



Government of Bihar
Mukhya Mantri Gram Sampark Yojana

Environmental Management Framework

October 10, 2016



Bihar Rural Road Development Agency (BRRDA)

Rural Works Department



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List of Acronyms

BOD	Biological Oxygen Demand
CGWB	Central Ground Water Board
CO	Carbon Mono-oxide
COD	Chemical Oxygen Demand
CoI	Corridor of Impact
CPCB	Central Pollution Control Board
CSR	Corporate Social Responsibility
CWW	Chief Wildlife Warden
dB(A)	Decibel (A)
DPR	Detailed Project Report
EA	Environmental Assessment
EC	Environmental Clearance
E-coli	Escherichia coli
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMF	Environment Management Framework
EMP	Environment Management Plan
EO	Environmental Officer
ESR	Environmental Screening Report
GI	Galvanized Iron
GoI	Government of India
GoB	Government of Bihar
IA	Implementing Agency
IAHE	Indian Academy of Highway Engineers
IS	Indian Standards
K	Potassium
Km	Kilometer
M	Meter
MDR	Major District Road
MoEF&CC	Ministry of Environment, Forests and Climate Change
MT	Metric Ton
N	Nitrogen
NAAQS	National Ambient Air Quality Standards
NGO	Non-Governmental Organization
NH	National Highways
NO	Nodal Officer
NOC	No Objection Certificate
No _x	Oxides of Nitrogen
OP	Operational Policies
ODR	Other District Road
P	Phosphorous

PAP	Project Affected Person
Pb	Lead
PCU	Passenger Car Unit
PIC	Project-In-Charge
PIU	Project Implementation Unit
PM10	Particulate Matter 10
PM2.5	Particulate Matter 2.5
RAP	Resettlement Action Plan
RoW	Right of Way
RR	Rural Road
SBD	Standard Bidding Document
SH	State Highway
SO2	Sulfur Dioxide
SPCB	State Pollution Control Board
TA	Technical Assistance
ToR	Terms of Reference
WB	The World Bank

Section I: Introduction

1.1 Back Ground

Bihar is located in the eastern part of the country (between 83°-30' to 88°-00' longitude). It is an entirely land-locked state and lies mid-way between the humid West Bengal in the east and the sub humid Uttar Pradesh in the west which provides it with a transitional position in respect of climate, economy and culture. It is bounded by Nepal in the north and by Jharkhand in the south. The Bihar plain is divided into two unequal halves by the river Ganga which flows through the middle from west to east.

In a state with 90 percent of population living in rural areas, it is quite pleasing to note that the rate of growth of Agriculture and Animal Husbandry sector has been 3.7 percent during 2010-11 to 2013-14, compared to a negative growth rate during 2000-01 to 2004-05.

Varied soil categories, fertile Gangetic alluvial soil, abundant water resources, particularly ground water resources, form the basis of agriculture in Bihar. The farmers in Bihar grow a variety of crops. Apart from food grains, the state produces pulses, oilseeds, fibre crops, sugarcane, fruits, vegetables and other crops. Recently, floriculture has caught the imagination of the farmers because of its increasing demand.

Bihar is one of the low income states of India. Its per capita income (INR 13,488) is much lower than the national average (INR 42,778) (As of 2012. Real GSDP per capita at 2005 prices), which is accentuated by the fact that there exists a wide variation in per capita income across districts. A densely populated and largely rural and agrarian state, Bihar has one of the highest incidences of poverty in the country with 34 percent of its population living below the poverty line. The state is also lagging on socio-economic parameters, with the Human Development Index (HDI) recorded at 0.447 (Inequality Adjusted Human Development Index for India's States 2011, UNDP), among the lowest in India. With the bifurcation of the state in 2000, the vast mineral sector and other big industries went to Jharkhand. Since then, the state has taken several initiatives towards increasing investment in infrastructure, particularly in the transport network, strengthening the social sector, and focusing on good governance, all of which has resulted in its economy growing at about 12 percent per annum in the 11th Plan period. However, it continues to face several challenges including inadequate infrastructure, weak human capacity, low productivity in agriculture, and deeply entrenched poverty. The 12th Five Year Plan aims to achieve a high growth rate (7 percent) in the agriculture and allied sectors, to develop infrastructure at a faster pace, to emphasize the development

of the social sector further, and to make a sustained effort towards reduction of poverty and equitable regional development. In particular, it recognizes the importance of improvement in rural connectivity in bringing the benefits of modern agriculture to farmers.

1.2 Road Network in Bihar

The total length of the roads in the state is 1, 40,220 km. The numbers of connected habitations are 60,284, against 48,307 habitations which are unconnected till date. Table 1 & 2 provide information on the current status of road connectivity and category-wise habitations to be connected, respectively.

Table-1: Status of roads

As per Core Network	
Total Length in the State (in km)	1,40,220
Length of Roads under Road Construction Department (NH, SH & MDR)(in km)	17,622
Length of Roads under Rural Works Department(ODR & VR)(in km)	122598
Length of road (Less than 250)(in km)	11,110
Length of Roads eligible for Rural Works Department (in km)	1,11,488
As per Supplementary State Core Network	
Others(in km)	3,735
GTSNY(in km)	12,500
Total rural Network(in km)	1,27,723
Constructed (in km)	60326
(a) under PMGSY	39938
(b) under MMGSY & other State Schemes	20388
(c) under GTSNY	0
Ongoing(in km)	16676
(a) under PMGSY	11422
(b) under MMGSY & other State Schemes	5254
(c) under GTSNY	0
Proposed(in km)	36,986
(a) under PMGSY	5,581
(b) under State Schemes	28,905
(c) under GTSNY	12,500

Table- 2: Details of habitations to be connected

Population	No. of habitations
1000+	4843
500-999	11421
250-499	18797
Below 250	13246
Total	48307

1.3 Mukhya Mantri Gram Sampark Yojana

The Government of Bihar (GOB) launched the Mukhya Mantri Gram Sampark Yojana in year 2013 to connect with all weather roads to all rural habitations with population more than 250 in 27 Non-IAP districts involving construction and improvement of 37,908 km roads with an estimated expenditure of INR 32,230 Crores (\$5372 million approx. @ Rs. 60 per US\$). The programme is presently funded by the govt. of Bihar through its own resources.

Govt. of Bihar has established a “State Core Network: showing connectivity to these habitations and finalized it through active consultation with local communities and key stakeholders MMGSY has comprehensive guidelines which are similar to PMGSY in regards to project selection management of social and Environmental issues, Procurement, Financial Management and Quality assurance. Rural Works Department through its agency, Bihar Rural Road Development Agency (BRRDA) is responsible for implementing of PMGSY as well as MMGSY.

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1.3.1 Objective of MMGSY

The objective of the MMGSY is to fulfill the vision of Government of Bihar to reach the capital city within 5 hours from any part of the state by providing all weather roads through single connectivity to unconnected habitations with 250 and more population in phase wise manner.

1.3.2 Guiding Principles

The guiding principles of MMGSY are described below:

- Unconnected habitations with a population of 250 to 499 will be connected through all weather roads in single connectivity
- Habitations which are left out in PMGSY scheme due to some reasons will be included in this scheme.
- “Through routes” which are in bad shape and can’t be used for traffic movement will get priority in the scheme.
- Important roads and bridges which have not been included in the Final State Core Network design then the respective Executive Engineer will do an enquiry and will send his recommendation to District Magistrate. Similarly once it gets approved by District Monitoring Committee (constituted for MMGSY Scheme), Executive Engineer will send the report to Headquarter. After getting the approval from Chief Minister on the proposal, on population basis it will be included in the priority list of proposed State core network design.
- Districts where schemes related to rural connectivity are going on but still some habitations are pending for connectivity will be included.

1.3.3 Project Description

The World Bank through its Country Assistance Strategy Commits to Support MMGSY in Bihar. The total project cost will be about INR 20 billion with Bank trading of INR 14 billion (about US \$ 235 million). Araria, Banka, Buxar, Saran, East Champaran, Gopalganj, Katihar, Patna, Purnea and Vaishali are the ten districts identified for the **first phase**. This will cover about 2500 km roads. GoB has requested DEA for World Bank Support of US \$ 500 million to cover 5000 km roads. The Department of Economic Affairs (DEA) has recommended that the project preparation be done for the entire 5000 km. Additional funding will be considered at later stage based on the implementation performance of the 2500 km

The project is expected to provide all weather access to economic opportunities and social services to about 1750 small habitations by construction and improvement of about 2,500 km rural roads including construction of some standalone bridges. The inhabitants in the area of influence of the rural roads, local businesses, as well as users of the rural roads will be the direct beneficiaries of the project. Those businesses and people will have improved access to markets and services through improved connectivity.

Once the targeted habitations get connected, rural people will get fair price for agricultural produce through easy access to the markets and will be able to avail basic health and education facilities.

1.4 World Bank Support

World Bank Supported MMGSY Rural Roads Project aims to increase the efficiency

of the MMGSY, through systematic and appropriate capacity enhancement in the State to provide and maintain all season access to beneficiary communities for enhanced access to economic opportunities and social services. The PDO for the project is to improve road connectivity in rural areas and improve management of rural roads in Bihar.

The proposed project will be a US \$ 500 million in the State. The MMGSY Rural Roads has two components:-

Component I (Civil Works): Civil Works relating to construction and/or up gradation of selected roads to provide all weather connectivity in Non-IAP Districts. A total estimated cost of INR 4180 Crores at current prices with State Govt. counterpart funding of INR 1290 Crores is proposed, balance of INR 2890 Crore being provided by the bank.

Component II (Technical Assistance): This comprises 5 components:

- Preparation of DPR
- Independent Verification
- Project Institutional Support
- Equipment
- Training for Skills Development

The component will support institutional strengthening, organizational effectiveness and individual skills development to complement achievement of the program outcomes for this an amount INR 120 Cr is proposed with major share of INR 110 Cr from the World Bank. A token provision of INR 10 Cr will be made by the State Government.

However in first phase ten districts i.e Araria, Banka, Buxar, Saran, East Champaran, Gopalganj, Katihar, Patna, Purnea and Vaishali have been selected under this project which will cover about 2500 kms of roads.

Towards enhancing the assessment and management of environmental and social issues in MMGSY planning and implementation, an Environmental Management Framework (EMF), Social Management Framework (SMF) and Vulnerability Framework (VF) had been prepared.

The Project has prepared the following safeguard instruments:

- 1. Environmental Management Framework (EMF)**
- 2. Environmental Code of Practices (ECoPs)**
- 3. Social Management Framework**
- 4. Vulnerability Framework¹**

¹ Vulnerability Framework has been annexed with the SMF.

1.5 Need for Environmental Management Framework

The rural works supported under the project are spread at least ten different districts (Araria, Banka, Buxar, Saran, East Champaran, Gopalganj, Katihar, Patna, Purnea and Vaishali) in Phase 1 in the state with varying geographical, topographical and socio- economic conditions. The heterogeneous characteristics at the rural road level, in terms of locations and engineering designs, warrant a mechanism to bring a homogeneous approach in the planning, design and execution of environmental management activities for such works. This has necessitated preparation of a document that will help and guide the Implementing Agency (BRRDA, Govt. of Bihar) in selection of appropriate technique/s to carry out planning, design and implementation of environmental management activities in line with the type and nature of civil works proposed under the project. Therefore, although the general thrust and broad project interventions are well understood, the specific details pertaining to planning and design of the various sub-projects that the project envisages to support, will be completely known only later in the project cycle.

In the given context, an Environmental Management Framework (EMF) serves as an appropriate tool, allowing for flexibility within the boundaries set forth by the requirements of the Bank's operation policies and the country's regulatory mechanisms.

Some of the works proposed under the project have a potential to trigger some adverse environment and social impacts in the process, if the works are not properly planned and managed. Also, some opportunities to enhance the positive benefits of the interventions exist, which can be integrated into the planning and design process early-on, provided a clear-cut guidance is available.

Therefore, an Environmental Management Framework (EMF) for the project offers the required flexibility in guiding the process of dealing with the unwarranted impacts and would help in augmenting the positive benefits for both situations – for sub-project/s where engineering interventions are known and those roads/sections where engineering design is yet to be initiated.

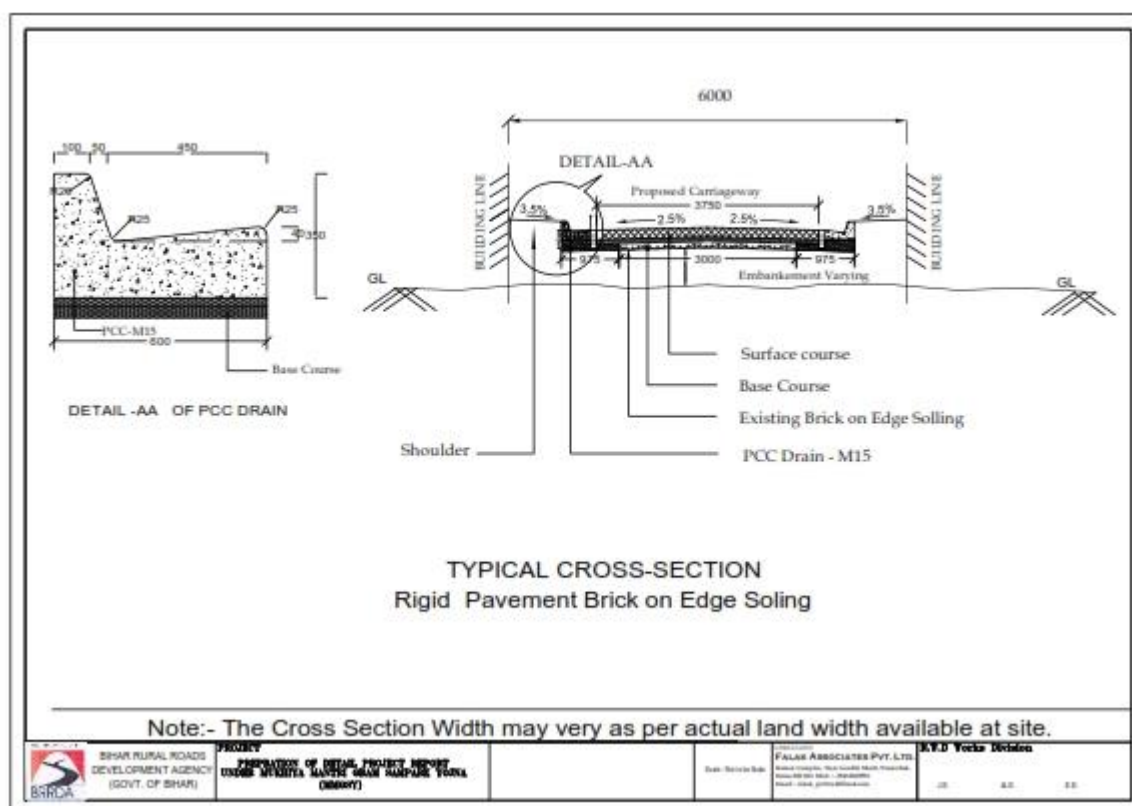
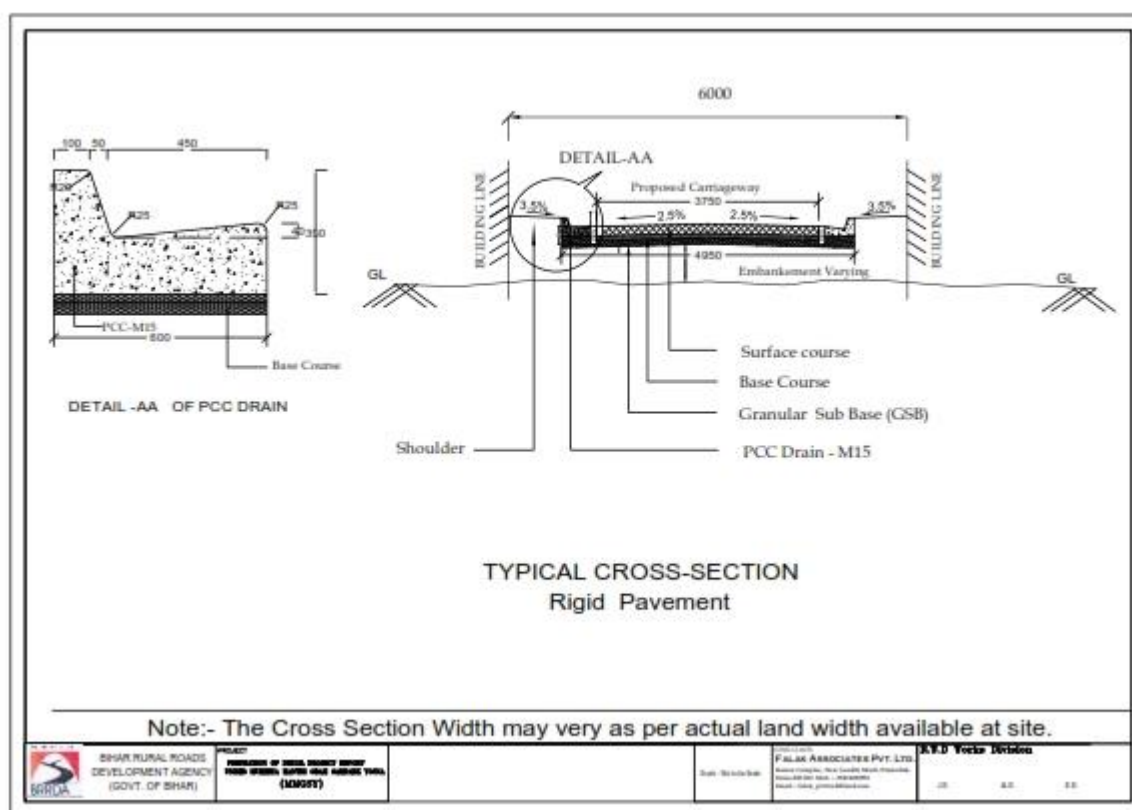
The framework describes the principles, objectives and approach to be followed in avoiding, minimizing and mitigating the adverse environmental impacts that are likely to arise as a result of the implementation of the various reconstruction activities under the MMGSY.

