# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE OF CONTENTS</td>
<td>2</td>
</tr>
<tr>
<td>ABBREVIATIONS AND ACRONYMENNS</td>
<td>4</td>
</tr>
<tr>
<td>CHAPTER 1: PROJECT BACKGROUND</td>
<td>5</td>
</tr>
<tr>
<td>1.1 Introduction</td>
<td>5</td>
</tr>
<tr>
<td>1.2 Project Overview</td>
<td>6</td>
</tr>
<tr>
<td>1.3 Project Development Objectives</td>
<td>6</td>
</tr>
<tr>
<td>1.4 Project Components</td>
<td>7</td>
</tr>
<tr>
<td>Component 1:</td>
<td>7</td>
</tr>
<tr>
<td>Component 2:</td>
<td>7</td>
</tr>
<tr>
<td>Component 3:</td>
<td>7</td>
</tr>
<tr>
<td>Component 4:</td>
<td>7</td>
</tr>
<tr>
<td>CHAPTER 2: NEED OF ENVIRONMENTAL MANAGEMENT FRAMEWORK AND METHODOLOGY</td>
<td>8</td>
</tr>
<tr>
<td>2.1 Introduction</td>
<td>8</td>
</tr>
<tr>
<td>2.2 Need for Environment Management Framework (EMF)</td>
<td>8</td>
</tr>
<tr>
<td>2.3 Objective of EMF document</td>
<td>9</td>
</tr>
<tr>
<td>2.4 Applicability</td>
<td>9</td>
</tr>
<tr>
<td>2.5 Approach and Methodology adopted for creation of Environment Management Framework (EMF)</td>
<td>10</td>
</tr>
<tr>
<td>2.5.1 Approach</td>
<td>10</td>
</tr>
<tr>
<td>2.5.2 Methodology</td>
<td>11</td>
</tr>
<tr>
<td>CHAPTER 3: ENVIRONMENTAL APPRAISAL AND ENVIRONMENT MANAGEMENT PLAN</td>
<td>12</td>
</tr>
<tr>
<td>3.1 Environmental Appraisal (EA) Procedures:</td>
<td>12</td>
</tr>
<tr>
<td>3.2 Development of Environment Management Plan:</td>
<td>13</td>
</tr>
<tr>
<td>3.2.1 Public disclosure of EMP</td>
<td>13</td>
</tr>
<tr>
<td>3.3 Approval of EMP</td>
<td>13</td>
</tr>
<tr>
<td>3.4 Integration of EMP in implementation Plan / Bidding document</td>
<td>13</td>
</tr>
<tr>
<td>CHAPTER 4: INSTITUTIONAL ARRANGEMENT FOR THE IMPLEMENTATION OF EMF</td>
<td>14</td>
</tr>
<tr>
<td>4.1 Arrangement for BPSP Project Implementation</td>
<td>14</td>
</tr>
<tr>
<td>4.1.1 Functions of Bihar Gram Swaraj Yojna Society (BGSYS)</td>
<td>16</td>
</tr>
<tr>
<td>4.1.2 State Project Management Unit (SPMU)</td>
<td>16</td>
</tr>
<tr>
<td>4.1.3 District Project Management Unit (DPMU)</td>
<td>17</td>
</tr>
</tbody>
</table>
ENVIRONMENT MANAGEMENT FRAMEWORK: Bihar Panchayat Strengthening Project (BPSP)

4.1.4 Block Project Management Unit (BPMU) ........................................................................ 18

4.2 Arrangement for the construction of Panchayat Sarkar Bhavans ........................................... 18

CHAPTER 5: MONITORING, EVALUATION AND REPORTING of the EMF ................................. 20

5.1 Monitoring and internal evaluation .......................................................................................... 20

5.2 External Evaluation ................................................................................................................ 20

5.3 Reporting mechanism ............................................................................................................. 21

ANNEXURE .................................................................................................................................. 22

Annexure 1: Negative List of Activities ......................................................................................... 22

