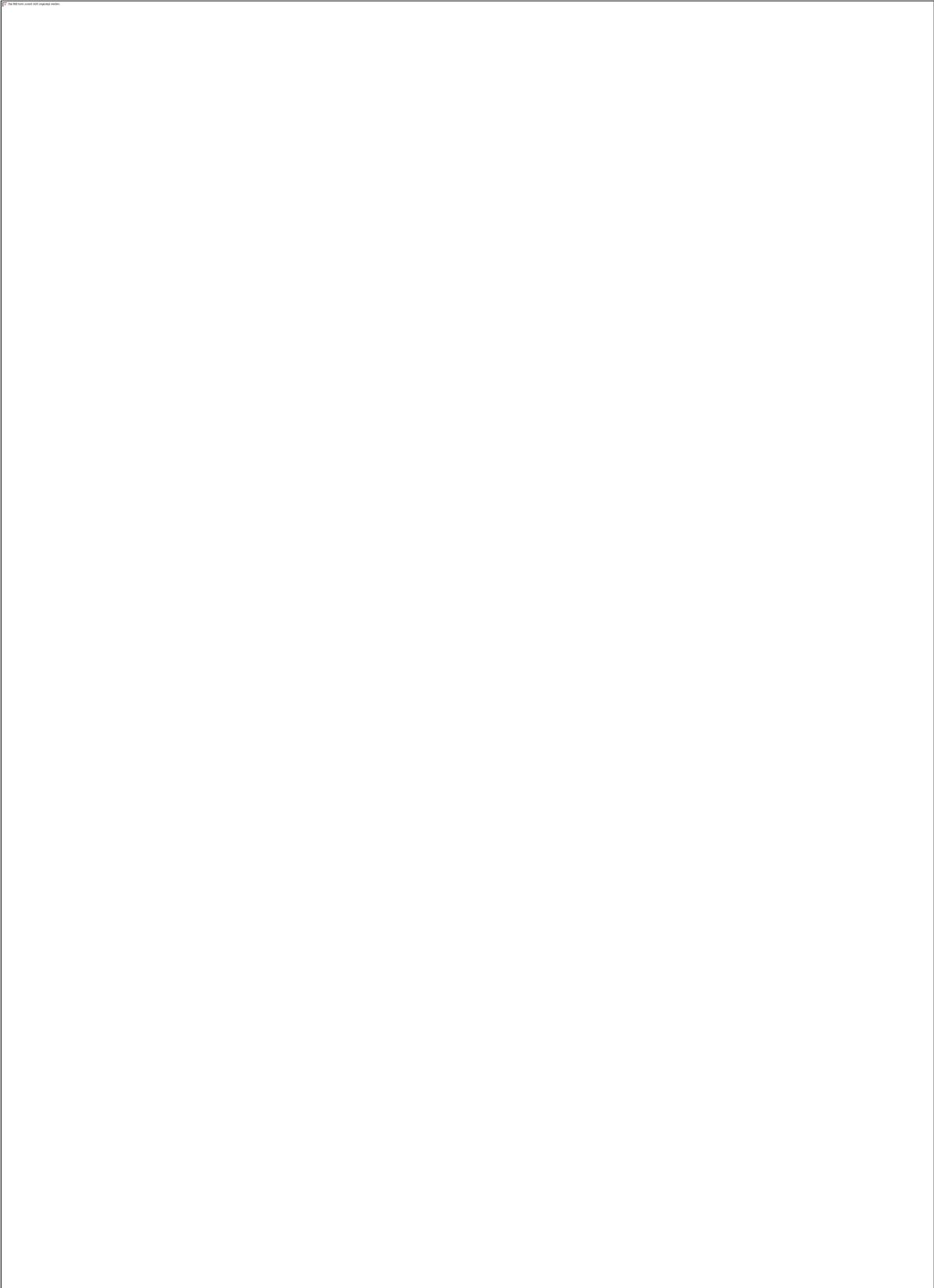
6. A woman from the nearby village asked if roads to the fishery pond can be provided as it often gets flooded whenever there is rain.

Smt. Aditi Paul informed that consultant is considering improving a few stretches of approach road alongside the project road. She requested the DPR consultant to take a note of the same and comeback to PWD on the feasibility and cost of such inclusion.

7. Shri Kilinorg Shylla, Village Employment Council Member said that he and his village people are willing to part their lands for road construction.
8. Most of the villagers expressed their happiness and cooperation to part away with their land if required and support PWD in making the road double lane. PWD informed that the proposal is for intermediate lane with hard shoulder and not double lane.

The villagers also mentioned that in other roads there has been no compensation hence there should not be any compensation in this road as well as this will create unhappiness on all people. Only people who lose their land should be provided with some money. The meeting ended with full consent from all attending and villagers agree to gift their land for the work.

Thereafter, A.E.E, and other JEs gave vote of thanks. A warm thankfulness was awarded to all concerned.





Stakeholder Consultation on
Meghalaya Integrated Transport Project (MITP) funded by World Bank

Venue: PWD Inspection Bungalow, Shangpung, Jaintia Hills

Date: 22nd October 2018

Minutes of the Meeting:

Smt. Anumanda Sumer, Assistant Executive Engineer, PWD, North Jowai Division, Jowai . She then informed the audience on the purpose of the stakeholder meeting being hosted by PWD in presence of World Bank.

The purpose of the meeting is to inform the locals about the project undertaken by the State for Rehabilitating and Strengthening of few Roads across the State. Not all roads will be done under the World Bank funding. The roads have been selected by PWD from proposals, which are long due for maintenance. Hence, World Bank has agreed to fund these roads. And to fund the roads World Bank according to their procedures consult with stakeholders to understand their say and whether they are likely to be benefited and or they have any issues with the roads.

Smt. Anumanda Sumer, welcomed the World Bank Consultant, Smt. Aditi Paul, Environment and Social Safeguard Specialist, other PWD Officials and all the stakeholders present for the consultation at the meeting venue. Smt. Sumer than request Smt. Aditi if the consultation can be carried out in local language (Khasi) for benefit of all present and suggested that she will translate all discourse in English for others.

The chair, then gave an introduction on Meghalaya Integrated Transport Project (MITP) under World Bank Funding. She mentioned that the roads are the arterial of our life. We do not have other modes of transport for our goods and services; thus, we are very thankful to the World Bank for funding our roads. Smt. Sumer then explained that the **PASYH GARAMPANI Road** will be undertaken for strengthening under the World Bank funded road correcting the curves and bends, improving the drainage at each culvert and ensuring that the road remain serviceable all time such that the connectivity between Assam and our State is better-off.

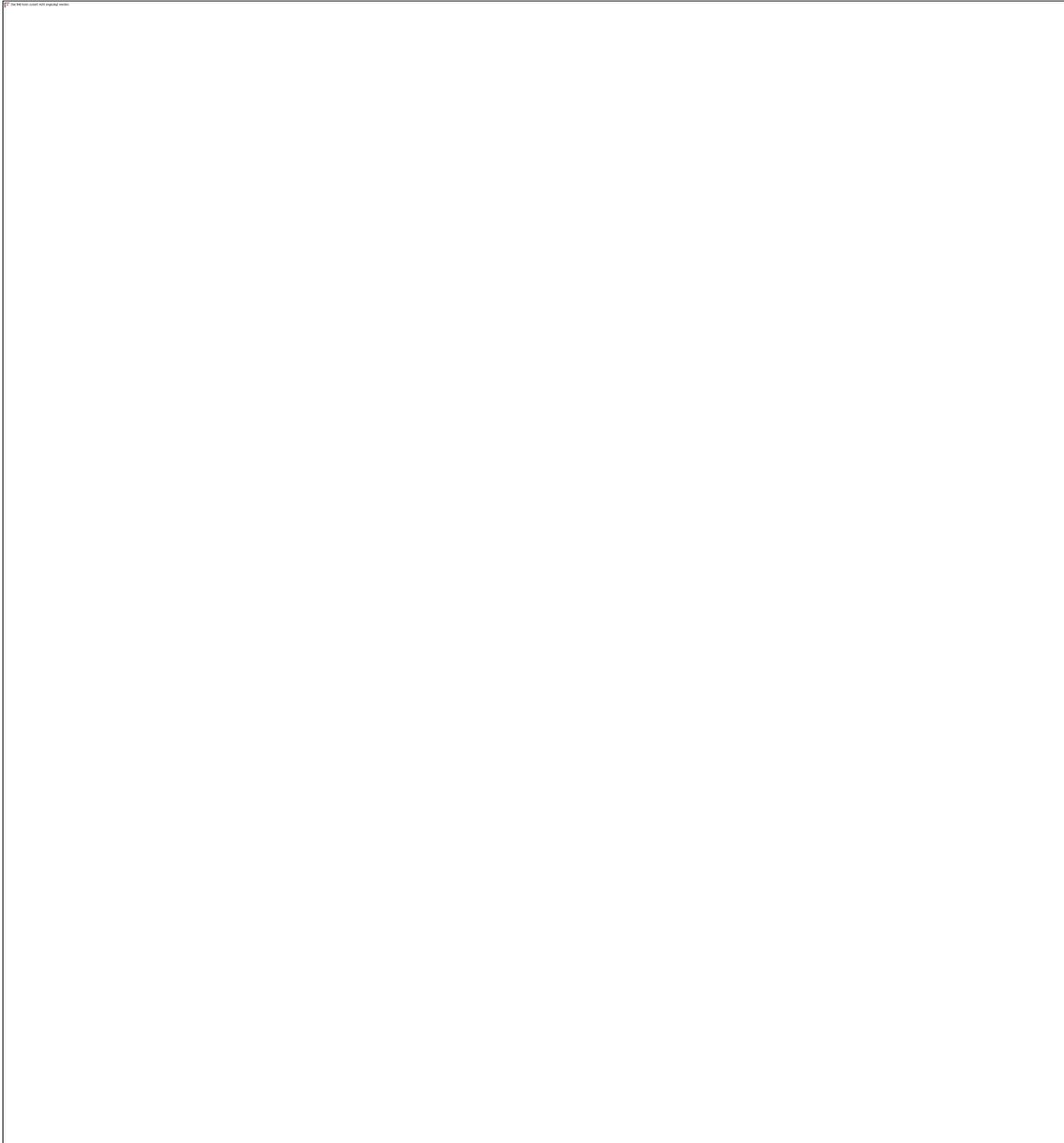
The forum was then opened for all to share their views and the following points were noted during the course of discussion: -

1. All the headman present ensure their cooperation for the work
2. Shri Arta Langbong, President of Saynjuk, suggested that the footpath along the road should be given more importance as more people walk along the road. In many places there is footpath only at one side. Both-side should be provided with footpath. Also, all schools, playground and houses should be barricaded with some protection.
3. One of the village members mentioned about few blind curves within the alignment of the road. There is no signage. Signage should be provided with adequate lighting so that accidents are reduced. Most of the vehicles are from outside the village meeting with accidents.
4. One of the headmen said that since there is no widening of the road there is no issue according to him. However, if PWD does not consider maintenance of the road at one-go, it is of no use. If the proposal is for development of 21st KM to 48KM, then our villages will not be benefited. Thus, PWD should not waste time and money. When World Bank is here, they should allow full road to be taken for development.
5. One of the JE who is also a head-man of one of the villages suggested that we should see that none of the culvert outlet is let into the village and or agriculture field as it will lead to conflict. After a year season villager will block the same and water will not flow through the culvert, damaging the road.
6. The DPR consultant remarked that there are playgrounds next to the road, should bamboo barricade be created to keep children segregated from traffic. Villagers welcome the idea and suggested all throughout the stretch of the road where possible such features should be created.
7. Shri Arta Langbong, President of Saynjuk requested if community toilets can be created at market places along the road or near the villages, which can be operated by the women of the villages.