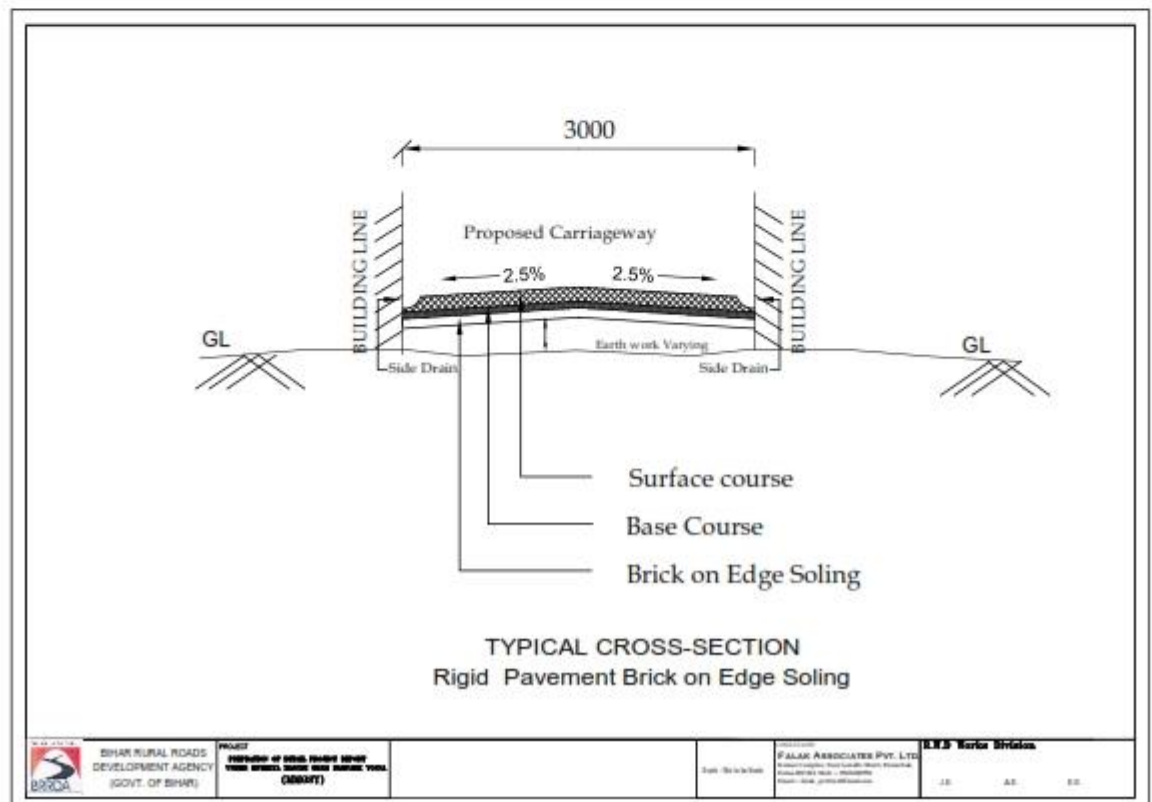
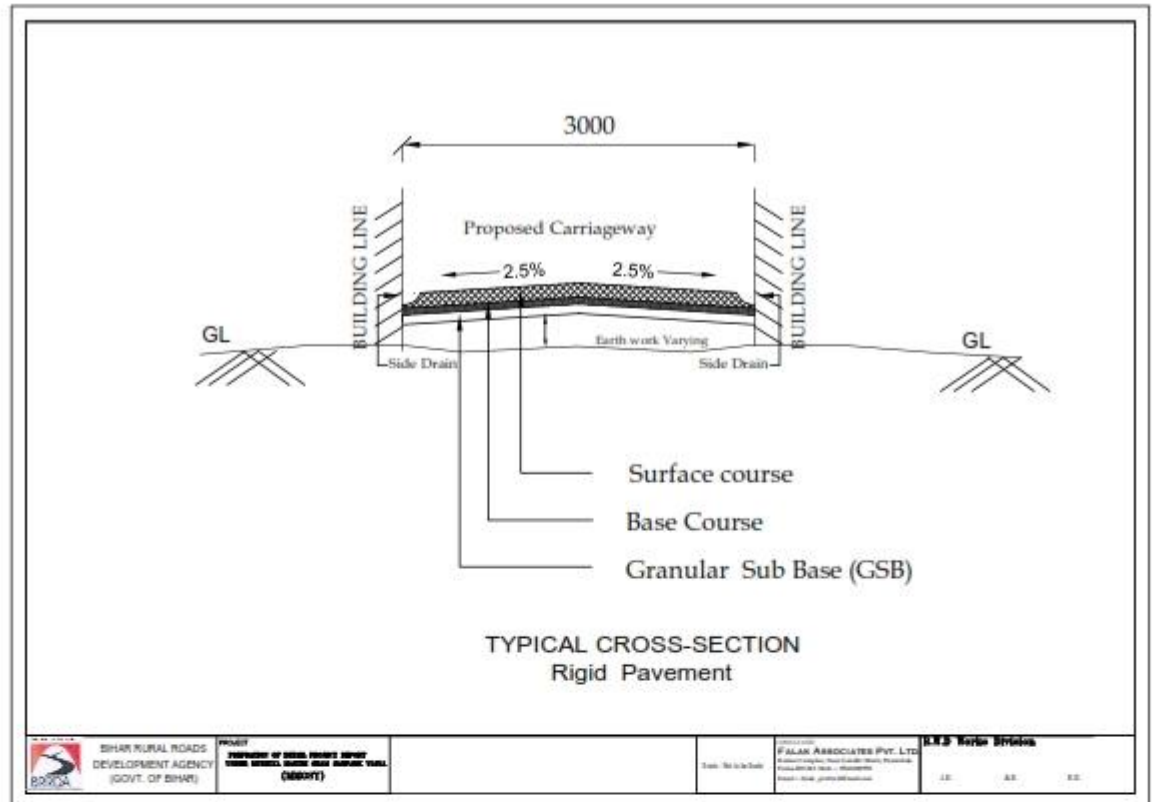
The framework details out the various policies, guidelines and procedures that need to be integrated during the planning, design and implementation cycle of the Bank- financed project in the state of Bihar. It also outlines the indicative management measures required to effectively address or deal with the key issues that have been identified. The required institutional arrangements for

implementing the EMF have also been outlined as a part of this framework.

Further, among other activities proposed under the project, the bulk of the civil works pertains to ‘rural roads.’ Typically, such roads are 0.5 to 6 km in length and would have standard cross-sections as mentioned in figure below. For such small works, an Environmental Management Framework (ESMF) has been developed and successfully applied in the World Bank funded projects in the past. These include the Rural Roads Project and the on-going PMGSY project, of which Bihar is also a part. These available tools/ instruments have been adapted for the purpose of this project and integrated into this document (EMF) prepared for the MMGSY, particularly to deal with the environmental issues pertaining to the rural roads component.

Figure-1: Standard Cross Sections of rural roads in MMGSY





1.6 Purpose and Objectives for Environmental Management Framework

Good environmental management practices are essential and integral elements of sound project preparation and implementation. More specifically, the EMF seeks to:

- Establish clear procedures and methodologies for environmental planning, review, approval and implementation of sub-projects to be financed under the Project.
- To provide practical guidance for planning, designing and implementing the environmental management measures.
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and related social concerns of the sub-projects and;
- Determine the institutional arrangements, including those related to training, capacity building and technical assistance (if required) needed to successfully implement the provisions of the EMF.

The application and implementation of the EMF therefore, will:

- Support the integration of environmental aspects into the decision making process of all stages related to planning, design, execution, operation and maintenance of sub-projects, by identifying, avoiding and/or minimizing adverse environmental and social impacts early-on in the project cycle,
- Enhance the positive/sustainable environmental and social outcomes through improved/ sensitive planning, design and implementation of sub-activities,
- Minimize environmental degradation as a result of either individual sub-projects or through their indirect, induced and cumulative effects, as much as possible,
- Protect human health, and
- Minimize impacts on cultural property.

The use / implementation of the EMF will also support the achievement of compliance with applicable laws and regulations as well as with the requirements of relevant Bank policies on environmental safeguard aspects.

1.7 Key Contents of the Environment Management Framework

The EMF comprises of the following safeguard instruments:

1. Environmental Management Framework (ESMF) (this document);
2. Environmental Codes of Practice (ECoP).

These documents together are referred as EMF in the report

1.8 Revision/ Modification of the EMF

The EMF will be an ‘up-to-date’ or a ‘live document’ enabling revision, when

and where necessary. Unexpected situations and/or changes in the project would therefore be assessed and appropriate management measures will be incorporated by updating the Environment 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 implementing agencies/ departments and with approval of the World Bank.

1.9 Limitations of the EMF

This Environment Management Framework has been developed in line with applicable World Bank's Operational Policies (OPs) and is based on the national and state laws and regulations, as applicable at the time of preparation of this document. Any proposed modifications in the laws, regulations or guidelines that were notified as 'draft' at the time of preparation of this document have not been considered.

Section II : Environmental Profile

2.1 Profile of Project State- Bihar

Bihar has a diverse climate. Its temperature is sub-tropical in general, with hot summers and cool winters. The state spans a vast fertile plain, which is drained by the Ganges river, including its northern tributaries, the Gandak and the Kosi, that originate in the Nepal Himalayas, and the Bagmati originating in the Kathmandu Valley. These rivers regularly flood parts of the state. The Ganges divides Bihar into two unequal halves, flowing from west to east. Other Ganges tributaries flowing through the state are the Son, Budhi Gandak, Chandan, Orhani and Phalgu. The foothills of the Himalayas start a short distance north inside Nepal and the mountains influence Bihar's landforms, climate, hydrology and culture. The central part of Bihar contains some small hills (the Rajgir Hills). To the south lies the Chhotanagpur Plateau, in the neighbouring state of Jharkhand.

The topography of Bihar state is plain. The Himalayas begin at foothills a short distance inside Nepal but influence Bihar's landforms, climate, hydrology and culture. Central parts of Bihar have some small hills, for example the Rajgir hills. The Himalayan Mountains are to the north of Bihar, in Nepal to the south is the Chota Nagpur plateau, which was part of Bihar until 2000 but now is part of a separate state called Jharkhand.

Bihar is drained by the Ganges River, including northern tributaries of other river. The Bihar plain is divided into two unequal halves by the river Ganges which flows through the middle from west to east. Other Ganges tributaries are the Kosi, Son, Budhi Gandak, Chandan, Orhani and Phalgu.

Bihar is India's most flood-prone State, with 76% of the population in the north Bihar living under the recurring threat of flood devastation. According to some historical data, 16.5% of the total flood affected area in India is located in Bihar while 22.1% of the flood affected population in India lives in Bihar. About 68,800 square kilometres out of total geographical area of 94,160 square kilometres) comprising 73.06% is flood affected. Floods in Bihar are a recurring disaster which on an annual basis destroys thousands of human lives apart from livestock and assets worth millions.

Bihar has a notified forest area of 6,764.14 sqkm, which is 7.2% of its geographical area. There is a belt of moist deciduous forests in the sub-Himalayan foothill ranges of Someshwar and Dun in Champaran district. Rainfall of above 1,600 millimeters in this area promotes luxuriant sal forests.

The state of Bihar is rich in wild animals. The important terrestrial species are tiger, leopard, bear, hyena, bison, chital, barking deer etc. Besides there are many varieties of crocodile, magars and fishes, gangetic turtles in river systems. Bihar has got the privilege of having the national aquatic animal, fresh water Dolphin in the

River Ganges, Kosi, Gandak, Mahanada and Paimar rivers of the state etc. Vikramshila Gangetic Dolphin Sanctuary has been notified at Bhagalpur portion of the river Ganges. Bihar is also famous for different wetlands and many varieties of local bird species as well as migratory birds. Different natural wetlands like Kanwar lake, Baraila lake, Kusheshwar nath Lake, Udaypur lake and man made lakes Nagi Dam & Nakti Dam have been declared as Bird Sanctuary. The Bihar has breeding population of greater adjutants in Naugachia area of Bhagalpur district. The state has constructed a Rescue and Rehabilitation centre at Bhagalpur.

Bihar state is divided into 9 divisions and 38 districts for administrative purposes. The various districts included in the divisions - Patna, Tirhut, Saran, Darbhanga, Kosi, Purnia, Bhagalpur, Munger and Magadh Division. There are 101 sub divisions, 534 CD Blocks, 8406 Panchayats and 45103 revenue villages.

As per details from Census 2011, total population of Bihar as per 2011 census is 10,38,04,637 of which male and female are 5,41,85,347 and 4,96,19,290 respectively. In 2001, total population was 82,998,509 in which males were 43,243,795 while females were 39,754,714.

The total population growth in the decade was 25.42 % while in previous decade it was 28.43 %. The population of Bihar forms 8.60 % of India in 2011. In 2001, the figure was 8.07 %.

Literacy rate in Bihar has seen upward trend and is 63.82% as per 2011 population census. Of that, male literacy stands at 73.39% while female literacy is at 53.33 %. In 2001, literacy rate in Bihar stood at 47.00 % of which male and female were 59.68 percent and 33.12 % literate respectively.

In actual numbers, total literates in Bihar stands at 5,43,90,254 of which males were 3,27,11,975 and females were 2,16,78,279.

Total area of Bihar is 94,163 sq. km. Density of Bihar is 1,102 per sq km which is higher than national average 382 per sq km. In 2001, density of Bihar was 881 per sq km, while nation average in 2001 was 324 per sq km.

Sex Ratio in Bihar is 918 *i.e.* for each 1000 male, which is below national average of 940 as per census 2011. In 2001, the sex ratio of female was 919 per 1000 males in Bihar.