Annexure 2: Environmental Guidelines - Mitigation measures for adverse environmental impacts of various activities: ................................................................. 24

Annexure 3: Screening Guidelines & Checklist for Selection of Site for Panchayat Sarkar Bhawan 25

Annexure 4: Detailed Environmental Appraisal and Environmental Management Plan .............. 28
### ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPMU</td>
<td>Block Project Management Unit</td>
</tr>
<tr>
<td>BGSYS</td>
<td>Bihar Gram Swaraj Yojna Society</td>
</tr>
<tr>
<td>BPSP</td>
<td>Bihar Panchayat Strengthening Project</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>C.B</td>
<td>Capacity Building</td>
</tr>
<tr>
<td>DLCC</td>
<td>District Level Coordination Committee</td>
</tr>
<tr>
<td>DPMU</td>
<td>District Project Management Unit</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Appraisal</td>
</tr>
<tr>
<td>EMF</td>
<td>Environmental Management Framework</td>
</tr>
<tr>
<td>EMP</td>
<td>Environment Management Plan</td>
</tr>
<tr>
<td>GoB</td>
<td>Government of Bihar</td>
</tr>
<tr>
<td>GoI</td>
<td>Government of India</td>
</tr>
<tr>
<td>GP</td>
<td>Gram Panchayats</td>
</tr>
<tr>
<td>IEC</td>
<td>Information Education and Communication</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring &amp; Evaluation</td>
</tr>
<tr>
<td>NREGS</td>
<td>National Rural Employment Guarantee Scheme</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Government Organization</td>
</tr>
<tr>
<td>PIP</td>
<td>Project Implementation Plan</td>
</tr>
<tr>
<td>PRI</td>
<td>Panchayati Raj Institutions</td>
</tr>
<tr>
<td>SPM</td>
<td>State Project Manager</td>
</tr>
<tr>
<td>SPMU</td>
<td>State Project Management Unit</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
</tbody>
</table>
CHAPTER 1: PROJECT BACKGROUND

1.1 Introduction

The 73rd Amendment of the Indian Constitution in 1993 and more specifically Schedule 11 mandates states to decentralize specific functions of government. The Constitution gives states the responsibilities for constituting and assigning revenue powers of local authorities for the purpose of local self-government or village administration.

Bihar Government is committed to establishing an effective and inclusive system of local self-governance in the state. Bihar Government passed Bihar Panchayat Raj Act 1993 and later made appropriate changes in the Bihar Panchayat Raj Act in 2006 as per The 73rd Amendment of the Indian Constitution which makes the formation of a three-tier system of PRIs a mandatory practice.

Regular elections have been held in 2006, 2011 and 2016 for the rural local bodies. Bihar went on to become the first state in the country to reserve 50 percent of the seats under three tier Panchayati Raj institutions for women. Reservation was also provided to SC/ST and Backward castes to ensure the participation of all communities in PRIs. The vision of constructing the Panchayat Sarkar Bhawan for every Panchayat in the state, in a phased manner, with nearly a thousand of them under different stages of completion, further, accentuates the pledge of the state government to establish the self-rule aspirations of populace.

Bihar is also the front runner in term of justice for the people at the door steps with the provision Gram Kutchehry, a unit of arbitration for resolving petty cases of conflict / disputes at the panchayat level, itself. The very purpose of the Gram Kutchehry is to ensure on spot speedy conflict resolution and disposal of petty crimes at Panchayat level itself. Gram Kutchehry became the forum to provide instant justice to the people right at their doorstops.