Smt. Aditi Paul, suggested that this is a good suggestion and she will check with her senior and requested DPR consultant to check with the headmen on the availability of land as well as cost to be included in DPR.

Thereafter, with the consent of all present, Smt. Anumanda Sumer, requested should there be any requirement of land, will the villagers be willing to cooperate. In response all present agreed and suggested that they will talk and keep others informed of the same.

Thereafter, A.E.E, and other JEs gave vote of thanks. A warm thankfulness was awarded to all concerned.



Stakeholder Consultation on
Meghalaya Integrated Transport Project (MITP) under World Bank Funding

Venue: Resubelpara Circuit House, North Garo Hills

Date: 21st October 2018

Proceeding:

At the very outset, the meeting was chaired and called into order by Mr. Standing Massar, Executive Engineer, PWD (Roads), Resubelpara Division, and also delivered a welcome speech.

Mr. Standing Massar, welcomed the officers present Shri. S. C. Sadhu, Deputy Commissioner, North Garo Hills, Resubelpara, Mr. Gromyko K. Marak, Additional Chief Engineer, PWD (Roads), Western Zone, Tura, Smt. R. D. Shira, B.D.O., Resubelpara C&RD Block, Mr. K. Koch, B.D.O., Kharkutta C&RD Block, Smt. A. Ch. Momin, DHO, North Garo Hills, Mr. J. P. Verma, ADH (Horticulture), Dr. Parikshit Gautam, Environment and wildlife Management Specialist (World Bank) and also the other PWD Officials and all the stakeholders present for the consultation at the meeting venue.

The chair, then invited Mr. Gromyko K. Marak, Additional Chief Engineer, PWD (Roads), Western Zone, Tura, to give an introduction on Meghalaya Integrated Transport Project (MITP) under World Bank Funding.

Mr. G. K. Marak, Additional Chief Engineer, PWD (Roads), Western Zone, Tura delivered a detailed presentation explaining the benefits and also the objective of the project. He apprised the villagers about Rehabilitation and strengthening of **Bajengdoba Resu Mendipathar Damra road (37.00 km)**, **Rongjeng Mangsang Adokgre (44th to 55th km)** **Ildok A'kong to A'dokgre (11.00 km)** and **Construction of Major Bridge over river Damring connecting Chidaret with Songsak Mendipathar Road via Thapa Bazar** under Phase-I in west Meghalaya.

The chair then called upon Dr. P. Gautam to deliver a speech. He said that the project is for the general welfare of the people and welcomed the positive and negative feedbacks from villagers. He said that transparency is desired in World Bank Project.

Mr. S. C. Sadhu, Deputy Commissioner, North Garo Hills, then addressed the meeting by requesting all the stakeholders to cooperate during the implementation and also said that by bringing such a project would highly increase the socio economy of the region. He also assured his support to the department and all possible help for early initiation of the project.

The forum was opened for discussion with the stakeholders and the following points were noted during the course of discussion:-

1. Mr. Meltison Momin, village Chigranggre: He stated that his source of drinking water was affected in one of the PWD projects and urged the Department to not repeat the same in this project.
2. Mr. Kritnath Marak, village Sordar Norangga: He stated that his village had PHE pipelines laid recently and requested the Department to carefully shift the utilities while implementing the project.

To this, Mr. G. K. Marak, Additional Chief Engineer, PWD (Roads), Western Zone, Tura replied that it will be taken into consideration if affected and include in the Detailed Project Report for Utility Shifting.

3. Mr. Byron Marak, village Resu Bakra: He requested the Department to replace some of the hume pipe culverts along the projected road to replace it with a slab culvert. He also stated that the villagers of Resu Bakra had a meeting on 17th October 2019, where they agreed to part their land even at Bakra Bazar with a condition that the Department construct a 200 m stretch approach road to Wilson School in the same village.

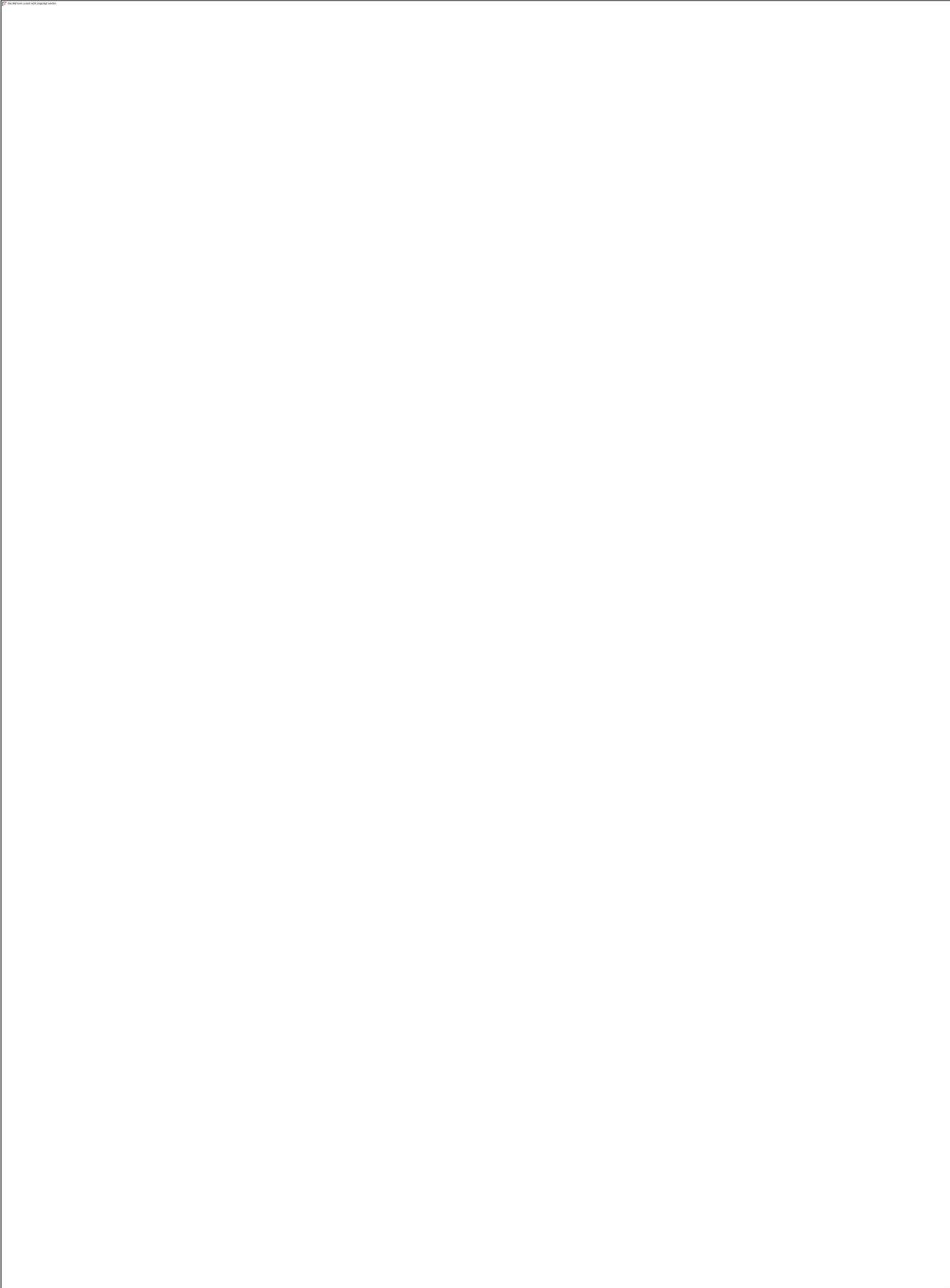
He also stated that, if there a cutting on the hill side, necessary protection works like retaining/breast wall be provided so that the nearby habitat areas will not be affected and also to provide protection works along the stream from Bakra Bazar to Resu High School.