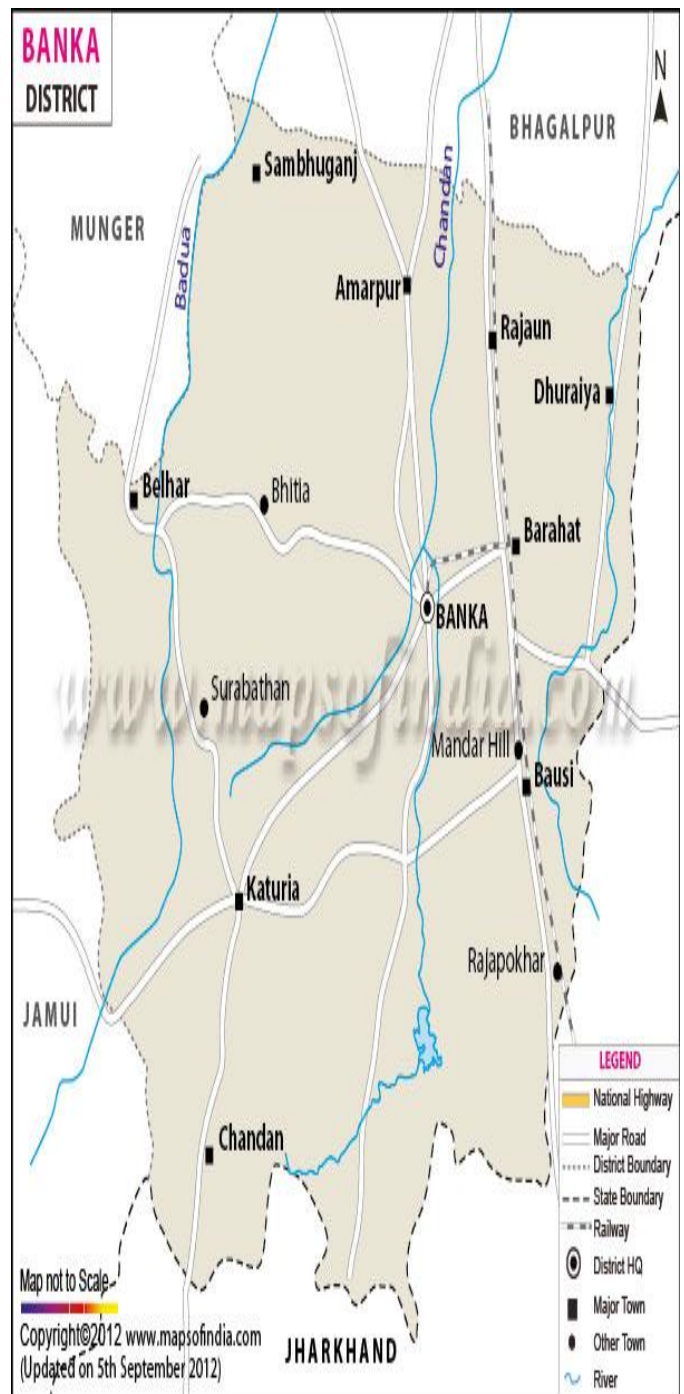
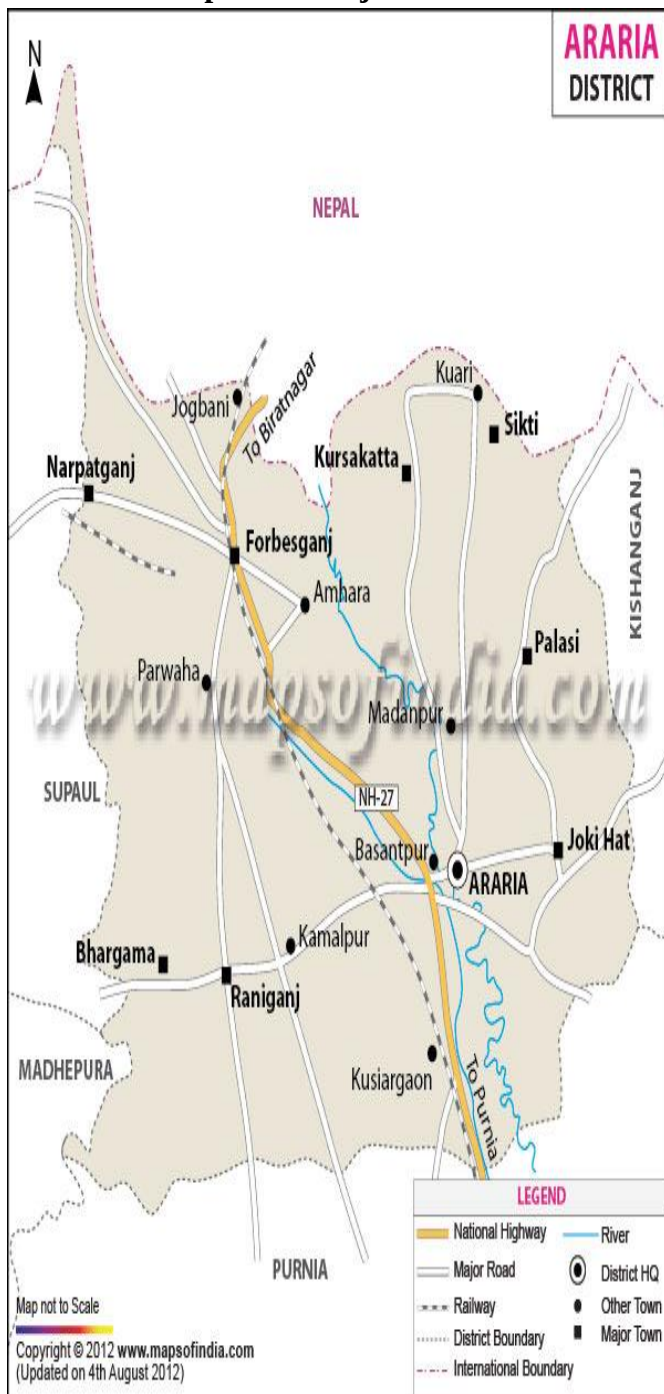
Table-3: Key socio-economic features of Bihar state area as given below:

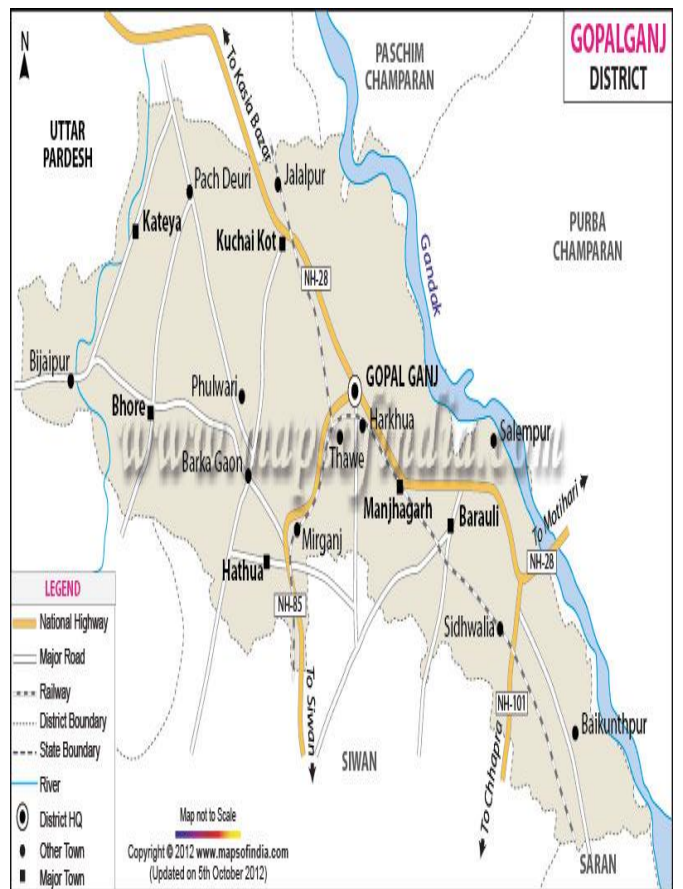
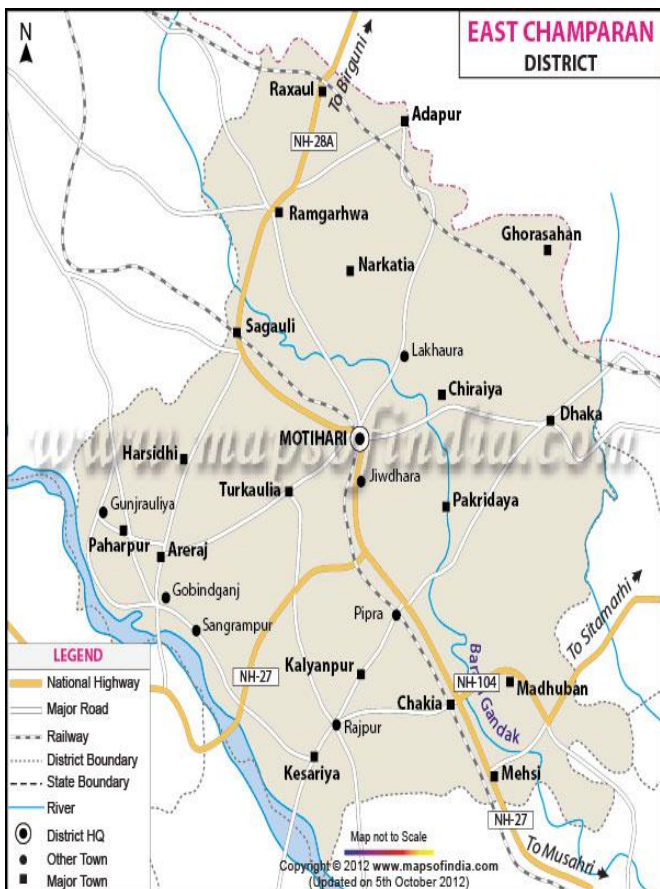
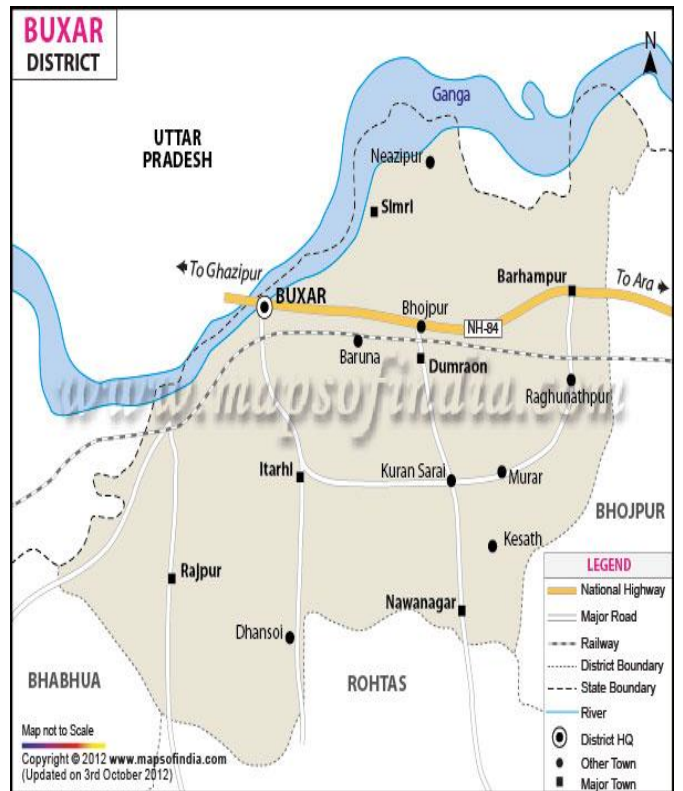
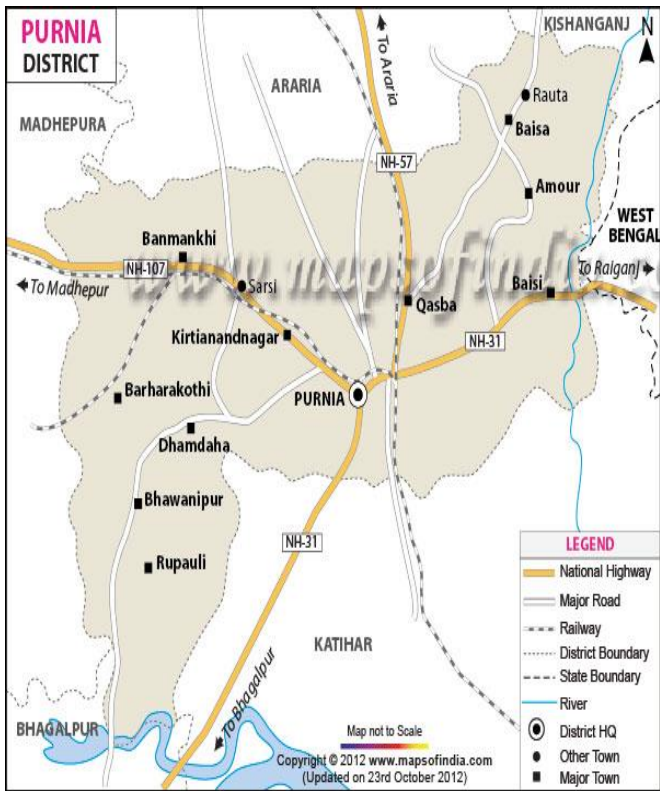
<i>Population</i>	
Population	10,38,04,637
Male	5,41,85,347
Female	4,96,19,290
Population Growth	25.42%
<i>Population (0~6 Years Group)</i>	
Population (0~6 Years Group)	1,85,82,229 (17.90%)
Male	96,15,280 (17.75%)
Female	89,66,949 (18.07%)
<i>Literacy</i>	
Literacy	5,43,90,254 (63.82%)
Male	3,27,11,975 (73.39%)
Female	2,16,78,279 (53.33%)
Density of Population	1,102 per sq kms
Sex Ratio (Females/Thousand Males)	916

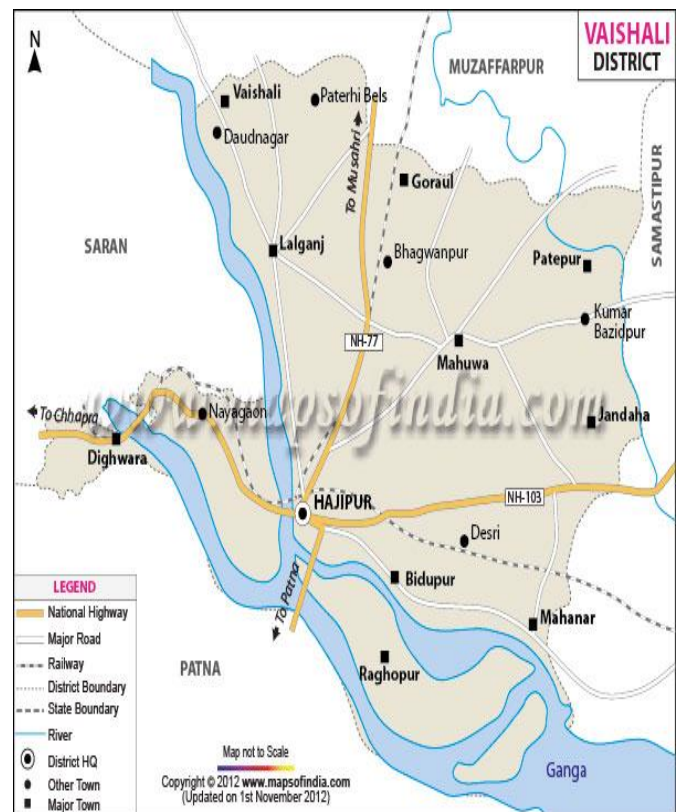
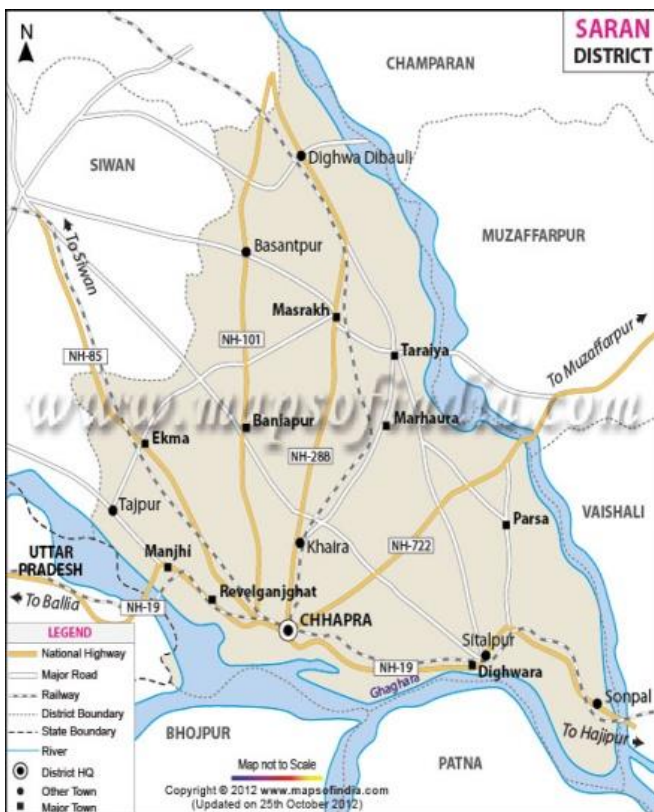
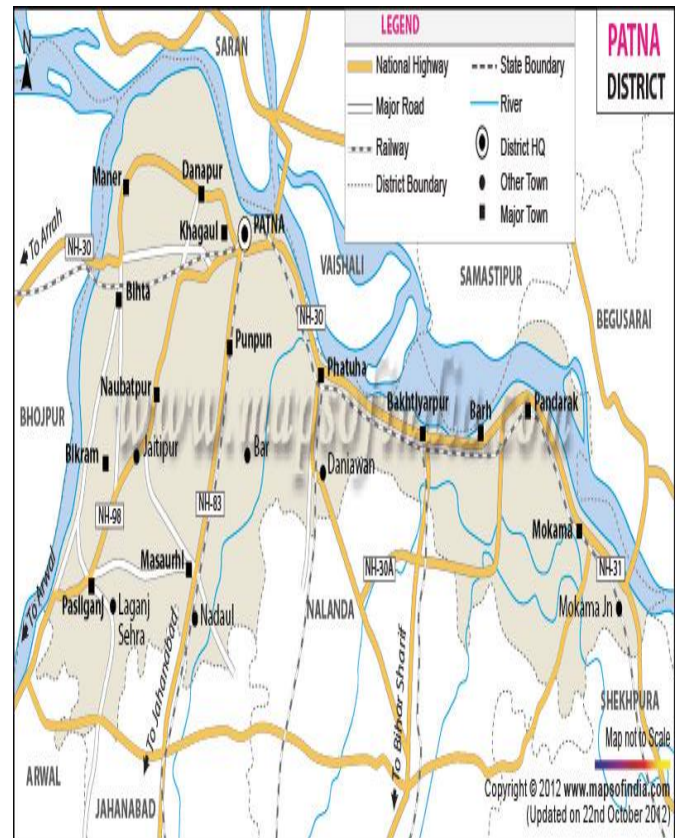
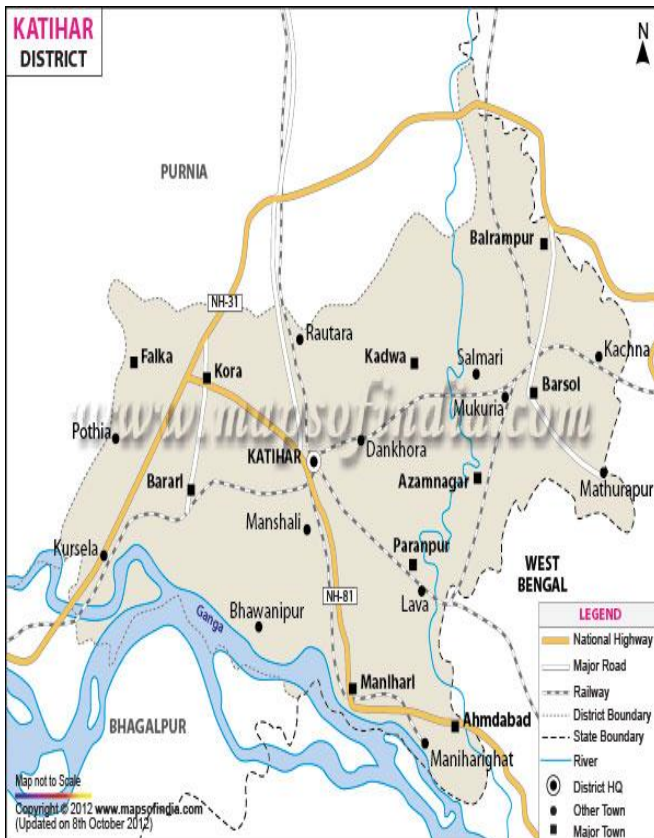
2.2 Key Environmental Features of Project Districts

A brief description of key environmental features of project districts *i.e.* Araria, Banka, Buxar, Saran, East Champaran, Gopalganj, Katihar, Patna, Purnea and Vaishali is discussed in the following sub-sections. This over-view would help in understanding the over-all setting within which the proposed project interventions would be implemented.