It is in this context that Bihar Panchayat Strengthening Project – BPSP becomes very important. The project has a very clear objective – “To support Bihar’s capacity to promote and strengthen Inclusive, Responsive and Accountable Panchayat Raj Institutions in selected districts across the state.” BGSYS is the main implementing agency of BPSP. The aspirations under the project include partially providing assistance to the state government for infrastructure support and strengthening Gram Panchayat with systems deemed essential for effective local-self-government. Under the project the Capacity Building is major thrust. Capacity building shall include classroom training for the elected Panchayati Raj representatives, exposure programs for the identified few on the basis of their achievements and mass mobilization campaign through mass media intervention and civic engagements. It entails elaborate on-ground activities to equip general audiences with right based information to participate in Ward Sabha and Gram Sabha.
1.2 Project Overview

BPSP has been planned to provide support to Bihar Government’s long-term vision of inclusive, responsive and accountable local governance encompassing the following aspects:

- A critical mass of grassroots political leaders who promote development, social justice and cohesion;
- PRIs have mature processes, practices and capacity to address own development priorities;
- Government of India (GoI) and Government of Bihar (GoB) allow PRIs more autonomy; and
- Informed and engaged citizenry and activists who participate in governance, monitor service delivery and demand government accountability

The focus of this project is to produce tangible gains to sustain political commitment at all levels to this long-term reform.

As a first step towards the long-term institutional development vision, the project focuses on strengthening statutory institutions established by the Constitution and the Bihar PRI Act (2006), namely the gram sabhas and Gram Panchayat standing committees besides supporting the District Planning Committees and the State Finance Commission when constituted. The operational focus will be:

- Providing basic office infrastructure and human resource to manage various programs;
- Democratizing decision-making processes within the panchayat by facilitating results-oriented work by panchayats and their Standing Committees;
- Facilitating cooperation by government officials;
- Encouraging collective action among villagers; and
- Strengthening the citizens’ capacity in monitoring panchayat operations and holding it accountable.

The project would also provide empirical evidence of how the state finance and management system can support panchayat development. The project will play an active role in advocating changes in the system to enable the panchayats to grow into inclusive, responsive and accountable institutions. By the completion of this project it is expected that the panchayats would have more clearly defined responsibilities, more capacity to manage their responsibilities and are will be more accountable to their citizens for performance.

1.3 Project Development Objectives

The objective of the Project is to support Bihar Government’s capacity in promoting and strengthening inclusive, responsive and accountable Panchayati Raj Institutions in selected districts across the state.
1.4 Project Components

The project has following components:-

**Component 1: Panchayat Sarkar Bhawan:** There are two sections to this component:

(a) Construction of 330 Panchayat Sarkar Bhawans
(b) Functional Panchayats to strengthen functionality of 330 Gram Panchayats with recently built Panchayat Bhawan

**Component 2: Capacity building for Panchayati Raj Institutions:** This component will focus on:

i) Institutional strengthening of GPs to strengthen core institutional capacity of panchayats including basic administrative, planning and financial management capacity and mass media communication and community mobilization;

ii) Local initiatives in the areas of water, and sanitation,

iii) Institutional strengthening activities at the State level (to strengthen the capacity of the Department of Panchayat Raj to manage the decentralization process and strengthen block and district resource centers throughout the state to provide training and technical support to GPs).

iv) Training activities along with activities to develop research capacity to monitor Panchayat performance will also be part of this component

**Component 3: Strengthen the State Government capacity to manage a gradual decentralization and empowerment process:** This will focus on strengthening the regulatory framework for Panchayats, by supporting the issuance of the Rules supporting the Bihar Panchayat Act 2006 and the necessary Financial Management and Accounting manuals. The component will also support the development and implementation of a panchayat based accounts software, the preparation of financial accounts and completion of financial audits in the selected project GPs.

**Component 4: Project Management and Coordination:** Government of Bihar has established a Bihar Gram Swaraj Yojana Society (BGSYS) as the implementation agency for the project. The Society is expected to play four critical roles: (i) A catalyst role: public awareness campaign, policy advocacy, innovative capacity building for visible development results, proactive partnership with NGOs to stimulate demand for accountability and improve PRI responsiveness; (ii) A technical support role: to support partner line departments to establish capacity in managing the devolution process and building PRIs capacity in the relevant service delivery area; (iii) A coordination role: coordinate, monitor and report on the devolution and PRI strengthening process; and(iv) A fiduciary role: Project financing management, procurement and reporting.
CHAPTER 2: NEED OF ENVIRONMENTAL MANAGEMENT FRAMEWORK AND METHODOLOGY ADOPTED FOR ITS CREATION