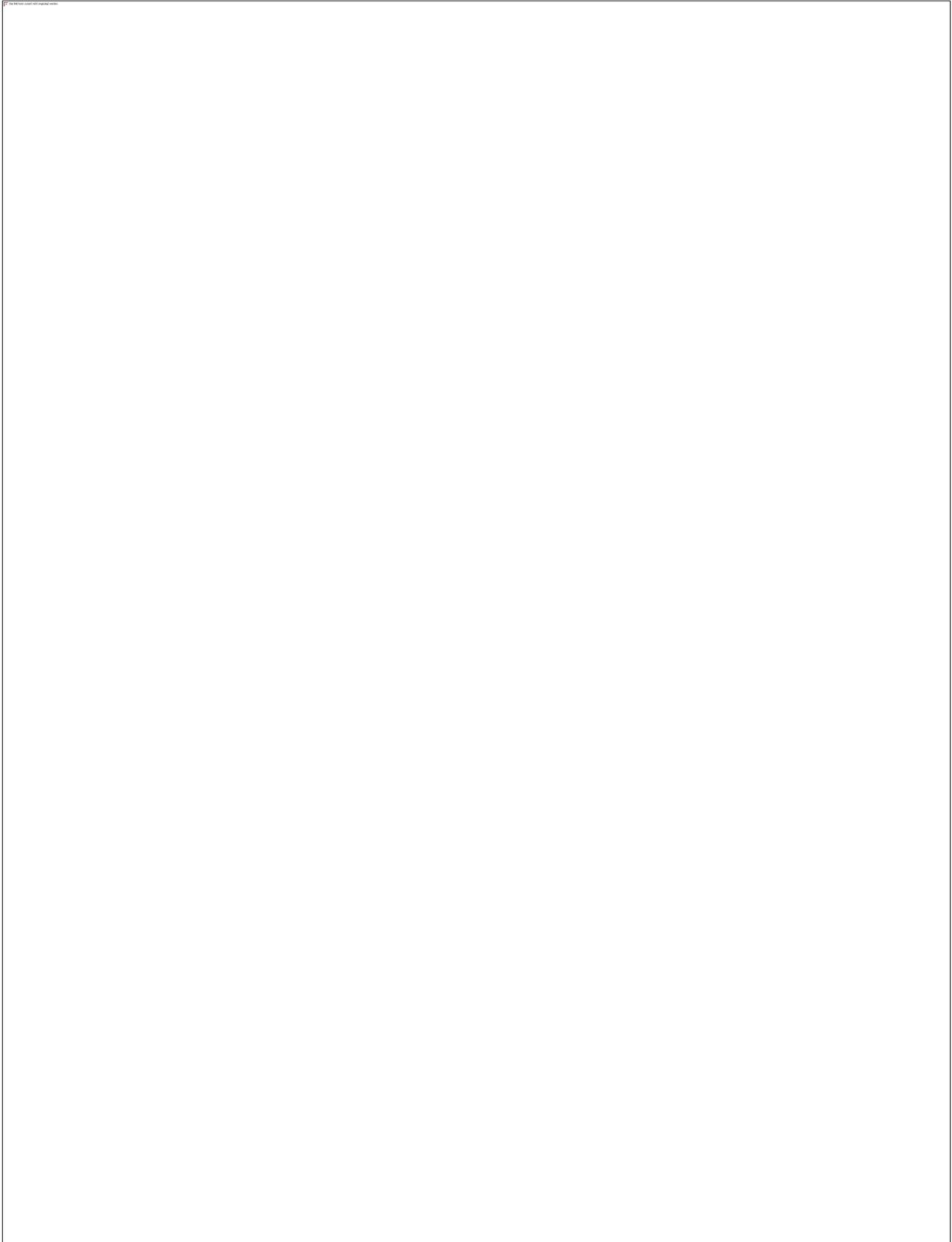
4. Mr. Kamaleswar Rabha, village Miapara: He demanded that two hume pipe culverts be included in the Detailed Project Report which is required at his village.
5. Mr. Athon R. Marak, Mendipathar: He stated that there is an accident prone zone from Sericulture Weaving to Mendipathar Bazar and urged the Department to improve the said curve and provide road safety.
6. Mr. Gracely K. Marak, village Resu Haluapara: He demanded for a 100 m stretch road at his village and also a protection work near Resu M. P. School.
7. Mr. Sarat Rabha, village Khas Rangsi: He stated that, while implementing this project, his rubber and arecanut plantation will be affected and is of the view that it would be good if his affected plantations can be shifted and planted in his other plot of land.
8. Mrs. Sanilla K. Sangma, village Nokma Mongpangro: She demanded a road to Jolding Wari which is a tourist attraction.
9. Mr. Polycarp Ch. Marak, village Salpara: He stated that there is an accident prone zone from St. Thomas School to Mendipathar College and demanded for road safety at the same stretch.
10. Mr. Deba Barsume, village Tapa Dangre: He demanded that the bridge, if constructed be at the higher level since the water level rises during rainy season.
11. Mr. Plastin Sangma, village Tapa Bazar: He seconded Mr. Deba Barsume's view.
12. Mr. Suraj Rabha, village Khas Rangsi: He demanded for a bridge and retaining wall at his village.
13. Mr. Khargeswar Rabha, village Tapa Moranodi: He stated that he is parting his land for bridge approach but requested that a 100 metre stretch approach to his house be constructed. He also stated that his village is seldom crossed by elephants.

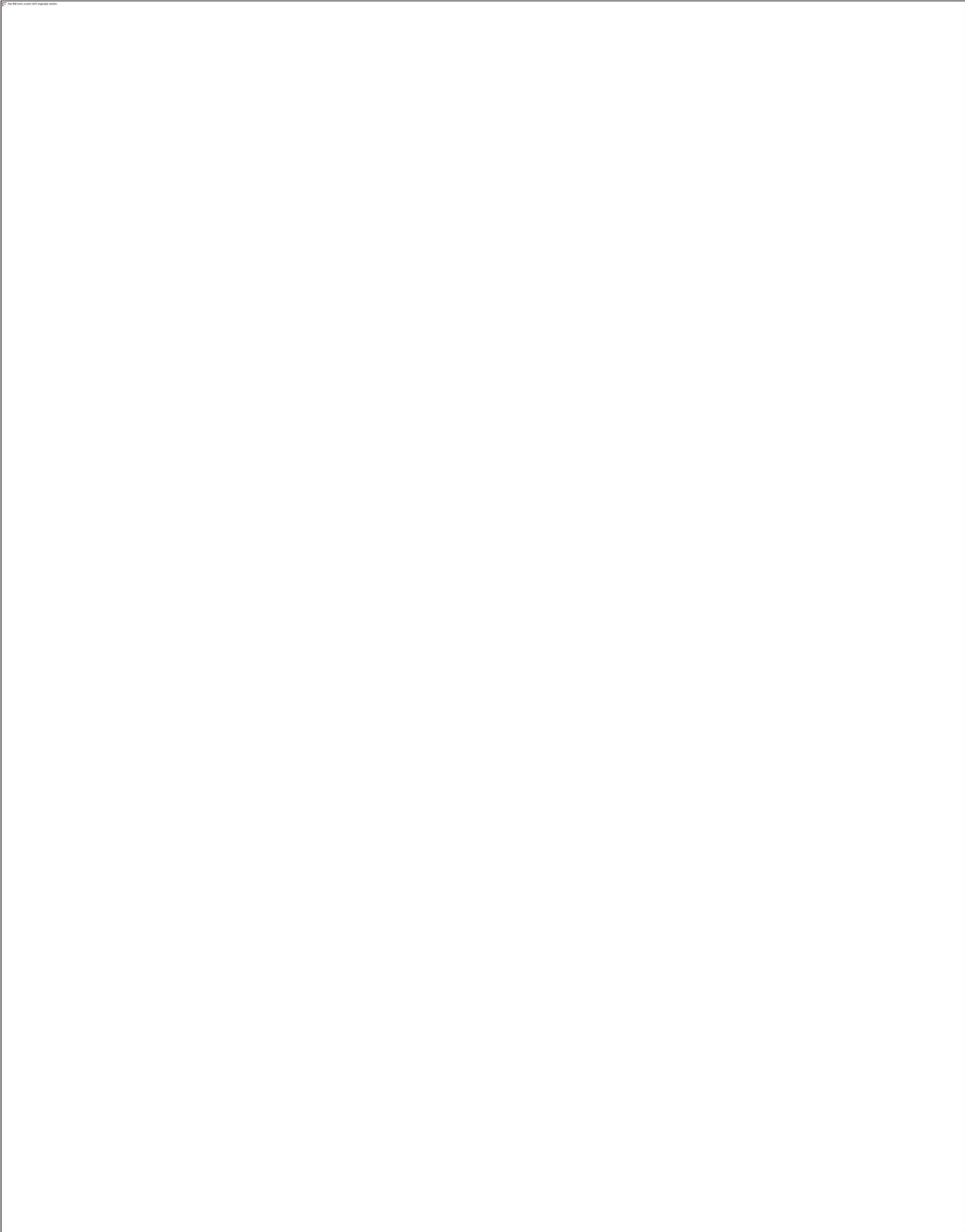
14. Mr. Nolit marak, village Rongmaklong (Damas): He demanded a retaining wall at his village.
15. Mr. Porjik Sangma, village Ildek Akong: He demanded a retaining wall and also to construct a spring chamber along with bath rooms at his village.
16. Mr. Ronjiv W. Momin, village Ildek Akong: He stated that, there is a boundary of two Akings (locally known as Dip, which is erected to show the boundary of two village Nokmas), along the proposed project and is of the view that a new Dip be constructed if the old one is demolished.
17. Villagers of Chigranggre Village: They demanded for a spring chamber near the project road.
18. Mr. Bronson Marak, village Doba Apal: He stated that they had a meeting at the village level and is ready to allot a land for construction of a bridge.
19. Mr. Devanand Sangma, village Mendipathar: He stated that there used to be a bridge at their village which was converted to a culvert later, after which their village has been affected by flood water whenever it rains.
20. Mr. Rengas Marak, Aking Nokma of Reking: He demanded Community Bathroom for the following villages under him falling on RMA Road: A) Norangga Dilnenggittim B) Norangga Songma C) Raja Turam D) Chigranggre E) Tingba Gittim F) Ildek Akong G) Reking