Map of 10 Project Districts







2.2.1 Topography

The topography of project districts is plain. Hillocks are rare in the project districts.

2.2.2 Soil

All the project districts are located in Indo-Gangetic plain therefore, fertile soil found in the area. Indo-Gangetic plain's soil is the backbone of agricultural activities. The Indo-Gangetic plain consists of a thick alluvial mantle of drift origin overlying in most part. The soil is mainly little young loam rejuvenated every year by constant deposition of silt, clay and sand brought by streams but mainly by floods in the project districts. This soil is deficient in phosphoric acid, nitrogen and humus, but potash and lime are usually present in sufficient quantity. The most common soil in the project district area is Gangetic alluvium of Indo-Gangetic plain region. Clay soil, sand soil and loamy soil are also common in the project districts.

2.2.3 Rivers & Floods

The project districts are drained by the Ganga River, Ghaghra River, Gandak River, Burhi Gandak river, Badua river, Mahananda river and its tributaries. Floods in the project district are a recurring disaster which on an annual basis destroys thousands of human lives apart from livestock and assets worth millions. During large numbers of roads submerged in fluid.

2.2.4 Climate

There are three well-defined seasons in the project districts, *i.e.* the hot-weather season, lasting from March to mid-June; the season of southwest monsoon rains, from mid-June to October; and the cold-weather season, from November to February. May is the hottest month, with temperatures regularly exceeding 32 °C, except in the extreme north. The coolest month is January, with temperatures typically rising into the low about 22 °C. The normal annual rainfall varies from about 1,000 mm in the west-central part of the state to more than 1,500 mm in the extreme north. Nearly all the rain falls between June and October, with July and August being the wettest months. The cold-weather season is the most pleasant part of the year.

2.2.5 Flora

The project districts are located in Indo-Gangetic plain with moist deciduous forests. Rainfall may exceed 1600 millimeters per year. Common trees include *Shorea robusta* (sal), *Toona ciliate* (toon), *Diospyros melanoxylon* (Kendu),

Boswellia serrata (Salai), *Terminalia tomentosa* (Asan), *Terminalia bellayioica* (Bahera), *Terminalia arjuna* (Arjun), *Pterocarpus marsupium* (Paisar), *Madhuca indica* (Mahua), *Dalbergia sissoo* (Shisham), *Gmelina arborea* (Gamhar), *Neolamarckia cadamba* (Kadamb), *Bombax ceiba* (Semal), *Azadirachta indica* (Neem), *Ficus religiosa* (Peepal), *Ficus benghalensis* (Bargad), *Haldina cordifolia* (Haldu).

Other plants of Bihar include, *Holarrhena antidysenterica*, *Flemengia chappar*, *Zizyphus xylopyra*, *Bauhinia vahlii*, *Smilex protifera*, *Butea superba*, *Butea parviflora*.

2.2.6 Forest

Among the project districts, about 462 sqkm forests are spread only in Banka district. Araria, Buxar, Saran, East Champaran, Gopalganj, Katihar, Patna, Purnea and Vaishali districts are devoid of forests.

2.2.7 National Park & Wild Sanctuary

In Bihar State, total 11 national parks and wild sanctuaries for protection and conservation of wildlife. There are only two wild sanctuaries in the project districts as per details given in **Table 2.1**:

Table 4: National Parks and Wild Sanctuaries in Bihar

Sn.	Name	Districts of Bihar	Type	Area (km ²)	Notification Year
1.	Barela Salim Ali Zubba Saheni Wildlife Sanctuary	Vaishali	Wildlife Sanctuary	1.96	1997
2	Udaypur Vany Prani Sanctuary	Champaran	Wildlife Sanctuary	8.74	1978

2.2.8 Agriculture

In project districts, agriculture area is cropped twice. Soil texture varies mostly from loam to sandy loam, which are extremely good for crop cultivation. However, despite being endowed with good quality soil and generally adequate rainfall; project area is yet to realize its full potential in agriculture. The crop productivity in the state and project district is one of the lowest in the country due to multiple factors including low quality inputs, low levels of technology uptake, minimal value addition and processing, high susceptibility to weather extremes and lack of quality extension services at grass-root level.

2.2.9 Minerals

There is no major mineral reserve in Araria, Banka, Buxar, Saran, East Champaran, Gopalganj, Katihar, Patna, Purnea and Vaishali districts.

2.2.10 Archaeological Heritage

Bihar state is one of the oldest inhabited places in the world with a history going back 3000 years. The rich culture and heritage of Bihar is evident from the innumerable ancient monuments that are dotted all over the state. Total 30 state protected monuments have been recognized while total 70 monuments of national importance have been recognized by the Archeological Survey of India (ASI) in Bihar and many of them are located in project districts namely, Araria, Banka, Buxar, Saran, East Champaran, Gopalganj, Katihar, Patna, Purnea and Vaishali.

Section III: Policy and Regulatory Framework

This section is provided as a reminder that all activities under the proposed project must be consistent with all applicable laws, regulations, notifications that are relevant in the context of the proposed project interventions. It is the responsibility of the Project Implementing Agency to ensure that proposed activities are consistent with the regulatory/legal framework, whether international, national, state or local govt. Additionally, it is also to be ensured that activities are consistent with World Bank's operational policies and guidelines. This section is not a legal opinion on the applicability of the law but serves as guidance in the application of the law to the current project context.

The legislations of Government of India (GoI) applicable for rural road works regarding environmental aspects and applicable safeguard policies are summarized in the following sections.

i) Environmental Clearance as per EIA Notification 2006 and subsequent amendments

In September 2006, a notification was issued by MoEF&CC, schedule projects requiring Environmental Clearance and process of securing the environmental clearance. Rural Roads are not included in EIA notification. However, roads traversing ecologically sensitive areas such as National Parks, Sanctuaries, Tiger Reserve, and Reserve Forests etc. would require Wildlife and/or forest clearance, as may be applicable

Applicability: As a rule, all sub-projects are exempted from environmental clearance.

ii) Forest Clearance under The Forest (Conservation) Act 1980

The Forest (Conservation) Act 1980, (as amended 1998) pertains to the cases of diversion of forest area and felling of roadside plantation.

Applicability: Restrictions and clearance procedure proposed in the Forest (Conservation) Act applies wholly to the sub-projects requiring diversion of forest areas, even in case the protected/reserve forest area does not have any vegetation cover.

iii) Wildlife Clearance under The Wildlife (Protection) Act, 1972

The Wildlife (Protection) Act, 1972 provides for the protection of wild animals' and birds and for matters connected therewith.

Applicability: Restrictions/protection measures and clearance procedures proposed in the Wildlife (Protection) Act applies to the sub-projects passing through identified/notified wildlife protection areas, including sanctuaries.

iv) Ancient Monuments and Archaeological Sites & Remains Acts, 1958

Provisions of the Act include Conservation of Cultural and Historical remains found in the project area.

Applicability: The provisions of the Act need to be considered during sub-project planning and designing to ensure that any ancient monuments and archeological sites of importance are not affected due to the proposed project road. In addition, all the construction related activities shall necessarily avoid such sites.

v) Solid Waste Management Rules, 2016

The Solid Waste (Management & Handling) Rules, 2016 governs collection, segregation, transportation, and disposal of types of solid wastes, The SWM Rules seeks to minimize the burden of on landfills for the disposal of municipal solid waste by adopting appropriate waste segregation and disposal technologies. Establishing construction camp during construction phase of rural roads will attract the provisions of this rule and warrant proper collection, segregation and disposal of solid wastes.

vi) Right to Information (RTI) Act, 2005

This Act relate to public access to information under the control of public authorities. Act has provisions access to information held by or under the control of any public authority and includes: (i) the right to: Inspection of work, documents, records; (ii) taking notes, extracts or certified copies of documents or records; (iii) taking certified samples of material'; (iv) obtaining information in the form of diskettes or in any other electronic mode or through printouts where such information is stored in a computer or in any other device.

Key Statutory Clearance Requirement – Construction Stage

During the construction stage of MMGSY, some of the key statutory requirements that need to be obtained by the Contractor as part of mobilization (pre-construction) have been listed in the table given

Table-5: Key Statutory Clearances to be obtained by the Contractor

S. No.	Clearance Required for	Statute under which Clearance is required	Statutory Authority
1.	Consent to Establish and Consent to Operate for Hot mix plant, Crusher and Batch Mix Plant	Air (Prevention and Control of Pollution) Act, 1981 and Noise Pollution (Regulation and Control) Rules, 2000	Bihar State Pollution Control Board
2.	Quarries (in case of opening of new quarries)	EIA notification 2006 under Environment Protection Act, 1986	District Level Environmental Impact Assessment Authority
3.	Permission for Sand Mining from River Bed and Borrowing of Earth	EIA notification 2006 under Environment Protection Act, 1986	District Level Environmental Impact Assessment Authority
4.	Forest Clearance /Tree Cutting Permission (if required)	Forest Conservation Act, 1980	Forest Department / MoEF&CC
5.	Wildlife Clearance (if required)	The Wildlife (Protection) Act, 1972	Hon'ble Supreme Court /MoEF&CC

Other Applicable Law

Environmental issues during rural road construction stage generally involve equity, safety and public health issues. The road construction agencies require complying with laws of the land, which include *inter alia*, the following;

Minimum Wages Act, Bihar: The employer is supposed to pay not less than the Minimum Wages fixed by Labour Resource Department Government of Bihar as per provisions of the Act;

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;

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 labour is prohibited in Building and Construction Industry.

Applicable World Bank Safeguard Policies

The World Bank's safeguard policies applicable to the rural roads under MMGSY,

are detailed below:

Table 6: Applicable World Bank Environmental Safeguard Policies

S. No	World Bank Policy	Applicability due to (if)	How Project Address Policy Requirements?
1.	Environmental Assessment OP 4.01	Project is likely to have impacts on environmental components such as on ambient air quality water bodies, existing slopes in on embankment, trees along the road, etc.	Preparation and application of environmental Codes of Practice for addressing environmental issues.
2.	Natural Habitats OP 4.04	Some Rural roads are likely to be in/close to sensitive natural habitats.	Avoidance measures, including non-inclusion of such sub- projects in the project.
3.	Forest OP 4.36	Some sub-projects are likely to be in/close to forest areas and may need forest land diversion	Preparation of a management plan to address impacts, if any and avoidance/minimization of construction and allied activities in forest areas.
4.	Cultural Properties OP 4.11	The projects entail risk/ damage to cultural properties and have likelihood of chance-finds during construction phase.	Provisions made for relocation of cultural properties and protection of the same through design modifications and other measures.

Apart from compliance to the above policies, the project will comply with the Bank Procedure, BP17.50. Disclosure shall be carried out at implementation and post implementation stages. The core network has been finalised through proper consultation with local community, respective Public representatives and has been approved by the District Steering committee and the State Cabinet.

Environmental Assessment (OP 4.01)

Environmental Assessment is used in the World Bank to identify, avoid, and mitigate the potential negative environmental impacts associated with Bank's lending operations early-on in the project cycle. The policy states that Environment Assessment (EA) and mitigation plans are required for all projects having significant adverse environmental impacts or involuntary resettlement. Assessment should include analysis of alternative designs and sites, or consideration of "no option" and require public participation and information disclosure before the Bank approves the project.

In World Bank operations, the purpose of Environmental Assessment is to improve

decision making, to ensure that project options under consideration are sound and sustainable, and that potentially affected people have been properly consulted and their concerns addressed.

The World Bank's environmental assessment policy and recommended processing are described in Operational Policy (OP)/Bank Procedure (BP) 4.01: Environmental Assessment. Environmental assessment in MMGSY has been done and no significant environmental impact has been envisaged.

Natural Habitat (OP 4.04)

The policy implementation ensures that Bank-supported development projects give proper consideration to the conservation of natural habitats, in order to safeguard their unique biodiversity and ensure the sustainability of the environmental services and products which natural habitats provide to human society.

This policy is applicable when a project (including any subproject under a sector investment or financial intermediary loan) with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project).

Forest Policy (OP 4.36)

The implementation of the policy ensures that envisaged forest sector activities and other Bank sponsored interventions which have the potential to impact significantly upon forested areas:

Do not encroach upon significant natural forest areas that serve important social, environmental or local economic purposes.

Do not compromise the rights of local communities to continue their traditional use of forests in a sustainable fashion.

Do not finance commercial logging operations, in the case of primary tropical moist forest, nor any purchase of equipment for this purpose.

Cultural Property (OP 4.11)

The World Bank Policy OP/BP 4.11 defines physical cultural resources as movable or immovable objects, sites, structures, groups of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community.

The Bank assists countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it finances. The impacts on physical cultural resources resulting from project activities, including mitigating measures, may not contravene either the borrower's national legislation, or its obligations under relevant international environmental treaties and agreements.

The borrower addresses impacts on physical cultural resources in projects proposed for Bank financing, as an integral part of the environmental assessment (EA) process.

Applicability of Regulations/Policies

The applicability of any of the national/state level regulation and World Bank Safeguard policy needs to be ascertained separately for each sub-project/road considered under MMGSY as each law/rule/regulation has its own legal implication and process for compliance. The regulatory framework as described in this EMF serves as a guiding document and a quick point of reference on the applicable regulatory framework.

Each of the proposed candidate roads identified till date for inclusion in the project has already been screened from this perspective. The precise applicability of the regulations will ultimately depend on the **location, proposed engineering intervention and detailed design of the sub-project** and this will be determined during the detailed (sub-project specific) environmental assessment exercise.

Should there be any changes in the provisions in the various acts rules or notifications enacted by the state Government during the course of implementation of the project, then compliance to the amended rules and regulations as applicable on the sub-projects will become mandatory.

Section IV: Environmental Issues and Management Measures

The MMMGSY will contribute to positive socio-economic growth both locally and at the regional level by removing barriers to rural connectivity in the project districts. Local farmers and inhabitants in the area of influence of the rural roads as well as the road users are expected to be direct beneficiaries of the MMGSY. These people will have improved access to higher service level of roads/highways and transport services.

Benefit will also accrue from the savings in travel time and transportation costs. Other expected positive outcomes of the MMGSY include improved access to a larger number of socio-economic opportunities, better health services, facilities and higher levels of education and improved road safety. While socio-economic benefits are likely to accrue due to the rural road works, some adverse cumulative impacts on natural, physical and social environment are also likely to occur during design, construction and operation phases of the project.

4.1 Screening of Sub-projects

A screening and review process for identification of sensitive sub-projects with respect to environmental issues have been worked out. The screening exercise for the second phase shall be carried out by the PIUs prior to initiation of the DPR activities. The screening exercise shall be a useful tool to identify the environmental issues, and thereby integrate them into the project preparation, and not as an exclusion criterion for avoiding environmental impacts. The screening criteria include factors/aspects such as:

- Sensitive areas, natural habitats, protected areas,
- Felling of trees for road construction,
- Clearance of vegetative cover,
- Loss of productive agricultural land,
- Cross drainage
- Habitation along the rural roads
- Cuts across natural streams or surface water bodies,
- Vulnerability to natural hazards, flood, and
- Environmental features as low lying area, water submerge area, etc.