2.1 Introduction
As per the World Bank Policy on Program for Results Financing, it is essential to ensure program’s consistency with the core principles outlined in the July 2015 policy and directive on Program-for-Results Financing in order to effectively manage program risks and promote sustainable development. These principles are:

- Promote environmental and social sustainability in the Program design - avoid, minimize, or mitigate adverse impacts, and promote informed decision making relating to the Program’s environmental and social impacts.
- Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program.
- Protect public and worker safety against the potential risks associated with construction and/or operations of facilities or other operational practices under the Program; exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.
- Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assists the affected people in improving, or at the minimum restoring, their livelihoods and living standards.
- Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups.
- Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

Of the above principles, the first 3 pertain to environmental aspects and have been the focus in this report.

2.2 Need for Environment Management Framework (EMF)
Planning, construction and management of the Panchayat Bhawans may involve several critical environmental obligations and issues. So to enhance the intended project benefits, good environmental management practices are essential. To integrate the elements of sound project preparation and implementation for preventing and overcoming possible environmental issues, an environment management tool is required.

Environment Management Framework (EMF) is the tool used for this purpose. EMF specifically seeks to:
Provide practical guidance for planning, designing and implementing the environmental management measures in order to manage potentially adverse impacts of pre and post construction activities financed under the project.

Determine the institutional arrangements to successfully implement the provisions of the EMF

Serve as a reference document to specify appropriate roles and responsibilities and outline the necessary reporting procedures for managing and monitoring environmental concerns of the sub-projects and outline training and capacity-building arrangements needed to implement the EMF provisions

In order to ensure that the environmental issues related to BPSP are systematically identified and addressed in the various stages of the implementation of subprojects, an Environment Management Framework (EMF) has been developed for this project.

2.3 Objective of EMF document

The key objective of EMF is that the interventions of the project are environmentally sustainable and comply with all the regulatory requirements (rules and regulations of Government of Bihar, Government of India and safeguard policy of World Bank). The application and implementation of the EMF therefore, will:

- Support the mainstreaming of environmental aspects with other project documents in the planning, designing, execution, operation and maintenance of sub-projects to ensure that environmental risks are adequately identified and mitigated in all the stages
- Enhance the sustainable environmental outcomes through improved/ sensitive planning, design and implementation of sub-project activities;
- Minimize and mitigate any adverse effect on the environment resulting from individual sub-projects or through their indirect, induced and cumulative effects, as much as possible; and protect human health from these identified adverse impacts.
- Support the achievement of compliance with applicable state and national laws and regulations as well as with the requirements of relevant environmental safeguard policies of the World Bank;
- Delineation of roles and responsibilities for implementation of EMF/EMP

2.4 Applicability

EMF attempts to lay out the Environmental Appraisal process and environmental guidelines aiming at choosing environment friendly alternatives which lead to protection and enhancement of local environment.

Environmental Appraisal (EA) & Environment Management Plan (EMP) will be mandatory for activities related to constriction of Panchayat Sarkar Bhawans.

EMF will act as a reference tool for the project implementation by the stakeholders (direct & indirect) who include Project authorities, PRIs, related agencies and contractors for the effective implementation of the sustainable Environment Programme. This will help in developing an overall commitment in PRIs and creating sustainable Project implementation Plan (PIP).
2.5 Approach and Methodology adopted for creation of Environment Management Framework (EMF)

2.5.1 Approach

This framework is based on an Environmental Systems Assessment (ESA) study (draft) conducted by The World Bank in year 2010. The scope of the study includes the following –

- **Environmental Analysis:** History of PRI system in Bihar, current capacities of GPs with specific focus on NRM aspects, current activities by Panchayats and their impacts on environment, identification of risks and mitigation, development of legal and regulatory framework for the project for environmental due diligence process and identification of scope for promotion of environment friendly activities in GPs.