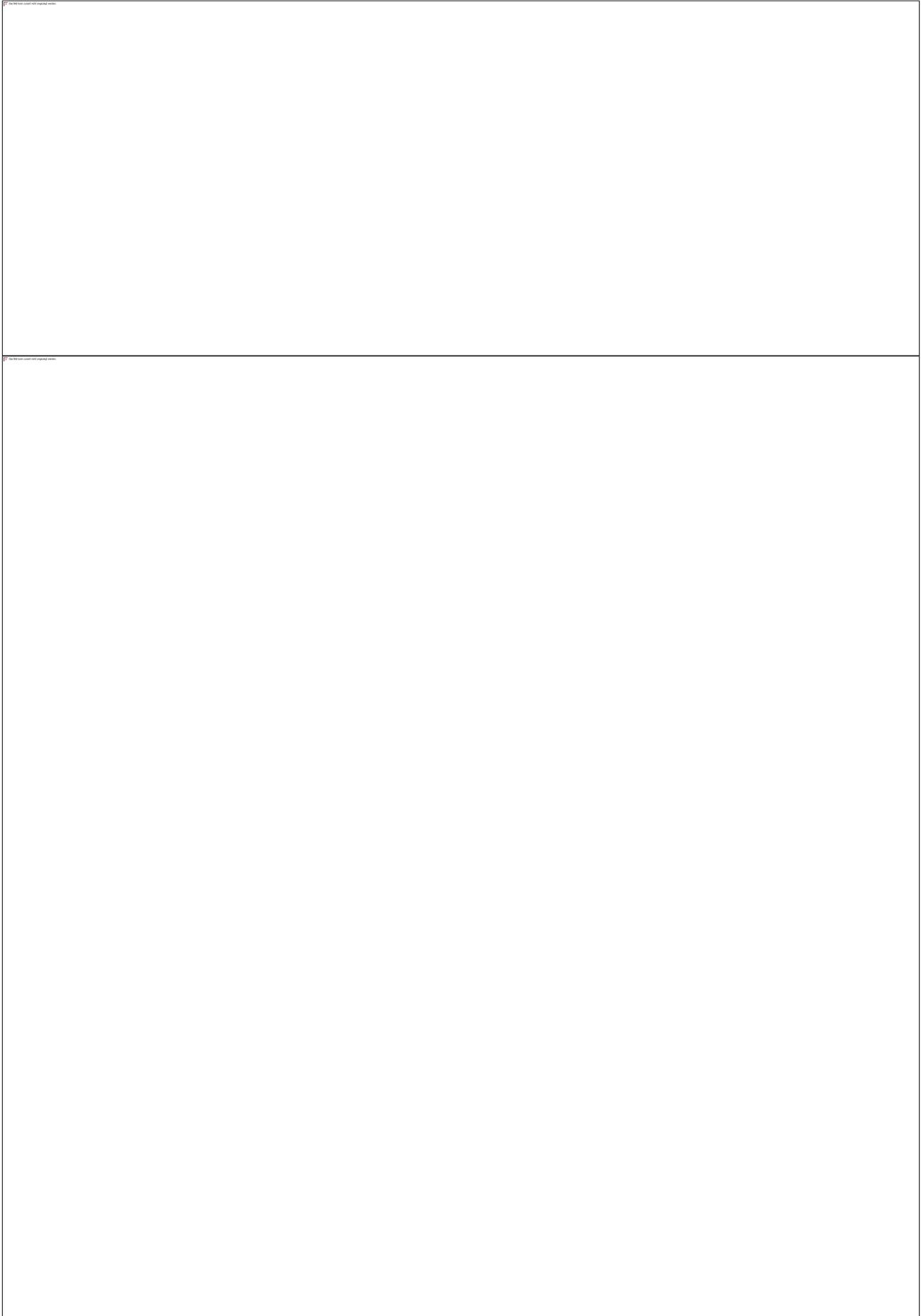
The meeting was then concluded with a vote of thanks from Mr. Prinathson A. Sangma, Assistant Executive Engineer, P.W.D. (Roads), Dainadubi Sub Division, Dainadubi, North Garo Hills.











Meghalaya Integrated Transport Project (MITP) under World Bank Funding

Venue: BADO Conference Hall, Dalu, West Garo Hills

Date: 23rd October 2018

Proceeding:

At the very outset, the meeting was chaired and called into order by Smt. Odelia K. Marak, Executive Engineer, PWD (Roads), Barengapara Division, and also delivered a welcome speech.

Smt. Odelia K. Marak, welcomed the officers present Mr. Chonseng. N. Sangma, Superintending Engineer, P.W.D. (Roads), Tura Circle, Tura, Smt. Tengchi G. Momin, B.D.O., Dalu C&RD Block, Dr. Parikshit Gautam, Environment and wildlife Management Specialist and also the other PWD Officials and all the stakeholders present for the consultation at the meeting venue.

The chair, then invited Mr. Chonseng. N. Sangma, Superintending Engineer, P.W.D. (Roads), Tura Circle, Tura, to give an introduction on Meghalaya Integrated Transport Project (MITP) under World Bank Funding.

Mr. C N. Sangma, Superintending Engineer, P.W.D. (Roads), Tura Circle, Tura delivered a detailed presentation explaining the benefits and also the objective of the project. He apprised the villagers about Rehabilitation and strengthening of **Parallel Road to existing Dalu Baghmara road (18.00 km)** under Phase-I in west Meghalaya.

The chair then called upon Dr. Parikshit Gautam to deliver a speech on ESMF. He said that the project is for the general welfare of the people and welcomed the positive and negative feedbacks from villagers. He said that transparency is desired in World Bank Project.

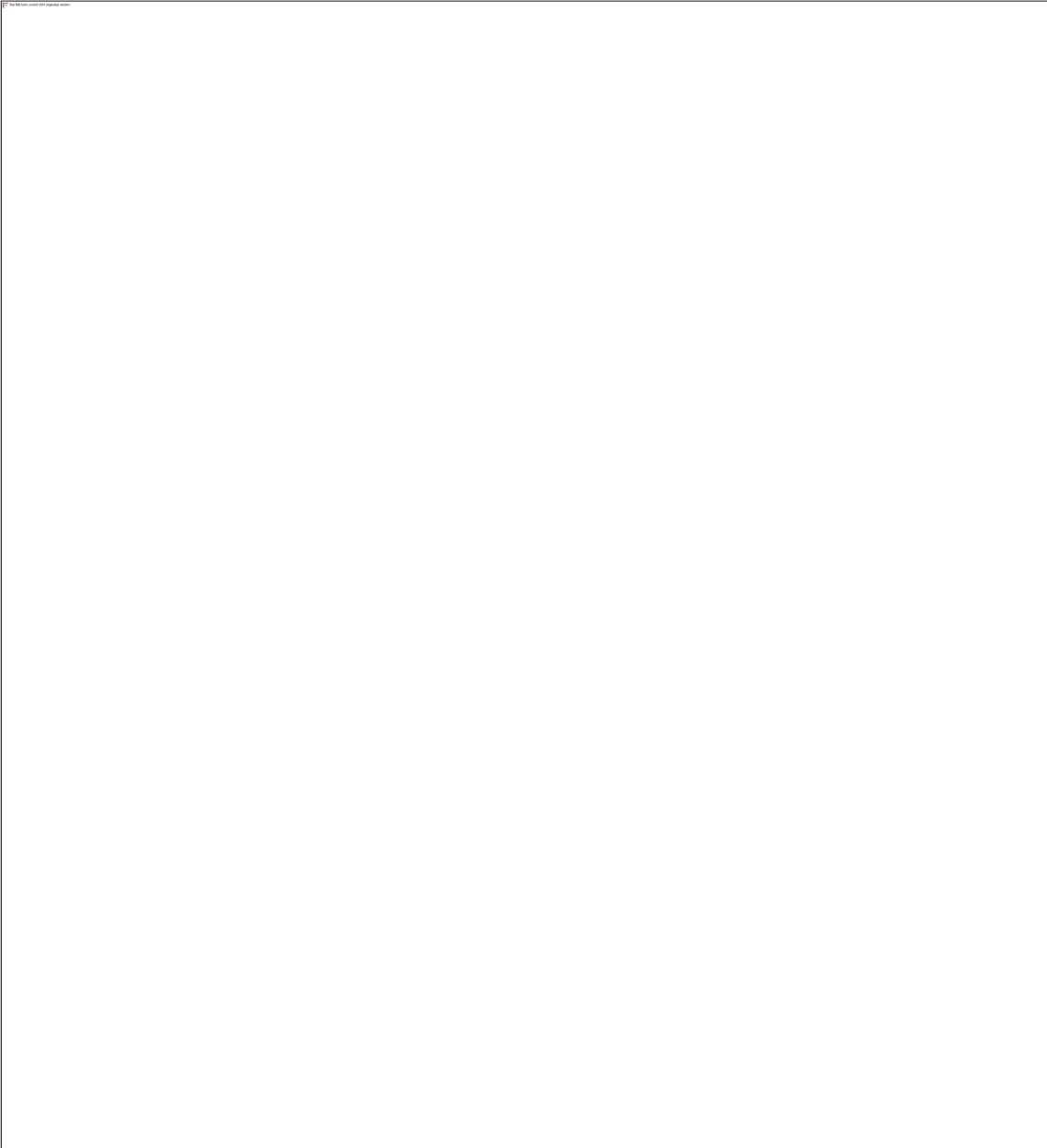
Smt. Tengchi G. Momin, B.D.O., Dalu C&RD Block, then addressed the meeting by requesting all the stakeholders to cooperate during the implementation and also said that by bringing such a project would highly increase the socio economy of the region.