The screening shall enable categorization of sub-projects based on their environmental sensitivity as follows:

- (i) Sub-projects, wherein no significant adverse environmental impacts are expected:

- The environmental impacts will be of the type normally associated with standard rural road construction.
- The measures suggested in the ECoP shall be adequate to address the general environmental issues likely in these sub-projects.

(ii) Sub-projects, wherein there is a potential for significant adverse environmental impacts:

There is no adverse impacts which will require specific interventions such as roads passing through forests, sanctuaries and thereby requiring additional environmental analysis. In such cases:

- Sub-projects traversing through sensitive natural habitats will be identified and assessed in terms of their impacts. Sub-project/s where adverse impacts are anticipated, will not be included under the project
- If the sub-project assessment in cases located close to sensitive habitats reveals that impacts can be avoided /mitigated, a management plan will be prepared in line with ECoP 19.
- Vulnerability to natural hazards will be assessed and relevant ECoPs will be applied.
- In addition to the application of ECoPs, the PIU shall undertake the particular road improvement work in compliance with the statutory/regulatory provisions, as applicable.

4.2 Environmental Issues

The rural road project activities, if not properly managed and mitigated, could have some local level adverse environmental impacts. The rural road works are likely to create some adverse environmental impacts, particularly during the construction stage. While the adverse impacts are likely to be fairly limited in the local context, the exact nature and magnitude of impacts will vary in accordance to the location and type of engineering interventions.

The identification and assessment of anticipated environmental impacts carried out for rural roads has been used as a basis for framing environmental management measures. Inputs from the local community, including the RWD and the line agencies has also been for the said purpose.

The typical likely environmental impacts from the proposed operation would include:

1. Felling of some limited number of roadside trees;
2. Adverse impacts on water resources, including from silt flow during construction of works;
3. Induced environmental impacts due to improper borrowing of earth;
4. Flooding/rain water accumulation in habitation areas

5. Impairment to or worsening of the local/regional drainage;
6. Erosion on embankment for rural road construction;
7. Construction phase impacts, including those related to camp site operation, dust generation, and pollution from plants, machinery, and vehicles and disposal of debris/other construction wastes;
8. Appropriate management of construction materials (such as aggregates, sand, earth, etc);
9. Induced environmental impacts due to non availability of aggregates and transportation of aggregates from long distances.
10. Safety concerns during construction works and due to increased traffic speeds during operation;
11. Improper management and disposal of debris and other wastes arising due to complete removal of old road pavement, dismantling of bridges and other structures; and;
12. The potential for poorly planned or managed development induced by the improved roads.

The provision and maintenance of all-weather access to rural communities undoubtedly creates an easier access to economic opportunities and social services. In this context, “empowering” rural areas through strategic provision of all- weather road access has emerged as one of the key priorities for the Government of Bihar (GoB). However, the cumulative direct, indirect and induced adverse environmental impacts resulting from the development of rural roads network can cause significant damage to environment, if not addressed appropriately.

4.3 Environmental Management Process

The rural road works mostly involve improving existing earthen roads and cart tracks. The environment management process and tools for the project have been designed keeping in mind this varied scope of work for rural roads. Accordingly, to effectively plan, design and integrate environmental dimensions into the over-all project preparation and implementation, an Environment Management Framework (EMF) has been prepared.

The EMF has been prepared to guide the over-all sub-project

Scope of Environmental Codes of Practice

- To form a field guide manual to the planners. Field engineers and contractors to.
- Identify project activities that can have potential environmental impacts and to provide mitigation measures
- Demonstrate road design and construction practices that are cost-effective and address environmental impacts
- Illustrate recommended practices to address the environmental concerns during project planning implementation and operation
- Define role of involvement of the rural communities at different stages of the project. and.
- Achieve MMGSY objectives of rural connectivity through roads planned and constructed to blend with the natural surroundings.

preparation and implementation process and covers aspects such as screening methodology (including on biodiversity/wildlife issues); institutional arrangements to facilitate compliance with the requirements specified in the World Bank Operational Policies and those required under Govt. of India and Government of Bihar regulations. The framework will help in addressing environmental issues and risks in a structured and systematic manner.

The EMF has been informed by: (a) the results of an environment screening exercise; and (b) experiences from the Bank-funded road projects in the state, particularly the completed the on- going under PMGSY.

For effective implementation of the rural road works, the requirements set forth in the EMF and more specifically the ECoPs will be appropriately integrated and cross- referenced in the Detailed Project Reports, contract conditions and Bills of Quantities.

In view of non availability aggregate in Bihar state or few hundreds kilometers lead for transportation of aggregate for rural roads construction, the project will explore the opportunities for new technologies/ materials for cost-effective and durable rural roads construction. The project will support innovative technologies demonstrating the use of environment friendly design and techniques.

Section V: Community Planning and Participation

Effective participatory mechanism for community level local government in decision-making at implementation and post implementation stage of the project has been evolved. Involvement of communities at implementation and post implementation stage of project shall be taken up as specified in this framework. The Participation Framework envisages involvement of the local community, PAPs/PAFs & PIU during project implementation and monitoring stages. The PIU will be responsible for ensuring participation of the local community at the sub project levels. The involvement of the community is not only restricted to the interactions with the villagers but also disclosing the relevant information pertaining to the project and tasks encompassed in the project. The core network has been finalised through proper consultation with local Community and respective Public representatives. It has been reviewed and approved by the District Steering Committee, and the State Cabinet.

The project encourages community involvement to make them accountable in the success of the entire project. The community will participate directly or in coordination with PIUs :

- Identification and finalisation of alignment
- Facilitate identification of issues and concerns
- Making land available either through donation or acquisition for the project if required (in DPR preparation stage which is over)
- Providing labor, water and camp site for construction activities
- Redressing grievances at individual/community level
- Providing assistance to the contractors and PIU staffs to ensure speedy implementation
- Following the instructions given in signages
- Avoiding the personal interest during construction and post construction stage



5.1. Stakeholder Consultations and Disclosure

Consultation with officials of local government, local community, and other representatives of the affected population is essential to gaining a comprehensive understanding of the types and degrees of adverse project effects.

For projects that have environmental and social impacts, consultation will not be a single conversation but a series of opportunities to create understanding about the project among those it will likely affect or interest, and to learn how these external parties view the project and its attendant risks, impacts, opportunities, and mitigation measures. Listening to community concerns and feedback can be a valuable source of information that can improve project design and outcomes and help an organisation to identify and control external risks. It can also form the basis for future collaboration and partnerships.

Community consultations' and participation has been an integral part in MMGSY This will continue till implementation and post implementation stages.

District level Stakeholder's consultation programme:

RWD organised district level stakeholder's consultation programme at 3 districts namely East Champaran, Purnia and Buxar. Draft ESMF prepared for MMGSY shared with the stakeholder's and their valuable feedbacks and concerns has been recorded which has been attached in the Annexure 11. Project will try to incorporate and comply valuable suggestions, Feedbacks and concerns received from stakeholder's consultation programmes organised in 3 district.

Disclosure of draft SMF and VF on website

Draft ESMF of MMGSY has been uploaded on the website www.rwdbihnic.org for calling the comments /feedbacks/suggestions from public. Valuable suggestions/feedbacks, which will be in the interest of the project, will be incorporated in the draft. The time for calling the comments /feedbacks/ suggestions will be of 15 days.

State level stakeholder consultation on draft SMF and VF

Final SMF and VF after incorporating suggestions from the state level consultation and comments received from website disclosure, notification through newspapers etc. Shall be re disclosed after 15 days of draft disclosure.

Section VI: Environmental Codes of Practice (ECoP)

The ECoPs have been developed to guide the planning, design, construction and maintenance

stages of MMGSY in terms of avoidance or mitigation of the adverse environmental impacts that may result from the projects. The codes define methods and procedures to be followed by the Executing Agencies, Contractors and other agencies involved in the MMGSY. The scope of the ECoPs is outlined in the Box given here.

The list of ECoPs prepared and their coverage is presented in **Table 3.1**. Checklist for checking the DPR preparation and for identifying issues to be addressed in pre-construction, construction and post-construction stages will be as per the ECoPs. Implementation of environmental measures shall be monitored through the environmental audit procedures provided in ECoPs. This includes format for reporting the addressal of issues in various stages of the project.

Table 7: Environmental Codes of Practice and Their Coverage

ECoPs	Title	Key Issues Addressed
ECoP 1.0	Project Planning & Design	• Incorporation of environmental concerns in project preparation to avoid impacts in construction and operation stages • Avoidance of roads through sensitive areas as reserved forests/sanctuaries/wetlands etc • Compliance with legal requirements • Devising enhancement measures into project design
ECoP 1A	Roads in Flood Prone Areas	• Key provisions to be included in project preparation and design in Flood Prone areas
ECoP 2.0	Site Preparation	• Relocation of utilities, common property resources and cultural properties • Avoidance of affect on roadside vegetation.
ECoP 3.0	Construction Camps	• Avoidance of sensitive areas for location of construction camps • Infrastructure arrangements for workers and construction equipment
ECoP 4.0	Alternate Materials for Construction	• Use of fly ash as per MoEF&CC Notification • Minimizing earth requirement

ECOP 5.0	Borrow Areas	• Avoidance of agriculture lands • Redevelopment of borrow areas
ECOP 6.0	Topsoil Salvage, Storage & Replacement	• Topsoil removal from areas temporarily/permanently used for construction • Storage of topsoil in stockpiles and protection from erosion • Reuse of topsoil at areas to be revegetated and in agriculture lands
ECOP 7.0	Quarry Management	• Redevelopment of quarries in case new quarries are setup for the project
ECOP 8.0	Water for Construction	• Extraction of water in water scarce areas with consent of community • Scheduling construction activities as per water availability
ECOP 9.0	Slope Stability and Erosion control	• Adequacy of drainage for erosion control.
ECOP 10.0	Waste Management	• Reuse of cut material in hill roads • Safe disposal of wastes
ECOP 11.0	Water Bodies	• Avoidance from cutting due to alignment • Protection of embankment slopes in case of alignment on embankments • Rehabilitation of water body
ECOP 12.0	Drainage	• Conduct of hydrological investigations during project preparation • Provision of longitudinal and cross drainage as per requirements • Proper location of drainage outfall
ECOP 13.0	Construction Plants & Equipment Management	• Compliance of construction plants and equipment with emission standards of Central Pollution Control Board • Maintenance of machinery and equipment to avoid pollution
ECOP 14.0	Public and Worker's Health & Safety	• Provision of Personal Protective Equipment to workers • Provision of basic necessities to workers • Public safety while travel along construction sites • Public safety during operation of the road
ECOP 15.0	Cultural Properties	• Avoidance of impacts due to project • Protection of precincts from impacts due to construction • Relocation in case impacts are unavoidable
ECOP 16.0	Tree Plantation	• Avoidance of impact on trees

		• Plantation of trees on roadside
ECoP 17.0	Managing Induced Development	• Restricting ribbon development at junctions and bus stops.
ECoP 18.0	Environmental Audit	• Monitoring of environmental and social parameters during project planning, construction and implementation
ECoP 20.0	Consultation Framework	• Aspects for consultation • Stage wise consultations • Consultation schedule and responsibilities
ECoP 21.0	Maintenance	• Aspects maintenance under various climatic conditions.

Section VII : Institutional Arrangements

7.1 Institutional Structure

Mukhya Mantri Gram Sampark Yojana (MMGSY) is a state program implemented by Rural Works Department, Govt. of Bihar through Bihar Rural Road Development Agency (BRRDA). The key involving institutions are: (1) Bihar Rural Road Development Agency (BRRDA) at State level (2) Project Implementation Units (PIU) at District level.

Project Implementation Unit (PIU), at the district levels, will execute the project at the local level. All these institutions are responsible for implementing the provisions of the SMF, VF, ECoPs, and ESMF along with the other project components, under the overall coordination and oversight of the BRRDA. BRRDA will have a nodal officer (Environmental cum Social) to oversee and ensure the implementation of the social and environmental safeguards. All PIU's will have nodal officer (Environmental cum Social).

To facilitate implementation of the environmental and social safeguards at state level, BRRDA will have a dedicated Nodal officer (Environmental cum Social). BRRDA will recruit these officers either on deputation from other departments or from the market as need be. The key tasks of the Nodal Officer (Environmental cum Social) include, assisting and advising the Project Director at BRRDA and implementing the EMF/ECoPs with the assistance from Nodal Officer, PIU (Environmental cum Social).

The PIU, through the designated AE/JE on environmental safeguards, will implement all the SMF tasks at the field level with the assistance and participation of the Local Community. The PIU will coordinate implementation of project components with the different agencies, such as DRDA, Revenue Department etc, including resettlement issues.

The civil works will be initiated only after the required RoW or land width is free from any encroachments and the PIU has the physical possession of the land. Before the start of civil works the compensation will be disbursed to land owners where land will be acquired through process of lease/acquisition.

7.2 Roles and Responsibilities of Designated Officers and agencies in MMGSY

Environmental and Social (E&S) Nodal Officer at BRRDA

- Coordination of planning & implementation of environmental and social management aspects of MMGSY in the state
- Obtain clearances from the line departments at state level.
- Monitor MMGSY roads for fulfillment of EMF, ECoPs ,SMF &VF provisions in co-ordination with PIU and PMC

- Co-ordinating with agencies for ensuring the implementation of EMF, ECoPs, SMF&VF.
- Report progress, highlighting environmental and social issues not addressed, to provide for course correction in subsequent projects
- Coordinate training with agencies involved at state and PIU level.
- Updating the Project Manager (MMGSY) about the compliance of EMF, ECoPs, SMF &VF in the field.

Environmental and Social (E&S) Nodal Officer at PIU

- Ensure dissemination of information to community/PAP's as proposed in Environmental and Social (E&S) documents.
- Ensure community participation and involvement of district administration, revenue department during preparation of DPR.
- Obtain clearances from the line departments at district level.
- Coordinate between state level agency for finalisation and disbursement of entitlements and enrolment procedures.
- Ensure participation of Community.
- Should work as an effective linkage between community and BRRDA
- Dissemination of project information to local community.
- Ensuring the redressal of grievances
- Responsible for addressal of additional unforeseen impacts during construction and post construction
- Monitoring the works of Contractor during implementation & post implementation stage.
- Ensuring safety of the community through proper consultations
- Uses of IEC materials for information disseminations and consultations
- Organising training programmes on safeguards for the contractors and Communities
- Monitor the MMGSY roads for fulfilment of ESMF issues in coordination with PQM's, PMC and Independent Safeguard Consultants during implementation & post implementation stage.
- Providing support to PQM's, PMC and Independent Safeguard Consultants.
- Update the Executive Engineer and Environment and Social nodal Officer (State) about the compliance of EMF, ECoPs, SMF &VF in the field.
- Disbursing the compensation/financial assistance to PAP's/PAF's.

The roles and responsibilities of Environment & Social Specialists of the PMC will include:

- Proper application of environmental, social and techno-economic screening procedures for the selection of rural road sub projects
- Detailed design is in compliance with agreed technical standards as well as stipulated environmental and social management measures; and
- Compliance of actual works with contract conditions and quality assurance procedures as well as agreed environmental and social management measures
- Sensitizing and capacity building of the PIU officials and community towards implementation of the ESMF provisions.
- Updating the Executive Engineer and Environment, Social Nodal Officer (State) & Project Manager (MMGSY) about the compliance of EMF, ECoPs, SMF &VF in the field.
- Assist in checking and ensuring compliance of subprojects with social safeguards and vulnerability framework through a sample check of DPRs and field visits to on-going contracts.
- Monitor, evaluate and facilitate implementation of community involvement and public disclosure processes.
- Provide guidance and facilitate training on the implementation of the social safeguards frameworks.
- Assist in preparation and submission of appropriate information reports and documents periodically on planning and implementation of EMF, ECoPs, SMF &VF.

Independent Safeguard Consultants

The Independent Safeguard Specialists shall be responsible for ensuring:

- Proper application of environmental, social and techno-economic screening Procedures for the selection of rural roads sub-projects;
- Detailed design is in compliance with agreed technical standards as well as Stipulated environmental and social management measures; and,
- Compliance of actual works with contract conditions and quality assurance Procedures as well as agreed environmental and social management measures, and,
- Sensitizing and capacity building of the PIU officials, the PRI representatives towards implementation of the ESMF provisions
- Updating the Executive Engineer, Project Manager (MMGSY) & E&S Nodal officer (State) about the compliance of EMF, ECoPs, SMF &VF in the field.