- **Site Analysis:** In line with project restructuring, a sample site analysis for sites selected for construction of Panchayat Sarkar Bhavans (PSBs) and existing PSBs which are non-functional.

- **Environmental Management Framework (EMF):** Development of Environment Management tools for Panchayat Sarkar Bhavans, institutional arrangements and regular monitoring strategies.

**Methodology adopted for Environmental Systems Assessment (ESA) study**

- **Review of Secondary data / information**
  - Review of documents available at National and State levels
  - This focused on understanding the existing policy, legal and regulatory provisions, operational procedures, institutional capacity, implementation effectiveness relevant to the activities under the Program and WB safeguard policy that have relevance to EMF.

- **Field Study**
  - 33 villages were visited and detailed discussions were held with key stakeholders in PRIs which included Mukhiyas, Standing committees, Ward members, Community
  - Extensive consultations were held with several stakeholders from Government Departments which included Department of Panchayat Raj, Relevant line departments, Academic and Research Institutions, NGOs, etc.
  - These consultations helped in understanding the current systems of functioning of PRIs and line departments with respect to environmental management

- **Consultation Workshop**
  - A stakeholder consultation workshop on the findings of ESA was organized on November 15, 2010 involving concerned Government Departments, NGOs, Panchayat representatives and BRGF Resource Persons.
  - Key findings of the ESA were presented in the workshop and their feedback and suggestions were taken to strengthen the EMF.
2.5.2 Methodology

An Environment Management Framework (EMF) was suggested in the Environmental Systems Assessment (ESA) study. This was followed by the joint site analysis by BGSYS & World Bank team. Based on these field visits suitable modifications have been made in the EMF by BGSYS in consultation with World Bank.

Besides this Environmental Systems Assessment (ESA) study also provided recommendation and action plan for the effective implementation of EMF. Following recommended activities and guidelines have been incorporated in this document:

- Negative list of activities
- Environmental Guidelines - mitigation measures for possible adverse environmental impacts of various activities
- Environmental friendly measures to increases resilience to construction activities to be undertaken for project implementation

**Negative list of activities:**

These activities have been excluded from the program in view of the high environmental risks. World Bank does not support any activity which has major environmental implications. This list is enclosed as **Annexure 1** to this document.

**Environmental Guidelines - mitigation measures for possible adverse environmental impacts of various activities:**

These environmental guidelines will be mandatory for Project interventions especially with regard to construction of new Panchayat Sarkar Bhawans. These guidelines will help PRIs in strengthening the environment management for the activities to be undertaken for this program. Detail list of impact and mitigation measures is enclosed as **Annexure 2** to this document.

**Environmental friendly measures:**

Environment friendly interventions with respect to construction have been suggested which can be implemented and promoted by LEAO/Contractors.

The Environment management framework is a live document and may be amended as and when required (after seeking approval of competent authorities, as the case may be) as experience and learning accumulate with the evolution of the project. All participants in BGSYS are encouraged to share their learning from their experiences of the project implementation, so as to improve the arrangement defined in this document (similarly in other manuals/documents) envisaged for implementation of BPSP to attain its mission and objectives. (**Annexure 4**)
Preparation of EMF involves the following steps:

1. Environment appraisal (EA) Procedures
2. Development of Environmental Management Plan (EMP)
3. Approval of EMP
4. Integration of EMP in Implementation Plan/ bidding document
5. Implementation of EMP through institutional arrangement
6. Monitoring, evaluation and reporting of EMF implementation

This chapter provides details of processes required of environment appraisal, development of the environment management plan, seeking approval from SPMU and the integration of EMP in the implementation / bidding document.

3.1 Environmental Appraisal (EA) Procedures:
Environment Appraisal (EA) involves filling of screening checklist to assess the environmentally negative issues and level of assessment. The environment negative list will form basis for the assessment. It will also include a screening tool and mitigation guidelines to ensure that

   a) all relevant policy, legal and regulatory requirements are met
   b) activities requiring further detailed environmental assessment are identified and go through the same
   c) the environmental sustainability of the interventions is enhanced.