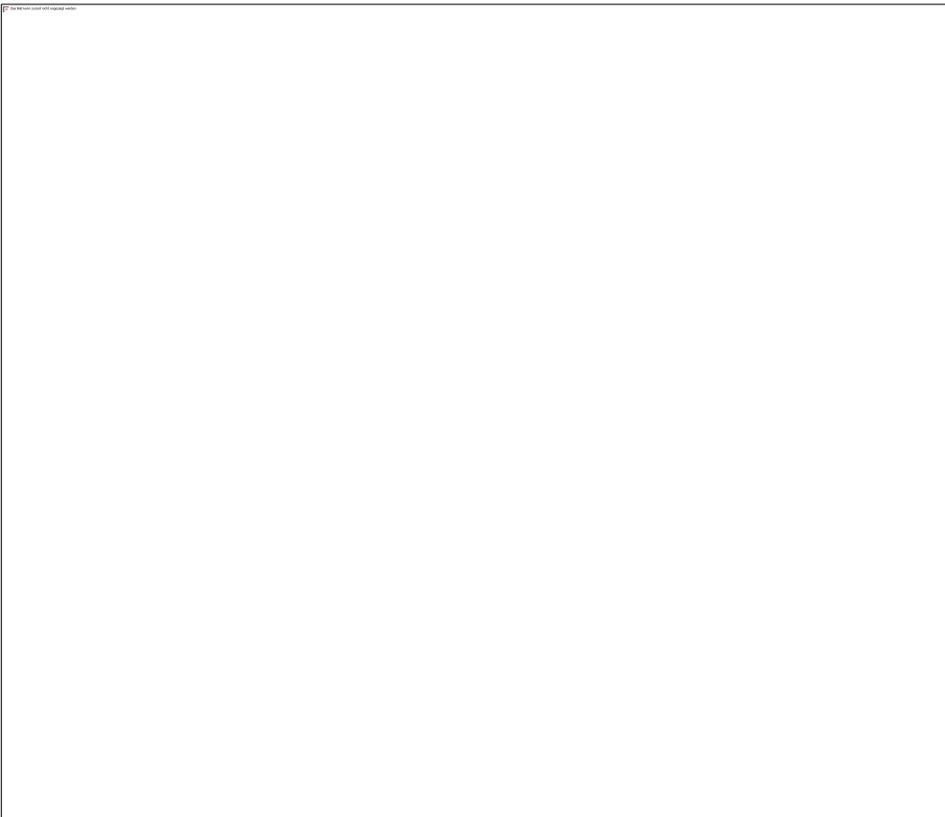
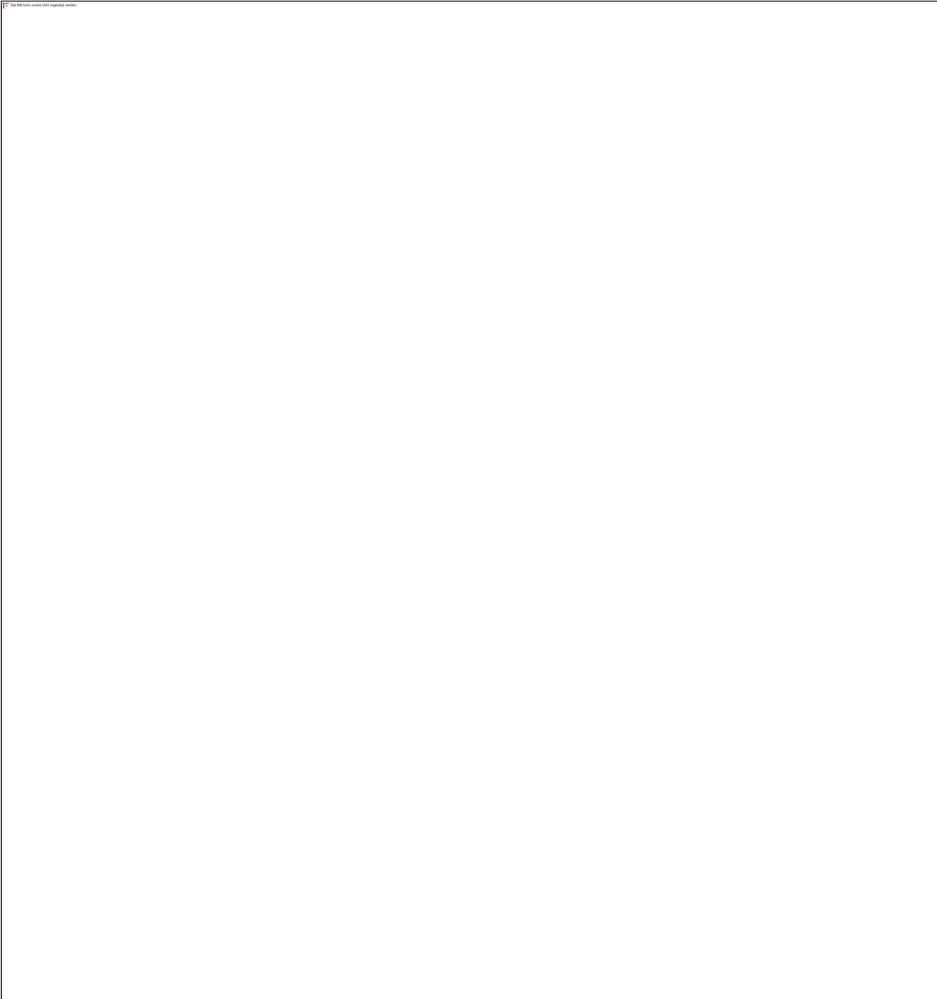
The forum was opened for discussion with the stakeholders and the following points were noted during the course of discussion:-

1. Mr. Prakash Ch. Marak, village Nokma Baburambil: He initially demanded for compensation if some of his plantations were affected but later agreed to his part land without any compensation after brief explanation by Mr. C. N. Sangma.
2. Mr. Srivas Chandra Das, village Gaon Bura of Killapara: He is appreciated and welcomed the coming of this project.

3. Mr. Pingston Marak, village VEC Secretary Baburambil: He stated that he does not want any compensation but only wanted the road to be re constructed.
4. Mr. Ratan Kumar Paul, Retired Teacher Babupara: He stated that the he wants the road to be conatructed and has no problem whatsoever.
5. Mr. Ketish Marak, village Baburambil: He stated that he wants the road to be constructed but he demanded for a protection work such boulder sausage of 30 metre at approach to his house.
6. Mr. Nilu Debnath, village VEC Secretary Paulpara: He demanded for construction of an approach road to Temple and School measuring around 200 metre.
7. Smt. Sipilla D. Marak, village Chaipani Paulpara: She asked the chair if her house will be affected by the project or not since it is near the road, for which Mr. C. N. Sangma replied that project is only an improvement and asked the DPR consultant to check during the survey if her house will be affected or not.

The meeting was then concluded with a vote of thanks from Mr. Cassius K. Sangma, Assistant Executive Engineer, P.W.D. (Roads), Border Roads Sub Division, Barengapara.





Stakeholder Consultation on
Meghalaya Integrated Transport Project (MITP) under World Bank Funding

Venue: Lower Gasuapara SSA LP School, South Garo Hills

Date: 23rd October 2018

Proceeding:

At the very outset, the meeting was chaired and called into order by Smt. Odelia K. Marak, Executive Engineer, PWD (Roads), Barengapara Division, and also delivered a welcome speech.

Smt. Odelia K. Marak, welcomed the officers present Mr. Chonseng. N. Sangma, Superintending Engineer, P.W.D. (Roads), Tura Circle, Tura, Mr. D. Hajong, B.D.O., Gasuapara C&RD Block, Dr. Parikshit Gautam, Environment and wildlife Management Specialist and also the other PWD Officials and all the stakeholders present for the consultation at the meeting venue.

The chair, then invited Mr. Chonseng. N. Sangma, Superintending Engineer, P.W.D. (Roads), Tura Circle, Tura, to give an introduction on Meghalaya Integrated Transport Project (MITP) under World Bank Funding.

Mr. C N. Sangma, Superintending Engineer, P.W.D. (Roads), Tura Circle, Tura delivered a detailed presentation explaining the benefits and also the objective of the project. He apprised the villagers about Rehabilitation and strengthening of **Parallel Road to existing Dalu Baghmara road (18.00 km)** under Phase-I in west Meghalaya.

The chair then called upon Dr. P. Gautam to deliver a speech. He said that the project is for the general welfare of the people and welcomed the positive and negative feedbacks from villagers. He said that transparency is desired in World Bank Project.

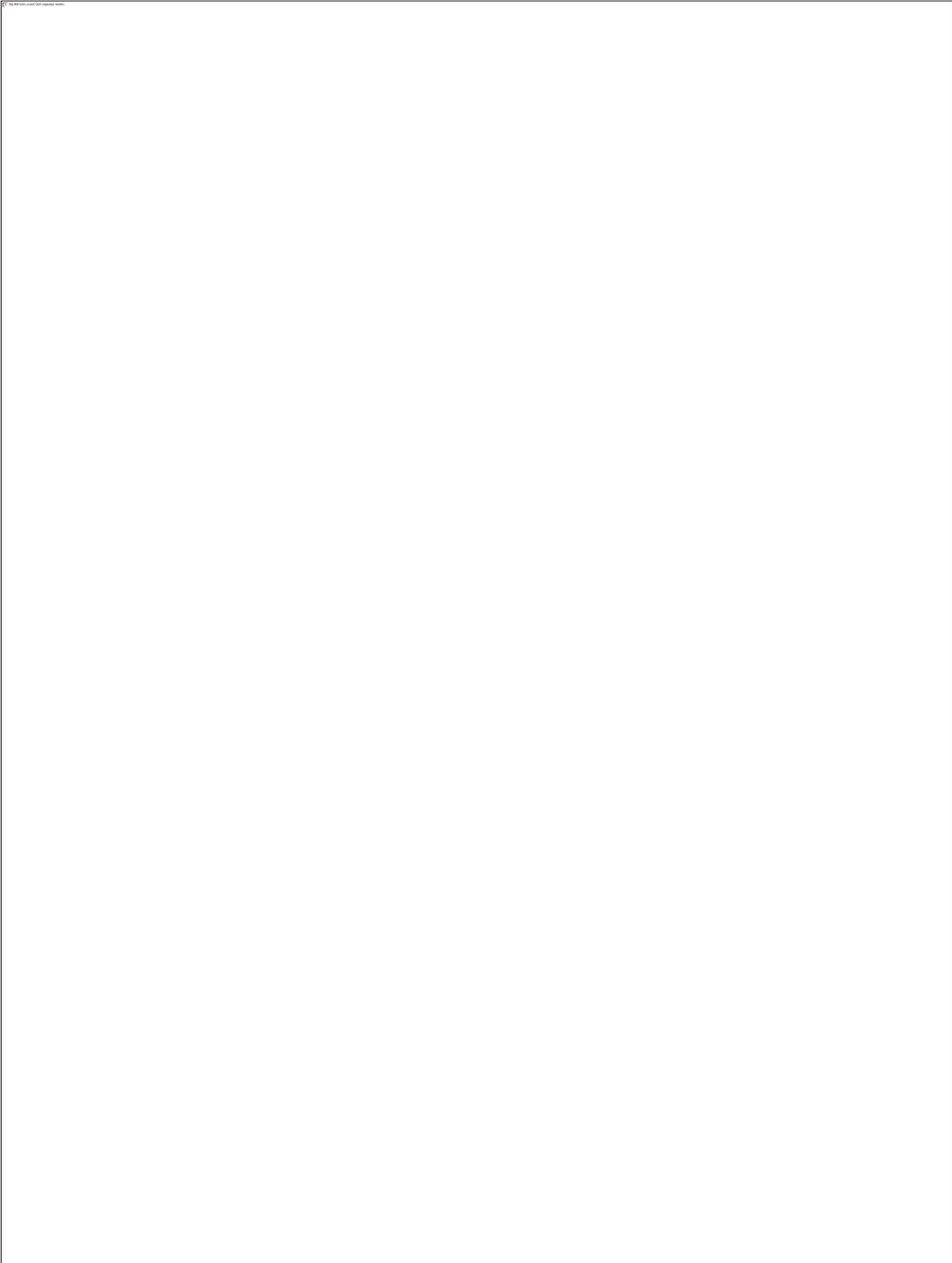
The forum was opened for discussion with the stakeholders and the following points were noted during the course of discussion:-