Table 8 : Institutional arrangements in MMGSY

Responsibility	Supported by	Tasks
EE/AE/JE PIU E&S Nodal officer (PIU), DPR Consultants	- Local Community - E&S Nodal officer BRRDA / SE (Concerned Work Circle) - Project Manager (MMGSY, BRRDA) - Principal Quality Monitor's (PQM's)	DPR Preparation
E&S Nodal Officer (PIU), EE/AE/JE (PIU)	Local Community	Dissemination/Community Sensitization
EE/AE/JE (PIU), E&S Nodal officer (PIU), DPR Consultants	- Local Community - District LRD - E&S Nodal officer BRRDA	Transect Walk/Finalisation of Alignment
EE/AE/JE (PIU), E&S Nodal officer (PIU), DPR Consultants	- Local Community - LRD	Census (Profiling) of PAPs/PAFs Identification of vulnerable PAPs/PAFs
LOCAL COMMUNITY EE/AE/JE (PIU) E&S Nodal officer (PIU)	- LRD - Local Community	Preparation of Mitigation Measures (Env. & Social)
E&S Nodal officer (BRRDA), E&S Nodal officer (PIU), EE(PIU)	- Project Manager (MMGSY,BRRDA) - SE (Concerned Work Circle)	Necessary Environment clearances at State/District level
AE/JE PIU, E&S Nodal officer (PIU)LRD	- Local Community - Project Manager (MMGSY,BRRDA) - E&S Nodal officer BRRDA	Follow up action on Mitigation Measures (Env. & Social) Legal Process on Transfer of Land Disbursal of Compensation Relocation of land and other structures Registration of Complaints. if any

E&S Nodal officer (PIU), EE/AE/JE (PIU)	• Local Community • EE/AE/JE (PIU) • LRD • E&S Nodal officer BRRDA • Public Grievance Redressal Officer (RWD) • PMC • Independent Safeguard Consultants	Follow up action on Complaints and Grievances on Safeguard issues
Project Manager (MMGSY,BRRDA), EE (PIU), E&S Nodal officer (BRRDA),E&S Nodal officer (PIU)	• The World Bank • PMC	Organising training Programmes at State and District level on Safeguards
Project Manager (MMGSY,BRRDA), E&S Nodal officer BRRDA & PIU, EE/AE/JE (PIU)	• Local Community • PMC • Principal Quality Monitor's (PQM'S) • Independent Safeguard Consultants	Monitoring of the project (Ensuring the implementation of Safeguard compliances during construction & post construction)
EE (PIU), E&S Nodal officer (PIU)	• Local Community • LRD • PMC • Independent Safeguard Consultants	Feedback on the progress of the project especially on Safeguard compliances

Section VIII : Grievance Redressal Mechanism



8.1 Grievance Redressal Mechanism at department level

Rural Works Department, Government of Bihar has a full fledged Grievance Redressal cell. The existing mechanism to address the grievances is as follows:

- Department has a toll free number 18003456179. After receiving the grievances on toll free number at BRRDA it is registered and updated on online system.
- After updation it is transferred to Grievance Redressal cell which is based at headquarter (RWD, Bihar)
- Grievance Redressal officer at Grievance Redressal cell then transfers it to the concerned nodal officer or Chief Engineer
- Then concerned Nodal officer/Chief Engineer transfers it to the concerned PIU.
- Concerned PIU after addressing the Grievance submits a compliance report to the concerned Nodal Officer/Chief engineer.

People can directly register their Grievances in written to the Grievance Redressal cell/ Vigilance Officer. Even People can directly present their written grievances to CM at Janta Darbar.

Status

Under the current system 1355 complaints/grievances has been received. All the 1355 complaints/grievances have been forwarded to the concerned officers.

Grievance Redressal Mechanism in MMGSY

Grievances in MMGSY will be dealt at PIU level on initial stage. Any person who has any grievance he/she can directly contact with Executive Engineer of the respective division. On receipt of the complaint EE will direct it to the Nodal officer of Environment and Social who will try to address the Complain locally with the help of respective Mukhiya and Sarpanch. Nodal officer can also seek the help of Public Grievance Redressal Officer. If complain is not resolved locally then it will addressed according to the procedures of Bihar grievance Redressal Act 2015.

8.2 Grievance Redressal Act 2015² (GRA)

Government of Bihar has announced a new Grievance Redressal act 2015. According to this act:

The GOB may notify from time to time, the Public Grievance Redressal Officer, first appellate authority, second appellate authority and revision authority and stipulated time limits.

The state government may notify from time to time, Department wise schemes, programmes and services on which complaint can be filed and also the public authority and department on which level the complaint will be redressed.

Establishment of Information and facilitation center- For the purposes of the efficient and effective Redressal of grievance of the people and to receive complaints under this act, the state government shall establish Information and Facilitation centers.

Procedure

1. On receipt of a complaint under sub section1, the Public Grievance Redressal Officer shall give an opportunity of hearing to the complainant within the stipulated time limit and after hearing the complainant, decide the complaint either by accepting it or by suggesting an alternative benefit or relief available under any other law, policy, service, programme or scheme or by rejecting it for the reasons to be recorded in writing and shall communicate his decision on the complaint to the complainant within the stipulated time.
2. Any person, who has not been given an opportunity of hearing and redressal of the complaint within the stipulated time limit or who is aggrieved by the decision of the Public Grievance Redressal Officer, may file an appeal to the first appellate authority within thirty days from the expiry of the stipulated time limit or from the date of the decision of the Public Grievance Redressal Officer: Provided that the first appellate authority may admit the appeal after the expiry of the period of thirty days but not exceeding forty five days if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.
3. If the Public Grievance Redressal Officer does not comply with the provision of section 5, any person aggrieved by such non-compliance, may submit complaint directly to the first appellate authority which shall be disposed of, in the manner of a first appeal.
4. The first appellate authority may order the Public Grievance Redressal Officer to give an opportunity of hearing and redressal to the complainant within the period specified by it or may reject the appeal.
5. A second appeal against the decision of the first appellate authority may be filed before the second appellate authority within thirty days from the date of the decision

of the first appellate authority: Provided that the second appellate authority may admit the appeal after the expiry of the period of thirty days but not exceeding forty five days, if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

6. An aggrieved person may file an appeal directly to the second appellate authority, if the Public Grievance Redressal Officer does not comply with the order of first appellate authority passed under sub-section (3) or the first appellate authority does not dispose of the appeal within the stipulated time limits and it shall be disposed of in the manner of a second appeal.
7. The second appellate authority may order the Public Grievance Redressal Officer or the first appellate authority to give an opportunity of hearing and redressal to the complainant or dispose of the appeal, as the case may be, within the period specified by it which in any case will not exceed thirty days or may reject the appeal.
8. Along with the order to give an opportunity of hearing and redressal to the complainant, the second appellate authority may impose a penalty on Public Grievance Redressal Officer or any other Public authority or the first appellate authority in accordance with the provisions of section 8.

¹Note: for details kindly see the website -<http://gad.bih.nic.in> / Acts & Rules.asp

Section IX. Monitoring and Reporting Procedures

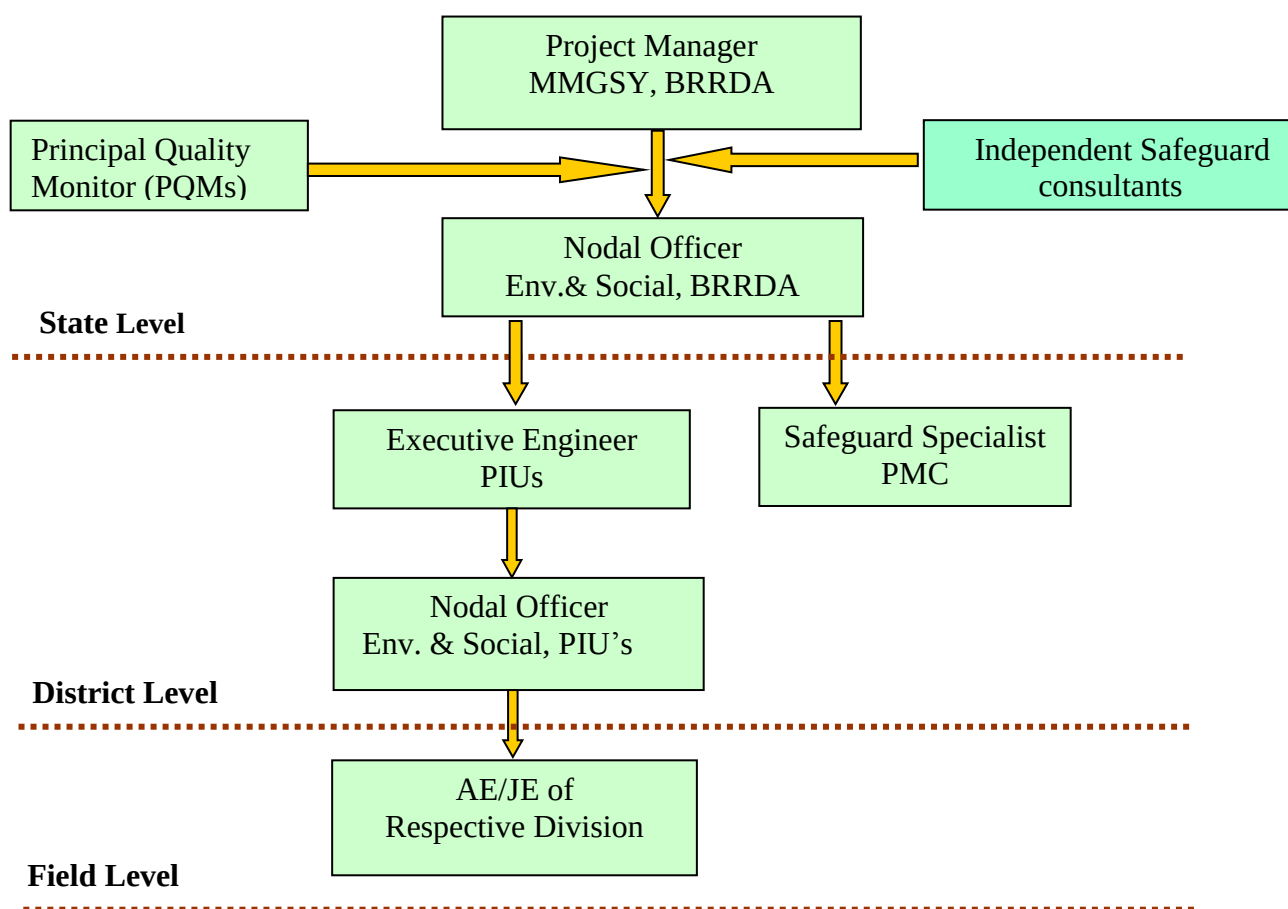
The monitoring of the social component which includes the SMF and the VF will be conducted through: (a) BRRDA (b) PIU (c) Project management Consultants (d) Independent Safeguard Consultants (e) Principal Quality Monitor's (PQM's). The monitoring reports from these actions will be submitted to the Bank periodically. Among various others, the minimum information those will be reported are on the following indicators.

1. Number of Consultations organised and number of participants participated.
2. Number of land taken on lease/acquired/on donation as per DPR
3. Types of environmental clearances required and received
4. Number of trees fell during construction
5. Appropriate management of construction materials in roads
6. Methodology and place where construction wastes and debris are disposed
7. Number of habitations where there is an issue of flooding/rain water accumulation found.
8. Roads where safety equipments not provided to labours.
9. Number of roads where induced environmental impacts due to improper borrowing earth found.
10. Number of water bodies affected and the mitigatory measures adopted
11. Issues related to wages .
12. Land identified for the setting up of construction camps and keeping of plants and machineries

PIU will undertake the evaluations of the social dimensions to assess the implementation and effectiveness of the EMF and its impact on the village community. The evaluation will be undertaken twice during the life cycle of the project – midterm and at the end.

9.1 Citizen Monitoring: RWD will develop a mobile based application implemented on which people can send their feedbacks /suggestions /comments about their roads constructed under MMGSY schemes. Later on other Citizen Feedback mechanism required at project level will be developed. Env. & Social Nodal officer at PIU will disseminate the progress of the project to the local community as and when required. People can also contact Env. & Social Nodal officer at PIU for their relevant queries (queries related to environment and social) related to their roads.

Figure 2: Monitoring arrangements in MMGSY



Monitoring Arrangement at State and PIU level for Safeguards

Section X. Training Plan

Implementation staff of MMGSY would need to be oriented towards environmental management. A two tier-training plan is prepared to orient the staff at district level (PIU) and field level towards implementation of ESMF. The training plan with the mode of training and target groups along with the duration is presented in the **Table 5.1**.

Table 9: Training Plan

(Common Program for effective implementation of ESMF and ECoPs)

Module	Description	Participants	Form of Training	Level	Duration
Module 1					
Session I	Basic Concept of EMF Screening of Corridors Environmental & Social Concerns in MMGSY	Chief Executive Officer BRRDA, Executive Engineers of PIUs, Nodal Officer of Environment and Social, Designated Environmental and Social Officers from PIUs, Consultants, Revenue Department, Forest Department, Environmental and Social Specialist of SC	Workshop	District	One Session
Module II					
Session I	Basic Concept of EMF Transect Walk ECoP Provisions and Applicability Preparation of BoQ Integrating EMF provisions into DPR Role and Responsibility Monitoring Mechanism	Executive Engineers and AEs/JEs of PIU, Nodal Officer of Environment and Social, Designated Environmental and Social Officers from PIU, Environmental and Social Specialists of SC	Lecture	District	One Session
Module III					
Session I	Identification of Environmental Concerns during construction stage ECoP provisions and	Executive Engineers and AEs/JEs of PIU, Designated Environmental and	Field based lectures	District	One Session

	its Implementation Reporting formats	Social Officers from PIUs, Environmental and Social Specialist of SC, Contractors' Representatives			
Session III	Institutional Setup Roles and Responsibilities of officials/ contractors/ consultants/ Technical Examiner towards protection of environment Monitoring mechanisms Reporting requirements with targets	Executive Engineers and AEs/JEs of PIU, Designated Environmental and Social Officers from PIU, Environmental and Social Specialist of SC, Contractors' Representatives	Interactive Session	District	

Section XI: Guide to Application of ECoPs

11.1 Project Cycle: Sub-Project Details

The entire project cycle or process is divided into five phases of work:

The core network has been finalised through proper consultation with local community, respective Public representatives and has been approved by the District Steering Committee and the State Cabinet.

Project Planning and Design: The planning and design phases of project involve:

- First task involves, finalization of alignment, inventorization of social including sites for land accretion and environmental features, considering aspects of road safety and scope for future growth, consultation with the land owners/community and identification of likely PAPs through community planning during transect walk.
- Second task involves design of road geometrics and enhancement measures based on the outcome of the first task and preparation of Detailed Project Report (DPR)

Site Preparation process involves mobilization of contractor that includes setting up of site, signing of MOU, site clearance, etc. During this stage, the contractor will organize consultations with the community to discuss temporary impacts during construction including safety and the work schedule. It is only after the physical possession of land and MOUs for use of local resources that the mobilization of machinery will start on site.

Construction Stage: The stage involves where actual construction of MMGSY Road begins. The stage includes earthwork, sub-base and base course, construction of culverts and drains, etc. with main focus on public and worker safety. Monitoring plays the important role in this stage to ensure all measures are followed as per the contract document, which includes DPR.

Post Construction Stage: The post construction scenario tasks include Reclamation of temporary used land for disposal of waste, storage of material, etc.; borrow areas, water bodies; etc. The reclamation shall be considered complete only after the contractor secures a certificate of completion from the land owner. The other tasks that need to be undertaken by the community include managing the induced development and tree plantation.