3.1.1 Negative List: It will involve filling of screening checklist to assess the environmentally negative issues and level of assessment. The environment negative issues have been provided under the ‘Exclusion of High Risk Activities’ list (Annexure 1).

3.1.2 Screening: This will involve screening of activities related to construction of Panchayat Sarkar Bhawan. The purpose of screening is to ensure that every activity under BPSP is in compliance with the laws and regulation of GOB, GoI and safeguard policy of WB. An indicative screening checklist for sites election of Panchayat Sarkar Bhawan is attached as Annexure 4.

3.1.3 Mitigation guidelines: Measures for identified adverse environmental impacts of various activities have been provided as Annexure 2.

EA will be mandatory for all project-supported activities related to construction of GP Bhavans. This will not be mandatory for other activities of GPs; however the capacity building efforts of the project will promote the use of environmental appraisal as a good practice for all GP activities irrespective of the source of funding.
3.2 Development of Environment Management Plan:
Environment Management Plan (EMP) will be prepared on the basis of potential environmental issues identified under EA and with reference to mitigation measures provided in environmental guidelines and generic EMP prepared as Annexure 4.

3.2.1 Public disclosure of EMP
As per the World Bank consultation and disclosure requirements policy (OP17.50), the results of EA will be disclosed to the community. The potential impacts, mitigation measures identified and any environmentally proactive interventions planned under the EMP will also be shared with the community.

3.3 Approval of EMP
EMP will be approved by the project. It will also provide specific mitigation measures to be executed at the time of implementation and inclusion of these in the bidding documents in case of implementation through contractors.

3.4 Integration of EMP in implementation Plan / Bidding document
For construction work, EMP will be included in the bidding document for its effective implementation by the contractor. The Engineer, coordinating with LAEO, will ensure that the EMP is made part of the contract documents and is executed satisfactorily.
CHAPTER 4: INSTITUTIONAL ARRANGEMENT FOR THE IMPLEMENTATION OF EMF

4.1 Arrangement for BPSP Project Implementation

The Government of Bihar (GoB) has constituted “Bihar Gram Swaraj Yojna Society (BGSYS)” for the purpose of implementing World Bank funded Bihar Panchayat Strengthening Project under Panchayati Raj Department. The General Body of the Society is the apex body headed by Development Commissioner, Government of Bihar and it consists of Principal Secretaries/Secretaries of Department of Finance, Planning and Development, Panchayati Raj, Rural development, Education Department, Social welfare, Health, Rural Works Department, Public Health Engineering Department, Director General BIPARD & Project Director BGSYS.

The Executive Committee of the Society is headed by the Principal Secretary/ Secretary, Panchayati Raj Department and it comprises of Principal Secretaries/ Secretaries of the above said Departments or any officer not below the rank of deputy secretary can be nominated by them. The society will act as Project executing agency, primarily responsible for implementation of the Project by setting State Project Management unit (SPMU) at state level headed by Project Director.

The organizational hierarchy of BGSYS has been depicted in the diagram given on next page;
As evident from the diagram, BGSYS will have overall three level structure for implementing this Project: State level, District level and Block level management units.

The General Body of the society will be at the top and have an oversight role over the implementation of the project. The oversight will include monitoring of the performance of the project and taking strategic decisions for its effective implementation. Execution of the project will be mainly the responsibility of the Executive Committee of the society. This along with SPMU will oversee the implementation, take operational decisions, undertake risk management, monitor performance of implementation of the respective subprojects through collection of data / reports and provide status reports to the General Body as per set frequency or whenever required. The oversight will also include the key role of coordinating the different line agencies responsible for the implementation of the project on ground. SPMU will also be responsible for management of the funds and day-to-day operations related to the implementation of the subprojects at state level. This role will be taken up by DPMU and BPMU at district and block levels respectively.