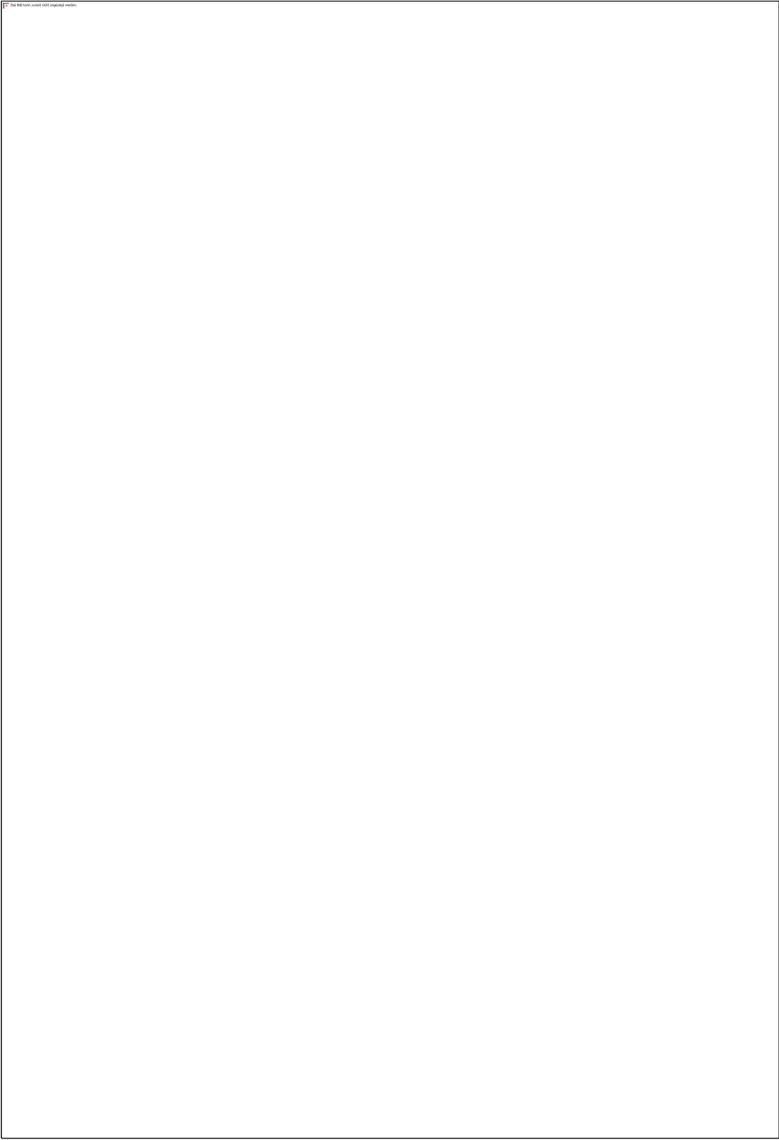
1. Mr. Arnesh T. Sangma, village Gaonbura Pokirkona: He stated that he has no objection for the construction of the project and also suggested that the implementing agency may use his Gaonbura office as their camp since there is drinking water readily available.
2. Mr. Sengsrang G. Momin, VEC Secretary Gograkura village: He stated that there is a Church and school near the project road and he wants an approach to be constructed along with culvert and also stated that school compound be excavated for its improvement.

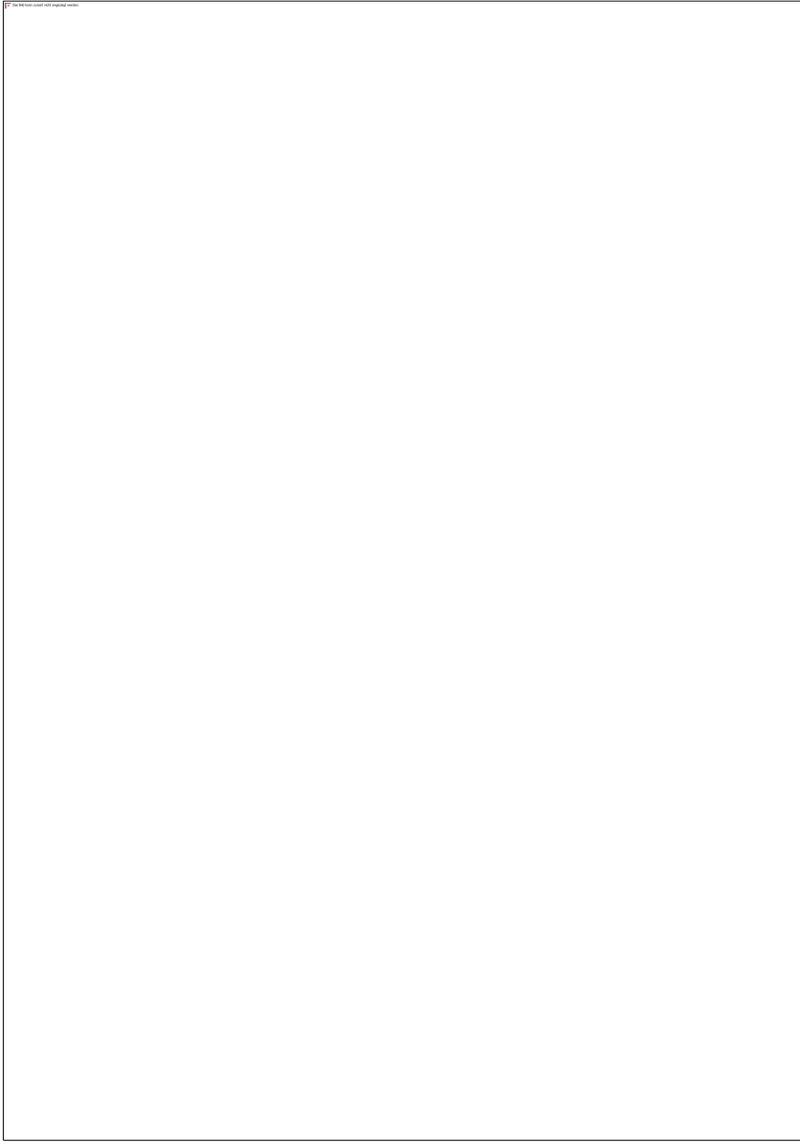
3. Mr. Aisha M. Sangma, A.king Nokma village Gasuapara: He demanded that the approach road to a school be constructed and also to repair the school which has been damaged due storm that occurred in their area.
4. Mr. Putindro Koch, village Gaonbura Gasuapara: He stated that his house is near the road and also Dapua stream. He is demanded for a boulder sausage to be constructed.
5. Mr. Noresh A. Sangma, village Dalupara: He stated that that their village Church and school gets flooded during rainy season, so he demands that an approach road along with culvert be constructed to avoid flood.
6. Mr. Somor R. Marak, village VDP Secretary Jatrakona: He demanded for a protection work at his compound which lies near the road.
7. Mr. Karna Koch, village Secretary Silbaripara: He stated that a playground may be improved by excavating the earth from the existing the playground and use the excavated earth for road construction.
8. Mr. Shashi N. Marak, village VEC President Gasuapara: He suggested that plantations be provided at barren land along the project road.
9. Mr. Matseng Ch. Momin, village VEC President Jatrakona Cherengpara Aking: He is readily allowing the contractor to set up a camp in his area.

The meeting was then concluded with a vote of thanks from Mr. Cassius K. Sangma, Assistant Executive Engineer, P.W.D. (Roads), Border Roads Sub Division, Barengapara.









Stakeholder Consultation on
Meghalaya Integrated Transport Project (MITP) under World Bank Funding

Venue: Rongsak Community Hall, East Garo Hills

Date: 24th October 2018

The meeting commenced with words of welcome speech by Shri. Sengban Ch. Sangma, A.E.E., PWD (Roads) Simsanggre Sub-Division, Williamnagar, East Garo Hills. The dignitaries present at the meeting are World Bank Consultant Dr. Parikshit Gautam, Environment and wildlife Management Specialist (World Bank), Shri Gromyko K. Marak, Additional Chief Engineer, PWD (Roads), Western Zone, Tura, Shri A. Ch. Marak, MCS, Additional Deputy Commissioner, Williamnagar, Shri. Chonseng N. Sangma, S.E Tura Circle, Shri. Albert G. Momin, BDO Samanda C&RD Block, East Garo Hills, Shri. Hubert Nengnong, Executive Engineer, PWD (Roads), Williamnagar Division, Shri. Sanjive K. Marak, Executive Engineer, PWD (Roads), Tura North Division, Tura, Shri. Salgira A. Sangma, Assistant Executive Engineer (T.C), Williamnagar Division, Consultant assigned for DPR preparation Shri Ajay P. Singh, Nokmas and villagers from various villages who will be directly and indirectly benefitting from the construction of RRD road funded by World Bank.

The Additional Chief Engineer, Western Zone, Tura takes over the chair and invited for fair participation and discussion regarding the **Rongram Rongrenggre Darugre (RRD) road** construction. He briefed about the economic importance of the R.R.D road construction. He informed that the total length of the R.R.D road from Asanang to Samanda is 43 Km. Due to the need of the smooth transportation which will directly and indirectly benefits the villagers in terms of selling their agricultural products, easy accessibility to medical facilities, the government have approached world bank under Meghalaya Integrated Transport project for road construction. He stated that the purpose of conducting meeting is to apprise the villagers about the norms laid down in World Bank regarding road construction. He made them aware about the norms of the World Bank and asked the villagers whether they can comply with the norms. If so, the project will be taken up, if not, it will be stopped/diverted to other suitable place. He stated about the Concept of the Project in relation to Agriculture, Industry and Tourism. He also brief about the Project Development objectives which are as follows:

1. Improved Transport connectivity.
2. Improved Transport efficiency
3. Transport Institute Modernization.

He also apprised the villagers about Rehabilitation and Strengthening of **Rongram Rongrenggre Darugre (RRD) Road (42.00 km)** under Phase-1 in west Meghalaya. RRD road falls under MDR category - 42 Kms (Williamnagar/ NH Tura). Total Length of Road to be taken up under World Bank project in Phase -I is 140 Kms. He also said that the success of the project will depend largely on the dedication and effort from the department with support and cooperation from the villagers. Under World Bank Project undertaking decision is left on the goodwill of the villagers. In addition to DPR preparation, World Bank will prepare ESMF. World Bank project also include environment and social standards.