The detailed MMGSY process outline and corresponding EMF provisions and application of ECOP are presented in **Figure 6.1** and **Table 6.2** respectively. The responsible agency/official involved, time frame, etc. is presented in **Table 6.1**

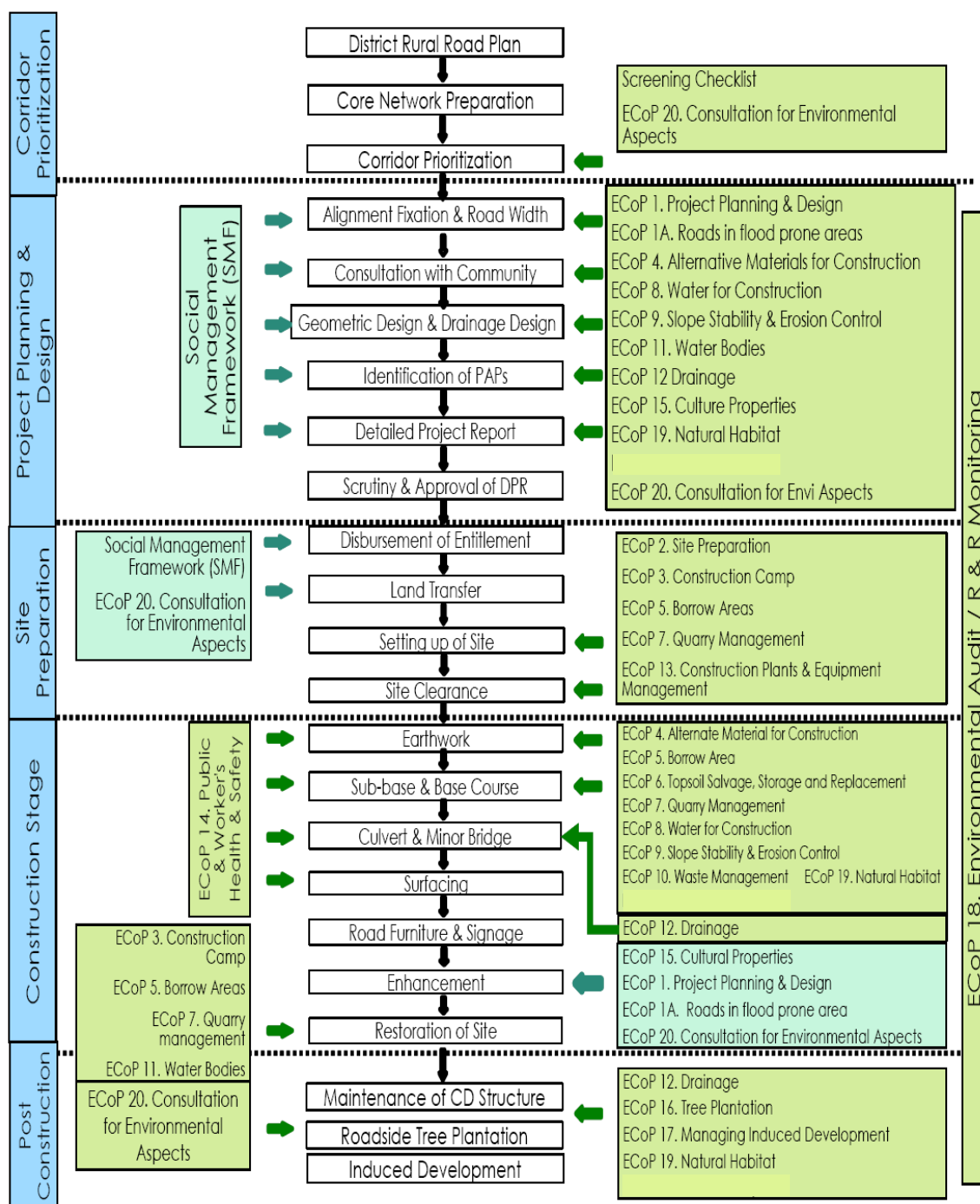


Figure 3: Detailed MMGSY Process Outline and Corresponding EMF Provisions and Application of ECOP

Annexure-1: ESMF Tasks and Implementing Agency

Project Stage	Task	Target Group	Responsibility
1. Project Planning and Design Stage			
i. DPR Preparation Stage	Dissemination of Project Information	Community	PIU (E&S Nodal Officer/EE/AE/JE), Local community
	Sensitization of Community	Community	PIU (E&S Nodal Officer/EE/AE/JE), Local community
	Finalization of Alignment (Transect Walk, Alignment Shifts incorporating community suggestions)	Community	PIU (E&S Nodal Officer/EE/AE/JE), Local community, Revenue Dept and others
	First month of DPR Preparation Geometric Design & Drainage Design	Community	PIU (E&S Nodal Officer/EE/AE/JE)
	Marking of Alignment	-	PIU (E&S Nodal Officer/EE/AE/JE), Local community, Revenue Dept and others
	Scrutiny and Approval of DPR	-	SQM/PQM (Scrutiny), SE/CE (Approval)
	DPR Auditing	-	PIU/TE/SC
3 Implementation Stage			
i). Site Preparation Stage	Land Transfer on lease/through acquisition/on donation	PAPs	PIU (E&S Nodal Officer/EE/AE/JE), Local community, Revenue Dept, other line Departments
	Relocation/shifting of common property resources	Community/P APs	PIU (E&S Nodal Officer/EE/AE/JE), Local community
ii). Construction Stage	Temporary impacts during construction	Community	Local community, Contractor, PMC
	Health Impacts including HIV/AIDS	Community	Local community, Contractor, PHC, DACS
	Setting up of Site	-	PIU (E&S Nodal Officer/EE/AE/JE), Contractor
	Redressal of Grievances	Community/P APs	PIU (E&S Nodal Officer/EE/AE/JE), Local community, Revenue Dept, PGRO (RWD)
	Unforeseen Impacts	Community	PIU (E&S Nodal Officer/EE/AE/JE), Local community, Revenue Dept, Contractor, PMC
	MoUs for use of local resources	Community	PIU (E&S Nodal Officer/EE/AE/JE), Contractor, Local community, PMC
	Monitoring of Construction Work	-	PIU (E&S Nodal Officer/EE/AE/JE), BRRDA, PMC, PQM, ISC

iii). Post construction Stage	Reclamation of Temporary used land borrow areas, water body and cultural property	Community	Contractor, PIU (E&S Nodal Officer/EE/AE/JE), PMC, PQM, ISC
	Tree Plantation	Community	PIU (E&S Nodal Officer/EE/AE/JE), Local community , PMC
	Managing Induced development	Community	PIU (E&S Nodal Officer/EE/AE/JE), Local community , PMC
	Monitoring Progress		PIU (E&S Nodal Officer/EE/AE/JE),BRRDA, PMC, PQM, ISC
	Project evaluation	Community/P APs	PIU (E&S Nodal Officer/EE/AE/JE),BRRDA, PMC, PQM, ISC and Local community

PIU: Project Implementation Unit; RD: Revenue Department; DRDA: District Rural Development Agency; DoRD: Department of Rural Development; DACS: District AIDS Control Society; PHC: Primary Health Centre; PMC : Project Management Consultants,PQM: Principal Quality Monitor, EE : Executive Engineer, SE : Superintending Engineer, CE: Chief Engineer, ISC: Independent Safe Guard Consultants. PGRO : Public Grievance Redressal Officer.

Annexure 2: Stakeholders Consultation at District level

District level Stakeholder's consultation workshop was organised at three District and they are Motihari, Buxar and Purnea.

Some important suggestions/feedbacks and comments which are important for the project has been discussed below:

Suggestions/feedbacks/comments	Place of Stakeholder's consultancy	Steps to be taken
Land should be acquired before construction	Motihari & Buxar	Roads in MMGSY will be constructed on existing revenue tracks so land acquisition may not be required but if required it will be minimal. In that situation land will be acquired before construction through donation / acquisition /or on lease.
Drains should be constructed in those areas where there is an issue of water logging	Motihari & Buxar	There is a provision of construction of drainage in rural roads but it depends upon the availability of land.
There should be equal participation of vulnerable population in the project.	Motihari & Buxar	Project will try to ensure the active participation of vulnerable population and for that Vulnerability framework has been prepared.
Suggestions from all the three layers of Panchayat should be taken into consideration during construction of roads	Motihari & Buxar	During transect alignment is finalised by consulting the local community, Vulnerable population and local population.
During construction of road only approved minerals, stone aggregate, sand and soil should be used.	Purnia	Materials which will be used in the construction of roads in MMGSY will be according to the IRC specifications
During the preparation of DPR mode of transports that ply on the roads should be analysed and it should be informed to the concerned Transport Officer.	Purnia	During DPR preparation it is kept into consideration and according to that material specification is prepared.

This programme should be advertised on mass level.	Buxar	Respective PIU's will organise consultations programmes and campaigns in their respective divisions in which they will share the progress of the roads.
Consultation workshops should be organised on regular interval of time	Buxar	Regular Stakeholder's consultations and public consultations will be organised at PIU and state level.
Labours engaged in MNREGA scheme with proper documents should be engaged in this project	Buxar	MMGSY project will require skilled labours mostly so it is not possible to engage them in this project. However if Contractor feels that they can be engaged then it will be his discretion but he has to discuss it with respective PIU.

Photographs of Stakeholder's Consultation at District level

Motihari



Purnea



Buxar



आज दिनांक 11.08.2016 को डा0 राधाकृष्णन भवन मोतिहारी में मुख्यमंत्री ग्राम सम्पर्क योजना (विश्व बैंक सम्पोषित) द्वारा पर्यावरण एवं सामाजिक प्रबंधन पर आयोजित एक दिवसीय कार्यशाला की कार्यवाही :-

- (1) सर्वप्रथम कार्यपालक अभियंता, ग्रामीण कार्य विभाग, कार्य प्रमंडल मोतिहारी द्वारा कार्यशाला में उपस्थित जिला परिषद अध्यक्ष, जिला परिषद उपाध्यक्ष, Additional Collector मोतिहारी तथा अधीक्षण अभियंता, ग्रामीण कार्य विभाग, कार्य अंचल मोतिहारी को पुष्प गुच्छ दे कर स्वागत किया गया।
- (2) ब्रांडा से आये सहायक अभियंता श्री राजेश कुमार द्वारा मुख्यमंत्री ग्राम सम्पर्क योजना (विश्व बैंक सम्पोषित) में पर्यावरण एवं सामाजिक प्रबंधन पर संबंधित विषयों पर संक्षिप्त परिचय दिया गया, तथा प्रोजेक्टर के माध्यम से पर्यावरण एवं सामाजिक प्रबंधन पर विस्तृत रूप से Power Point Presentation दिया गया।
- (3) उपस्थित लोगों से पर्यावरण एवं सामाजिक प्रबंधन पर सुझाव/प्रश्न-आमंत्रित किये गये। जिला परिषद अध्यक्ष द्वारा अपना विस्तृत सुझाव निम्न प्रकार से दिया गया :-
 - (A) सड़क बनाने से पूर्व जमीन अधिग्रहण की प्रक्रिया पूर्ण कर ली जानी चाहिये।
 - (B) जल जमाव वाले क्षेत्रों में सड़क के साथ - साथ नाला का भी निर्माण कार्य कराया जाना चाहिये।
 - (C) कार्यक्रम में महिलाओं तथा दलित, महादलित को भी हिस्सा बनाना चाहिये।
 - (D) दलित, महादलित, पिछड़ा अति पिछड़ा बहुल्य इलाके में सड़क निर्माण को प्राथमिकता दी जानी चाहिये।
 - (E) सड़क निर्माण हेतु तीनों स्तरों के पंचायत प्रतिनिधियों की राय लिया जाना चाहिये।
 - (F) गुणवत्ता पूर्ण कार्य के लिये पंचायत संस्थाओं से अनापत्ति प्रमाण - पत्र प्राप्त किया जाना चाहिये।
- (4) (A) श्री सजावल राम, पूर्व मुखिया द्वारा दलित महादलित के पैरे बसावट जहाँ सरकारी जमीन उपलब्ध नहीं है वहाँ प्राथमिकता के आधार पर जमीन अधिग्रहण कर सड़क का निर्माण कराने का सुझाव दिया गया।
 - (B) सड़क के किनारे नाला बनाते समय नाले की पानी को नीजी जमीन में न गिराकर जमीन का अधिग्रहण कर वहाँ गढ़ा बनाकर उसमें पानी गिराये जाने का सुझाव दिया गया।

अंत में अधीक्षण अभियंता ग्रामीण कार्य विभाग, कार्य अंचल मोतिहारी द्वारा धन्यवाद ज्ञापन के साथ कार्यशाला की कार्यवाही समाप्त की गई।

- (5) उपस्थिति:- पंजी के अनुसार (संलग्न)

19.8

कार्यपालक अभियंता,
सह

सचिव कार्यशाला (विश्व बैंक सम्पोषित)
ग्रामीण कार्य विभाग,
कार्य प्रमंडल मोतिहारी।

बिहार सरकार, ग्रामीण कार्य विभाग द्वारा
मुख्यमंत्री ग्राम संपर्क योजना (विश्व बैंक) अन्तर्गत
ENVIRONMENTAL SOCIAL MANAGEMENT FRAMEWORK
पर आयोजित कार्यशाला

दिनांक 11.08.2016

क्रमांक	पदाधिकारी का नाम	पदनाम	कार्यालय का नाम	मोबाईल नं०	ई-मेल आईडी	हस्ताक्षर
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2.	HARENDRA SAH	A.E.	R.W.D. MOTIHARI	8986915238		बिहार 11/8/16
3.	HANSARUL HARBUE	J.E.	R.W.D. MOTIHARI	8986915361		बिहार 11/8/16
4.	Khwar Singh Ram	J.E.	R.W.D. Chakia	8986915489		बिहार 11/8/16
5.	Atsuniswar	J.E.	R.W.D. MOTIHARI	8986915277		बिहार 11/8/16
6.	makshar Sharma	J.E.	R.W.D. MOTIHARI	8986916112		बिहार 11/8/16
7.	Nand Kishor Sharma	J.E.	R.W.D. Chakia	8986915739		Nand Kishor 11/8/16
8.	Abhinav Tamr	J.E.	R.W.D. MOTIHARI	8986916271		Abhinav Tamr 11/8/16
9.	Ramesh Kumar Singh	J.E.	R.W.D. Chakia	8986916200		बिहार 11/8/16
10.	Gyanendra Singh	D.W.D.	R.W.D. Office	9801903188		बिहार 11/8/16
11.	Chaturgham K. Singh	A.E.	R.W.D. Chakia	8986915086		बिहार 11/8/16
12.	Gyanendra Singh	DA(P)	R.W.D. Chakia	750368325		बिहार 11/8/16
13.	Sunil Kumar	A.E.	R.W.D. Sugauli	8986915197		बिहार 11/8/16

1495

बिहार सरकार, ग्रामीण कार्य विभाग द्वारा
मुख्यमंत्री ग्राम संपर्क योजना (विश्व बैंक) अन्तर्गत
ENVIRONMENTAL SOCIAL MANAGEMENT FRAMEWORK
पर आयोजित कार्यशाला

दिनांक 11.08.2016

पृष्ठ संख्या

क्रमांक	पदाधिकारी का नाम	पदनाम	कार्यालय का नाम	मोबाइल नं०	ई-मेल आईडी	हस्ताक्षर
1.	Ajay Kumar	A.E	R.N.D. - ALCAP	8986915809		11/08/16
2.	Neeraj Kumar	AITM	R.W.D. - Raxaul	879702749		Neeraj Kumar
3.	Md. Mustafiz Khan	AITM	R.W.D. - Araonj	787079193		Mustafiz
4.	Md. Jawed Akhtar	AITM	R.W.D. - Motahani	995430253		Md. Jawed Akhtar
5.	Saket Kumar	AAM	R.W.D. - W.K. Division Mohanpur	8578061549	Casakel. neeraj@	Saket Kumar
6.	Dr. Sanku Kumar	A.P.O.	Dr. Sanku Kumar	993465845		11/08/16
7.	Sufi Gulam Mustafa	AITM	R.H.D. - Chakia	9507610419		Sufi Gulam
8.	Vijay Prakash Singh	J.E.	R.W.D. - Araonj	8986916216		11/08/16
9.	Dr. O.N. Singh	D.A.O.	Office of the District Agriculture	9431818740		11/08/16
10.	Deepak Kumar	B.A.E.	-do-	9973637875		11/08/16
11.	Bhaskar Nath Singh	Secretary	-do-			11/08/16

बिहार सरकार, ग्रामीण कार्य विभाग द्वारा
मुख्यमंत्री ग्राम संपर्क योजना (विश्व बैंक) अन्तर्गत
ENVIRONMENTAL SOCIAL MANAGEMENT FRAMEWORK
पर आयोजित कार्यशाला

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क्रमांक	पदाधिकारी का नाम	पदनाम	कार्यालय का नाम	मोबाईल नं०	ई-मेल आईडी	हस्ताक्षर
1	कविश कुमार	सी.ई.	R.W.D. Raxaul	8986916115	—	कविश कुमार 11.8.16
2	Krishna Kumar Gini	ज.ई.	R.W.D. Raxaul	909976015	—	कविश कुमार 11.8.16
3	Kausar Ali	ज.ई.	R.W.D. Patanchayal	8986916460	—	कविश कुमार 11.8.16
4	Sansar Ali	ज.ई.	R.W.D. Patanchayal	9091886187	—	कविश कुमार 11.8.16
5	Bined Kumar Shitla	A.E.	R.W.D. Patanchayal	8986915943	—	कविश कुमार 11.8.16
6	Mithul Kumar	जे	R.W.D. Raxaul	8986916123	—	कविश कुमार 11.8.16
7	Rana Banarjee	A.E.	R.W.D. Raxaul	8986915187	—	कविश कुमार 11.8.16
8	Bened Kumar	E.E.	R.W.D. Raxaul	8986915185	—	कविश कुमार 11.8.16
9	Birish Kumar	B.B.	R.W.D. Raxaul	8986915808	—	कविश कुमार 11.8.16
10	Ajay Kumar	A.E.	R.W.D. Raxaul	8986915809	—	कविश कुमार 11.8.16
11	P.K. Choudhary	DFO	फॉर्म डाटा	8986915123	—	कविश कुमार 11.8.16

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बिहार सरकार, ग्रामीण कार्य विभाग द्वारा
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क्रमांक	पदाधिकारी का नाम	पदनाम	कार्यालय का नाम	मोबाईल नं०	ई-मेल आईडी	हस्ताक्षर
1.	Chandrasekar Narasimhan	Executive Engineer	RWRI, Bihar Patna	8588691 5281		
2.	Krishna Kant Singh	Assistant Engineer	RWRI, Bihar Patna	8982916118		
3.	Ram Sundar Singh	Assistant Engineer	RWRI, Bihar Patna	8986975283		
4.	Bishambhar Das	Junior Engineer	R.W.O Patna	8936915121		
5.	सिद्धांत राय	भूत	कोटा	9631059999		
6.	सुरी प्रभाकर	अधीक्षक	कोटा	9755021183		
7.	प्रमोद प्रसाद	J.E.	Phakur, Bihar R.W.O. Phakur	9973317882		