The detail functions of BGSYS and the Project management units at different levels are listed below:
4.1.1 Functions of Bihar Gram Swaraj Yojna Society (BGSYS)

- Formulate guidelines for implementation of the various programs of the state Society.
- Act as per Rules and "non-negotiable principles" of the Bihar Panchayat Strengthening Project and enforce the rules and guidelines for the implementation of the project.
- Creation and development of District/Block Units, including coordinating and guiding their functioning.
- Exercise overall responsibility for management of BGSYS on behalf of the Government of Bihar within the framework of project guidelines.
- Ensure overall implementation of the EMF in the project
- Arrange funds and personnel required for implementing the provisions of EMF
- Ensure that recommendations from supervision and monitoring are integrated into the project and the EMF is updated periodically as necessary
- Provide status report of project implementation to Executive Committee
- Provide inputs to Executive Committee for relevant environmental policies / making appropriate changes in the existing policies

4.1.2 State Project Management Unit (SPMU)

- The day-to-day affairs of the State Society shall be conducted by the SPMU under the supervision, guidance and control of the Project Director.
- There are three functional wings headed by Directors (i) Finance and administration (ii) Operation & communication (iii) Knowledge Management, at the SPMU.
- The SPMU has been constituted with various State Project Managers in disciplines like, Administration, Water and Sanitation, Procurement, HR & Capacity Building, Communication, Finance & Accounts, Audit and Accounts, Monitoring & Evaluation, civil engineers, etc. and Project Manager in Documentation, IT, Capacity building, HR, Procurement etc with necessary supporting staffs.
- Subject to approval of the General Body of the State Society for creation of regular posts, the Executive Committee will authorize recruitment of employees of the State Society, required for the running of the SPMU/DPMU/BPMU and also for the implementation of various projects implemented by the State Society. For the purpose of administrative matters and disciplinary action, the Project Director is the appointing authority.
- Establish District Project Management Units & Block Project Management Units which will work as a unit of the BGSY Society
- Coordinate at state and regional level with line departments, relevant institutions / agencies / individuals responsible for the environmental aspects of the project implementation
- Ensure that the mitigation measures of identified environmental risks are included in Environmental Management Plan (EMP) and are implemented
- Ensure that the environmental appraisal and screening conducted by BGSY Society and as per the process finalized in consultation with World Bank expert.
- Finalize project indicators in consultation with World Bank expert to effectively monitor the project performance
• Carry out regular monitoring and supervision of the EMF implementation through appropriate reporting mechanisms
• Provide status report of project implementation to BGSYS
• Provide inputs to BGSYS for relevant environmental policies / making appropriate changes in the existing policies
• Provide technical advice and guidance on environmental management to DPMU whenever required

4.1.3 District Project Management Unit (DPMU)

• The day to day affairs of the District shall be conducted by the district unit under the Supervision, Guidance and Control of the State Unit and in Coordination with the District Level Coordination Committee having District Magistrate as the Chairperson and CEO Zila Parishad as the Vice Chairperson.
• The District Project manager will be the overall in-charge of DPMU with three functional cells (i) Finance and administration (ii) capacity building (iii) monitoring and evaluation at DPMU.
• The District Unit would be managed by the District Project Manager who would also be the Convener of the District Coordination Committee and will report to Director Operations & Communication.
• The District Unit will have District coordinators in discipline like Finance Manager, Water and Sanitation, Monitoring & Evaluation, Public finance with adequate number of support Staff to implement the Project as approved by the SPMU.
• Ensure that all activities necessary for the effective implementation of the EMF
• Ensure that the recommended mitigation measures in Environmental Management Plan (EMP) are implemented
• Conduct supervision visits (in coordination with the BPMU).
• Carry out regular monitoring and supervision of the EMF implementation
• Provide status report of project implementation to SPMU
• Provide technical advice and guidance on environmental management to BPMU whenever required

4.1.3.1 District Level Coordination Committee (DLCC)

District Level Coordination Committee will be formed under the Chairmanship of the District Magistrate. The Committee will consist of following members-

- The District Magistrate Chairman
- The CEO, Zila Parishad Vice Chairman
- District Panchayati Raj Officer Member
- District Planning Officer Member
- District Statistical Officer Member
- District Programme Officer Member
- Civil Surgeon Member
- District Education Officer Member
- Divisional Superintendent of Education Member
District Magistrate can also appoint other officials in the DLCC as and when required. In addition to that DLCC can Co-Opt three PRI members, one from each tier of the Panchayat. Further DLCC can also appoint maximum three members from the Civil Society Organization/Social Activist working in the field of Panchayat in the District. In addition DLCC can invite experts from the different fields as and when required for specific guidance. DLCC will meet at least once in every quarter.