He also apprised the villagers about stakeholders' consultation.

1. Learn about community needs and preferences with reference to project objectives.
2. Identify new roads alignment if need be in case the existing road alignment affect community.
3. Discuss the environment and social safeguard inflections, impact mitigations and guidelines adopted in ESMF.

4. Identify donors where voluntary lands are involved. He also stated that project preparation will be completed in 2 (Two) Months. With regards to the time allotted for DPR preparation he requested the villagers to part the needed land width for road construction. He stated that carriage way under the project is 5.50 metre and road will be constructed as per international standards.
5. He apprised the villagers about 'give and take' policy i.e regarding discussion of compensatory works including afforestation plans, construction of retaining wall, approach road construction, construction of spring chambers playground etc for the lands given on goodwill by the villagers for road construction.

Some other points of discussion brought about by Additional Chief Engineer, Western Zone, Tura.

1. Alignment of road, improvement of road geometrics.
2. Right of Way (ROW): Mostly along existing alignment.
3. Streams and springs, trees and plants if affected due to road construction will be compensated by construction of more numbers of trees and plants.
4. Landslide area will be protected by construction of retaining wall, breast walls, gabion walls etc..
5. Community involvement:- Community active participation in road construction.
6. Endangered animals and birds and how they can be protected under this project.

Things to be included in the document.

1. Labour camp :- identify a place for setting up of labour camp for road construction.
2. Waste Disposal :- Requested the villagers to identify waste disposal site.
3. Road safety : - Identifying accidents prone areas so that road geometrics can be improved, road painting, installation of road studs, crash barriers, sign boards, etc.
4. Dust pollution mitigation methods to be adopted for road construction.
5. Shifting of utility like Electric pole and removal of earth, tree trunks, branches etc
6. Need of Natural resources for road construction, the availability of which depends on compliance to the norms laid down in Meghalaya Mining Policy Act (Minor Minerals concession rule, 2016)
7. Quality control: Quality of road construction as per World Bank standards.

Thereafter, a time was given for World Bank consultant Dr. Parikshit Gautam, who said that the project is for the general welfare of the people and welcomed the positive and negative feedbacks from villagers. He said that transparency is desired in World Bank Project, no secrecy.

Thereafter, Shri Albert G. Momin, BDO, Samanta C&RD Block was given time to share his opinions and views regarding the purpose of the meeting. He said that prior to him matter has been clearly briefed by Addl. C.E., Western Zone, Tura. He requested the villagers to think for the future, the benefits the completed project will give to the villagers and the people of Garo Hills in general. He requested the villagers to their full support and cooperation to the PWD and Contractors alike so that the project will be completed on time. As an example, he cited the ongoing obstruction to Rongjeng-Mangsang-Adokgre (RMA) road construction by the villagers which is hampering the progress of the project.

Thereafter, Shri A. Ch. Marak, Additional Deputy Commissioner, East Garo Hills was given time to share his opinions and views regarding the gift deeds procedures. He opined that there should be no hampering with regards to road construction. He also stated the example of R.M.A road. He said that if people expect compensation in this project

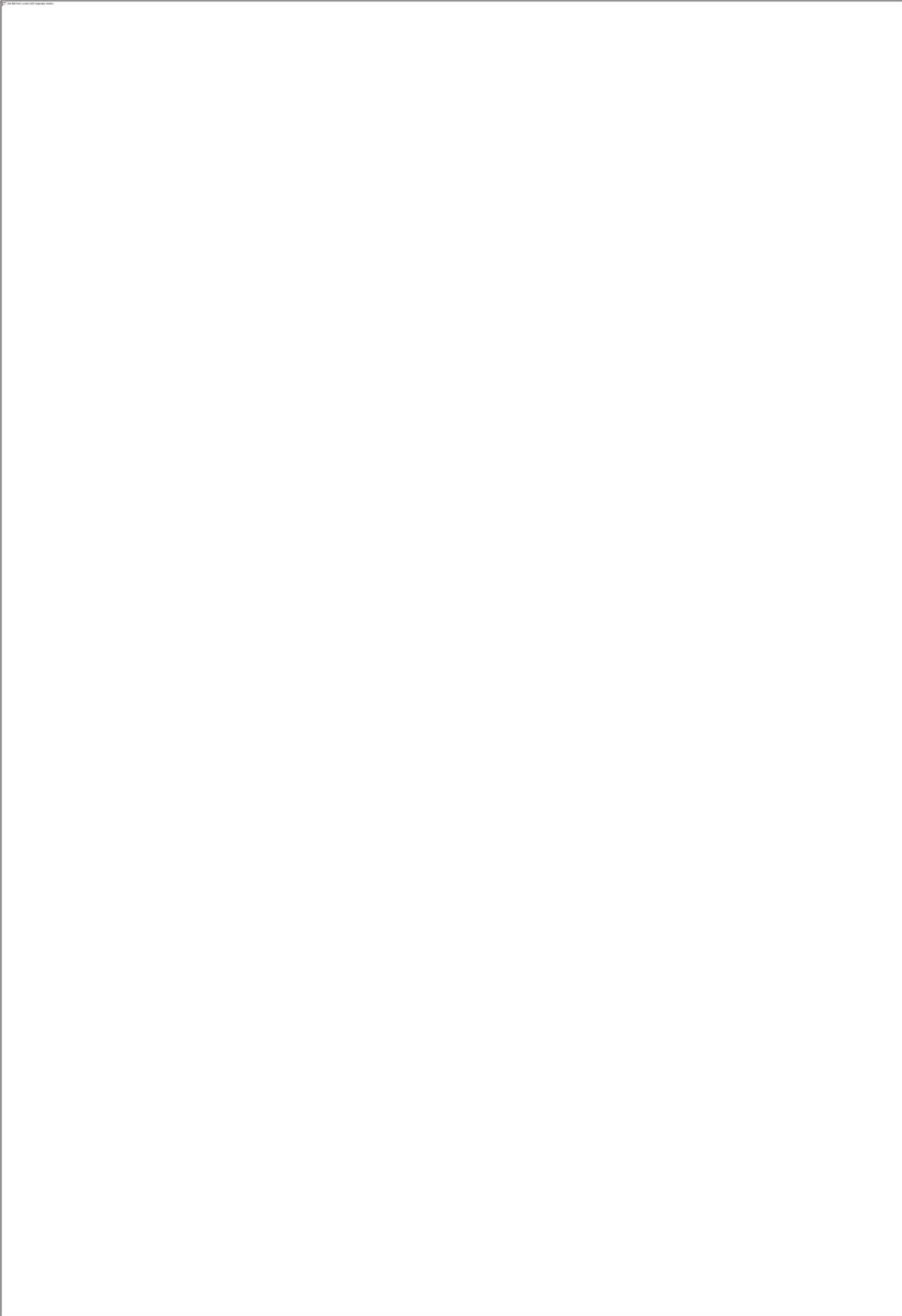
like the people of Rongjeng on RMA road, then it will obstruct the progress of work completely. He also said that if something is being lost from the villagers in terms of parting of lands, then it will be compensated, not with cash but in terms of construction of approached roads, afforestation, construction of retaining walls etc, to the affected people depending on the property impact assessment. He requested the villagers to give their full cooperation in this project so that everyone will be fully benefitted from this project.

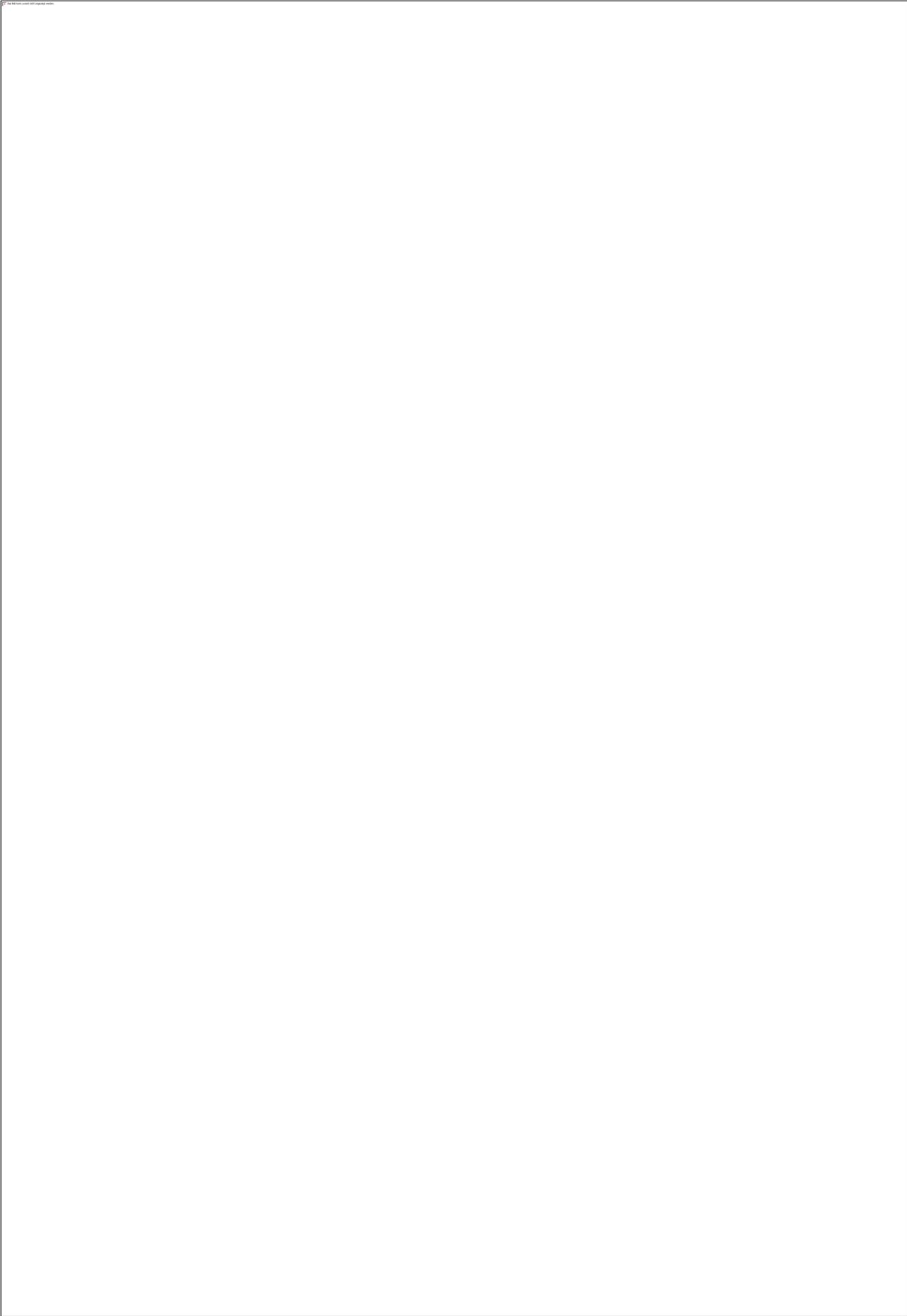
Discussion with villagers, opinions/ views of the Villagers, questionnaires by the villagers.