दिनांक 11.08.2016

आज दिनांक 13.08.2016 को जिला समागार, पूर्णियाँ में मुख्यमंत्री ग्राम संपर्क योजना (विश्व बैंक सम्पोषित) पर्यावरण एवं सामाजिक प्रबंधन पर आयोजित एक दिवसीय कार्यशाला की कार्यवाही :-

- (1) सर्वप्रथम कार्यपालक अभियंता, ग्रामीण कार्य विभाग, कार्य प्रमंडल, पूर्णियाँ द्वारा कार्यशाला में उपस्थित जिला परिषद् अध्यक्ष, उप विकास आयुक्त, पूर्णियाँ तथा अधीक्षण अभियंता, ग्रामीण कार्य विभाग, कार्य अंचल, पूर्णियाँ को पुष्प गुच्छ दे कर स्वागत किया गया ।
- (2) ब्राड से आये सहायक अभियंता श्री राजेश कुमार द्वारा मुख्यमंत्री ग्राम संपर्क योजना (विश्व बैंक सम्पोषित) में पर्यावरण एवं सामाजिक प्रबंधन पर संबंधित विषयों पर संक्षिप्त परिचय दिया गया तथा प्रोजेक्टर के माध्यम से पर्यावरण एवं सामाजिक प्रबंधन पर विस्तृत रूप से Power Point Presentation दिया गया ।
- (3) उपस्थित लोगों से पर्यावरण एवं सामाजिक प्रबंधन पर सुझाव/प्रश्न आमंत्रित किये गये ।
 - (A) जिला परिषद् अध्यक्ष द्वारा मांग की गई कि अबतक छुटे हुए आवादी/टोलों को भी संपर्कता प्रदान किया जाय जिसके जबाब में उन्हें बताया गया कि GTSNY के तहत सभी को भविष्य में संपर्कता प्रदान कर दिए जाने की सरकार की योजना है जिसका सर्वे कार्य पूर्ण किया जा चुका है ।
 - (B) जिला वन पदाधिकारी द्वारा डी0पी0आर0 बनाने के पूर्व Environment Assessment की प्रक्रिया के बारे में जानकारी मांगी गई जिसकी उन्हें जानकारी दे दी गई ।
 - (C) जिला खनन पदाधिकारी द्वारा सुझाव दिया गया कि सड़क निर्माण में सिर्फ स्वीकृत खनिज, गिट्टी, बालू एवं मिट्टी का ही व्यवहार किया जाय । उन्होंने सड़क की गुणवत्ता हेतु उपयुक्त स्तर के खनिज का ही सड़क निर्माण में उपयोग का सुझाव दिया ।
 - (D) जिला परिवहन पदाधिकारी द्वारा सुझाव दिया गया कि सड़कों के डी0पी0आर0 निर्माण करते समय यातायात से संबंधित वाहनों का सुमुचित आकलन कर इसकी सूचना संबंधित परिवहन पदाधिकारी को भी दिया जाना चाहिए ।

अंत में अधीक्षण अभियंता, ग्रामीण कार्य विभाग, कार्य अंचल, पूर्णियाँ द्वारा धन्यवाद ज्ञापन के साथ कार्यशाला की कार्यवाही समाप्त की गई ।

- (4) उपस्थिति :- पंजी के अनुसार (संलग्न)

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कार्यपालक अभियंता
-सह-

सचिव कार्यशाला (विश्व बैंक सम्पोषित)
ग्रामीण कार्य विभाग,
कार्य प्रमंडल, पूर्णियाँ

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बिहार सरकार, ग्रामीण कार्य विभाग द्वारा
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क्रमांक	पदाधिकारी का नाम	पदनाम	कार्यालय का नाम	मोबाइल नं०	ई-मेल आईडी	हस्ताक्षर	दिनांक 13/08/2016
1	D. M. PURNEA	—				<i>[Signature]</i>	
2	K. R. D. B. D.	Chairman	Zila Parishad	9430463564		<i>[Signature]</i>	13/08/16
3	Ram Shankar	DDC		9431818339		<i>[Signature]</i>	
4	Mr. Jyoti Chandra Singh	Chairman	Rural Council Purnea	8986915225			
5	Bijoy Kumar Lal	G. F. R. W. D.	Purnea	8986915376		<i>[Signature]</i>	
6	Panchanan Munda	A. E. R. W. D.	Purnea Division	8986915380		<i>[Signature]</i>	13/8/16
7	Anjali Kumar	AE RWD	Ward Div. Purnea	8986915804		<i>[Signature]</i>	13/8
8	Krishna Mohan Singh	D. T. O. Purnea	D. T. O. Office Purnea	8986966020		<i>[Signature]</i>	13/8/16
9	Matiur Rahman	Mining Officer	Purnea Division	943015886		<i>[Signature]</i>	13.8.16
10	Arun K. Prabhakar	Asst Engg. B. D. RWD, Purnea Div.	AE, RWD, Purnea	8986915150		<i>[Signature]</i>	13/08/16
11	VIVEK SONI	Asst. Engg. Purnea RWD, Purnea Div.	Ward Division Purnea RWD	8986915225		<i>[Signature]</i>	13-08-16

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बिहार सरकार, ग्रामीण कार्य विभाग द्वारा
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क्रमांक	पदाधिकारी का नाम	पदनाम	कार्यालय का नाम	मोबाईल नं०	ई-मेल आईडी	दिनांक 08/08/2016
12	ABUL HUSSAIN	J-E RWD Dharrachow	RWD WORKS DIV Dharrachow	8986915644		हस्ताक्षर
13	MANIK PRASAD SINGH	J-E RWD Buzurgan Em...	R.W.D. Works Div Buzurgan	8986915377		13/08/16
14	PRAMOD KUMAR	J-E RWD DHAMDAR	R.W.D. Works Div Dhamdara	8986915642		13/08/16
15	RAM UDAY KUMAR	J-E	R.W.D. Works Division Purnea	8986915850		13/08/16
16	Umesh prasad singh	J-E RWD Buzurgan	RWD. Work-Div Buzurgan	9430125374		13/08/16
17	Ram Chandra Ram.	J-E RWD Amour	Works Div. RWD Baisi	8521613901		13/08/16
18	Ram Moh. Surman	J-E RWD Buzurgan	R.W.D. Division Buzurgan	8986915850		13/08/16
19	Surendra Kumar	Dairyfield Ghara	Dist. Dairy Development Unit GHG	9431898484		13/08/16
20	Rajesh Verma.	D.W.O	District Welfare Office Pooja	9371664730		13/08/16
21	Poo Deep Kumar	ADSS Purnea	Dist. Social Security Cell Purnea	8544428538	adss.purnea @ yahoo.com	13/08/16
22	RAM EXBAL MAHATO	E.E Flood Control Div. Purnea	Flood Control & Devt Div. Purnea	9431898720	eecl@purnea govt.com	13/08/16

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बिहार सरकार, ग्रामीण कार्य विभाग द्वारा
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क्रमांक	पदाधिकारी का नाम	पदनाम	कार्यालय का नाम	मोबाईल नं०	ई-मेल आईडी	दिनांक 08/08/2016
23.	न. देवेंद्र कुमार	ग्रामीण कार्य विभाग	ग्रामीण कार्य विभाग	9451003045	Adhikari@gsa.gov.in	हस्ताक्षर
24.	Ranjit Kumar Keshar	Computer Operator	RWD, Purnea Div	9708711008	ranjit1202@gmail.com	Ranjit
25.	Amrita Singh	Asst IT Manager	RWD, Purnea Div	9420651444	amritasingh.aks@gmail.com	Amrita
26.	Kishore Kumar Chandra	Asst IT Manager	RWD, Purnea Div	9989614529	kishorekumar203@gmail.com	Kishore
27.	Surendra Prasad Singh	J.E.	R.W.D. Dhamdaha	8969015366		13/08/16
28.	Manoj Kumar Singh	J.E.	RWD (N.G.) Baisi	9693808782		13/08/16
29.	Priya Ranjan Das	A.E.	RWD, Purnea	8986915143	priyankumar@gmail.com	Priya
30.	Rampresh Kumar	J.E.	RWD, Purnea	8986915247		13/08/16
31.	Ram Babu	A.E.	RWD, Purnea	8986915263	rambabu30@gmail.com	Ram
32.	Satish Chandra Royale	A.E.	RWD, Purnea	8986915762		13/08/16
33.	Kalash Das Rana	J.E.	RWD, Purnea	7250660766		13/08/16

बिहार सरकार, ग्रामीण कार्य विभाग द्वारा
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पर आयोजित कार्यशाला

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जिला स्वनन कार्यालय, पूर्णिया
स्वनन पदाधिकारी, माल्डई स्थान

सुझाव:- मुख्यमंत्री दमरु केन्द्र के सड़क
निर्माण में- दिक्क खीकून खाने का
शिरी काछ एवं मिरी का व्यवहार
किया जाये ताकि सड़क का सुगन्ध
बैध हो।

देखा जा रहा है:- शिरी काछ आदि मानक
के अनुसार उपयोग नहीं हो रहा
है। एवं स्वनन स्वामित्व का सुगन्ध
किया जा रहा है जो कि का पंचायत
प्रकार पत्र नहीं हो रहा है।

जानी निम्न स्तर के स्वनन का
सड़क निर्माण में निष्कर्ष ही उपयोग
नहीं होना चाहिए ताकि सड़क
का सुगन्ध बनी रहे सके।

13-08-16
M. O. Muzee.

हडकों के DPR बनाने हेतु आमतौर पर
संबंधित वाहनों का आंकलन का वैधानिक
जांच तथा परीक्षण विभाग एवं संबंधित
परीक्षण पदाधिकारी को रसद की प्रतीति है
जांच रसद हडकों की प्रतीति एवं प्रमाण
वा विनिर्देश किया जा सकेगा

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13/8/16
जिला परीक्षण पदाधिकारी
अजमेर

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आज दिनांक 17.08.2016 को जिला सभागार बक्सर में मुख्यमंत्री ग्राम संपर्क योजना (विश्व बैंक संपोषित) द्वारा पर्यावरण एवं सामाजिक प्रबंधन पर आयोजित एक दिवसीय कार्यशाला की कार्यवाही :-

1. उपस्थिति- संलग्न पंजी के अनुसार
2. सर्वप्रथम कार्यपालक अभियंता, ग्रामीण कार्य विभाग, कार्य प्रमंडल, बक्सर द्वारा कार्यशाला में उपस्थित जिला पदाधिकारी महोदय श्री रमण कुमार, उप विकास आयुक्त, श्री मोबिन अली अंसारी, अधीक्षण अभियंता, ग्रामीण कार्य विभाग, कार्य अंचल, आरा, श्री अशोक कुमार मिश्रा को पुष्प गुच्छ देकर स्वागत किया गया।
3. ब्राडा से आये सहायक अभियंता-सह-ESMF नोडल पदाधिकारी, श्री राजेश कुमार द्वारा मुख्यमंत्री ग्राम संपर्क योजना (विश्व बैंक संपोषित) में पर्यावरण एवं सामाजिक प्रबंधन पर प्रोजेक्टर के माध्यम से विस्तृत रूप से Power Point Presentation दिया गया एवं इसके अवयवों का वर्णन किया गया।
4. उपस्थित लोगों से पर्यावरण एवं सामाजिक प्रबंधन पर सुझाव/प्रश्न आमंत्रित किये गये।

जिला पदाधिकारी महोदय द्वारा पूछा गया कि ग्रामीण कार्य विभाग का प्रशासन से क्या अपेक्षा है, इस पर विस्तार से चर्चा की गयी एवं प्रशासन द्वारा भविष्य में सभी प्रकार का सहयोग प्रदान करने का आश्वासन दिया गया।

उप विकास आयुक्त, बक्सर द्वारा यह सुझाव दिया गया कि मनरेगा राजदरों को इस कार्य में शामिल किया जाए एवं उनका Documentations भी किया जाय।

5. कार्यशाला में उपस्थित अन्य अधिकारियों द्वारा सम्मिलित रूप से कई बहुमूल्य सुझाव दिया गया है। जिसमें मुख्य है :-

- I. सड़क निर्माण हेतु तीनों स्तरों के पंचायत प्रतिनिधियों की राय लिया जाना चाहिए।
- II. जल जमाव वाले क्षेत्रों में सड़क के साथ-साथ नाला का भी निर्माण होना चाहिए।
- III. कार्य में महिलाओं तथा दलित, महादलित को भी हिस्सा बनाना चाहिए।
- IV. सड़क निर्माण से पूर्व जमीन अधिग्रहण की प्रक्रिया पूरा किया जाना चाहिए।
- V. इस कार्यक्रम का व्यापक प्रचार-प्रसार होना चाहिए।
- VI. भविष्य में ऐसी कार्यशाला का पुनरावृत्ति लेनी चाहिए जिसमें पंचायत जन प्रतिनिधियों को भी शामिल किया जाना चाहिए।

अंत में अधीक्षण अभियंता, ग्रामीण कार्य विभाग, कार्य अंचल, आरा द्वारा धन्यवाद ज्ञापन के साथ कार्यशाला की कार्यवाही समाप्त की गई।

19.8

कार्यपालक अभियंता

सह

सचिव कार्यशाला (विश्व बैंक संपोषित)
ग्रामीण कार्य विभाग
कार्य प्रमंडल, बक्सर

मुख्यमंत्री ग्राम संपर्क योजना (विश्व
बैंक संचालित) अंग्रेजी ESMF
के संबंध में कार्यवाही के उपर-म
पैजी जिला पदाधिकारी, वस्त्र 17.8.84
अ. ८४६६ जिला परिषद -

उप विकास आयुक्त - 14.8.11
वन समंडल पदाधिकारी -

जिला नू राज्य पदाधिकारी -

जिला सचिव-राज्य पदाधिकारी - 17/8

जिला प्रोग्राम पदाधिकारी - 17/8

जिला परीक्षण पदाधिकारी - 17.8.16

प्रभारी पदाधिकारी, राज्य शाखा, वस्त्र

जिला, वस्त्र पदाधिकारी, वस्त्र

जिला कृषि पदाधिकारी, वस्त्र

कार्यपालक अभियंता, जिला 18.8.84, वस्त्र

वस्त्र

वस्त्र अभियंता, जिला 18.8.84, वस्त्र

वस्त्र अभियंता, जिला 18.8.84, वस्त्र

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वस्त्र अभियंता, जिला 18.8.84, वस्त्र

গণিতের দ্বিতীয় ভাগ

बलीकाना अभियन्ता, का. अ. अ. अ. -

[Handwritten signature]

सहायक अभियंता ग्रा. का. वि. वस्तर, (राजपुर)

सहायक: अमिता अ. ० पं. वि. दुमरा (केस)

चमणजीयपेरुतु आधिकारी शांकरवि. कर्कर

सुहृद के अतिथि आवाठ पिठकला (कपूर)

[illegible]

क्या ०३११ वा ११०५० वरुण

ਪੰਜਾਬੀ ਸਾਹਿਤ ਦਾ ਇਤਿਹਾਸ

१। ५०० रु. के लिए, एड्स निवारण फंड ०.९५५५

১৭৬৩ খ্রিঃ ১২শে মার্চ

महाराष्ट्र शासन, ५२१२५ - अहमदनगर

કુલ ગૌરવ, કુજરાવ, પ્રજાના-કુજરાવ

सहायक अभियंता, कार्य-अवकाश, वरगुट

အ. ဝိညာဉ် - ဒုတိယ အပိုင်း

कृष्णाय नमः ॥ श्रीगणेशाय नमः ॥ श्रीगुरुभ्यो नमः ॥ श्रीगुरुभ्यो नमः ॥

कृषि प्रसिद्धि कार्य वि० राजपुर प्रशासन

सहायक-अभियंता/ग्रामीण कार्य विभाग कार्योत्तर प्रमुख/न

कृषियं अभियंता RWA, नवलगर-५३३०००

कलीय अभियंता गुरुकुल विष्णुमंदिर - इलाहाबाद

कनीय अविमर्श आ त्रिभिः त्रिपुण्ड्रि वन्द्यः ।

क्रीड प्रसिध्ता उवाच कर्त्तुं विना . १०५३/६

ਮੇਰੇ ਅਸਿਮਾਂਤਾ ਸਾਥੀ ੨੨ ਪ੍ਰਭਾਤੀ ਕਾਲ ਤੇ

Fig. 11-12

65

$\frac{1}{100} = 0.01$
 $\frac{1}{1000} = 0.001$

$$g = \frac{1}{2}$$

R. Kumar
7/11/16

Gagan Bhan Sahay

Swif Kemer
14/08/16

— Here K. Smith
17/8/16

उप विकास आयुक्त, वक्कर द्वारा
प्राप्त सुझाव :-

मनोरा मजदूरों को मजदूरों
का भी Documentation किया
जाता - पाठ्य ।

19.8.16
अ.प.

— इसका व्यापक प्रचार-प्रसार
भी होगा - पाठ्य, ताकि
मनोरा मजदूरों का भी वलस हो ।

अ.प.