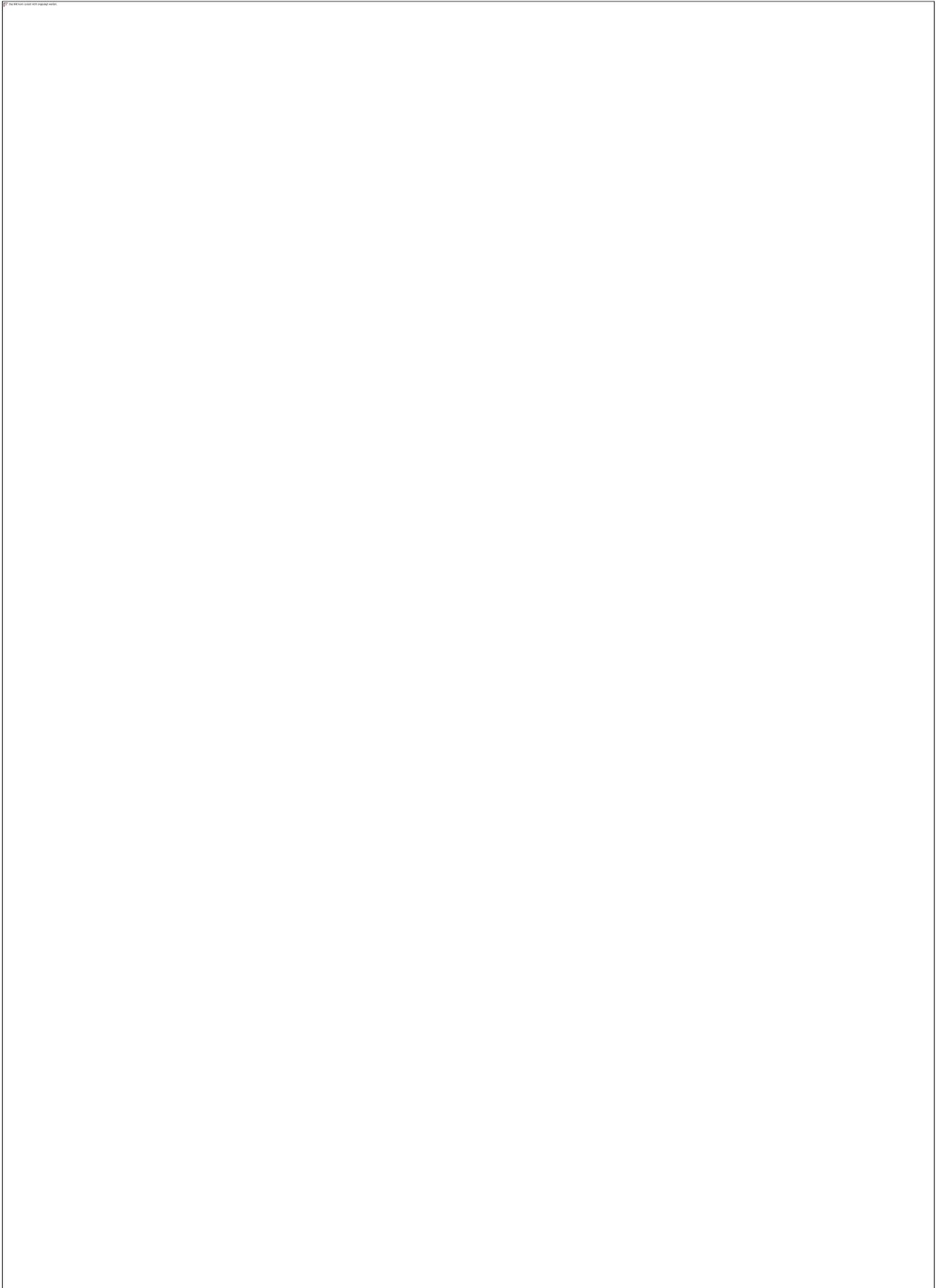
1. Shri Bailin Sangma, Nokma of Pakwagre A'king brought forward the same request, opinions and views that has been come to terms in a meeting in Asanang, West Garo Hills. His request is that the damaged SSA school building in his area be rehabilitated.
2. Shri Hellingson M. Sangma, Nokma of Rangmalgre A'king cum Sordar said that as Nokma he is responsible for the development of his village. He said that he and his village people are ready to part their land for road construction on the condition that their fruit bearing trees be safeguarded during road construction or compensated by cash to which the Additional Chief Engineer replied that if it is to be compensating by cash, then it's not in the norms of the World Bank and the project might not be materialized.
3. The ADC and Additional C.E further clarified that affected fruits bearing trees will be compensated by afforestation. Due consideration for affected area will be given in survey works, he opined. He said that cross verification of affected area will be done once the draft DPR is prepared and taken to the site for verification.
4. Shri Terendro Marak, Nokma Rongsakgre said that like the villagers of Pakwakgre and Rangmalgre, they are also willing to part their lands for road construction. He requested that in addition to road construction some village amenities be included in the DPR.
5. Shri Janggin T. Sangma, President of Rongsak Bazaar said that the encroachment into the land of PWD Road by the shop owners in the Rongsak market area will be looked into by him and would do shifting/relocation of the shops before commencement of the work.
6. Shri Withnal Ch. Marak Secretary of Rongsak Village was given time to speak and came up with the following demands :1) Jeepable road to community Hall (2) A.chik Nok (house) be constructed in Fish Sanctuary, Rongsakgre (3) Repairing of suspension footbridge over Simsang River at Rongsakgre to be included in the DPR. He requested that earth from cutting to be disposed off in Matchi School compound for improving the playground.
7. Shri Bogan M. Sangma, Nokma, Bansamgre said that he and his village people are willing to part their lands for road construction. He requested the department to renovate Bansamgre IB to which the Additional C.E replied that the department is in the process of constructing it into double storey IB.
8. Shri Badeng M Sangma, Bansamgre's Nokma's son in law said that he would call for emergency meeting with his villagers regarding affect to land due to road construction that day itself and outcome of the meeting would be intimated to the PWD department.
9. Shri Tuilin Ch. Marak Nokma's representative from Bansam A.we said that that there will be no objection to road construction from his village.
10. Shri Walison Sangma Nokma's representative, Bansam A'we said they are willing to part their lands for road construction. He requested the department to include construction of retaining wall in Bansam A'we L.P School Compound.
11. Shri Siraj Marak, a villager from Bansamgre said that there will be no objection to road construction. He wants a bridge over a 'bolbok wari' fish Sactuary to which the ADC, East Garo Hills replied that a new project of submersible bridge under IBDLP is being taken up at the same location. He also requested for playground improvement in his village.
12. Shri Janngin T. Sangma Sordar, Rongsakgre called for co-operation from the villagers so that the project can be executed smoothly.

13. Shri Winningson Sangma, a villager from Rangmalgre requested to construct the retaining wall on Catholic Church compound and on lower side of Baptist church compound at around 43th and 44th km.
14. Shri Arop Ch. Marak, a Villager from Bansamgre said that he has no problem to part his land for road construction.
15. Shri Tarzan Marak, a villager from Bansamgre requested for an approach road from main road to ICDS office in his village.
16. Shri Ajitson M. Sangma, a villager from Bansamgre expressed his concern for his fishery farm likely to be affected due to road construction to which the Addl. C.E replied that care would be given at the time of road construction so that it goes unaffected or even if its affected, compensatory works in terms of construction of protection works for the affected portion will be done.
17. Shri Arsen Sangma, a villager from Bansamgre called for active support and cooperation from the villagers' side so that the proposed road can be constructed without obstruction. He requested the department to change the alignment of the bridge over Rongrit River in new DPR. He wanted the alignment of the new bridge over Rongrit River from the downstream side making a new bridge look straightened than the older one. The Addl. C.E replied in affirmative provided the villagers are willing to part their land from the downstream side for the construction of new bridge.

Thereafter, A.E.E (TC), Williamnagar Division was given time for vote of thanks. A warm thankfulness was awarded to the entire persons concerned.









79	Trinilla Manek	Rongrakgre	Trmk
80	Kim mot manek	Rongrakgre	k. Ch. m
81	Balington Mousie	W/Nagan (P.WD)	Aju.
82	Kareh m. Sayner	Rongrakgre	Au.
83	Ranok. M. Sayma	W/Nagan P.WD	Puc
84	Andson M Sangma	Rongrakgre	Puc
85	Ausilla M Sangma	Rongrakgre	Puc
86	Rojak M Sangma	Rongrakgre	R.M.S
87	Jeng San Sangma	Ban Sangma	Py
88	Sontesh B. Marak	Rongrakgre	SB
89	Anilla M Sangma	Rongrakgre	As
90	Kraiballine Ch. Homio	Rongrakgre	Al
91	Walleang N Sangma	Rongrakgre	WV
92	Mutsang - N. Sangma	- do -	Mua
93	Sikung Sangma	Rongrakgre	Spr
94	Jung gora manek	Rongrakgre	Jungmanek
95	Mildalson Sangma	V/Rongrak	Jungora
96	Kansung Sangma	V: Dongrakgre	Syuma
97	Rajal Ch. Marak	V/Rongrak	Puc
98	Kvatisar M. Sangma	"	ESMA