### 4.1.4 Block Project Management Unit (BPMU)

- The day to day affairs of the Block shall be conducted by the block unit under the Supervision, guidance and Control of the District Unit and in Coordination with the Block Coordination Committee having Block Development Officer as Chairperson.
- The Block Unit would be managed by the Block Project Manager who would also be the Convener and member Secretary of the Block Coordination Committee.
- The Block Unit will have Facilitators with support Staff to implement the Project as approved by the SPMU.
- Review all activities necessary for the effective implementation of the EMF are undertaken on ground
- Review mitigation measures included in Environmental Management Plan (EMP) are implemented
- Conduct supervision visits to construction sites every month/ as per requirement
- Provide monthly status report of project implementation to DPMU
- Collect, collate and submit data and information to DPMU on project indicators related to EMF implementation

### 4.2 Arrangement for the construction of Panchayat Sarkar Bhavans

The construction of Panchayat Sarkar Bhavans will be carried out by the Local Area Engineering Organization (LAEO) under the Planning and Development Department, GoB i.e., it will act as the implementing agency for the construction of Panchayat Sarkar Bhavan and responsible for operationalization of construction process on ground in close collaboration with BGSYS. BGSYS will provide functional support in selection of the land for construction and will support in implementation of the EMF as per the applicability. The major functions of the implementing agency are listed below:

1. Site visit by the engineer
2. Decision about the activities to be undertaken for preparing land for construction work e.g. land clearance by cutting of trees etc.
3. Designing the Panchayat Sarkar Bhavans incorporating all the applicable environmental aspects and as per the size of the available site
4. Preparation of bidding documents incorporating all the elements as per EMP
ENVIRONMENT MANAGEMENT FRAMEWORK: Bihar Panchayat Strengthening Project (BPSP)

5. Receiving and finalization of tenders for hiring contractors
6. Issuance of contract having all the elements as per EMP to the selected contractor
7. Supervision of works and quality assurance
8. Ensuring effective and timely implementation of works as per the contract
9. Post construction, undertaking the final inspection of Panchayat Sarkar Bhavan and handover the building to Gram Panchayat
10. Submit monthly progress report to SPMU
11. Preparing the maintenance plan of the building for the Gram Panchayat

A detailed description of roles and responsibilities within the Project Management Units at state level, and within the PRIs for implementation of the EMF has been tabulated below to provide a clear picture of roles and responsibilities.

Table 1: EMF Activity and Responsibility Matrix at different levels

<table>
<thead>
<tr>
<th>Responsible person/Agency/group</th>
<th>EMF activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GP level</strong></td>
<td></td>
</tr>
<tr>
<td>Mukhiya</td>
<td>● Provide active support in the site selection for Panchayat Sarkar Bhavans aiming not to encroach into the agricultural fertile land or to disturb any prominent vegetation</td>
</tr>
<tr>
<td><strong>Block level</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Block Programme Manager         | ● Responsibility for monitoring of EMF into project cycle/process  
|                                 | ● Developing a proper network for coordination among project implementers at block level |
| **District level**              |                |
| District Project Manager        | ● Responsibility for monitoring of EMF into project cycle/process  
|                                 | ● Developing a proper network for coordination among project implementers at district level |
| **State level**                 |                |
| Project Director                | ● Overall monitoring of EMP implementation  
|                                 | ● Taking approval of EMP from Executive committee  
|                                 | ● Coordination with other departments for effective implementation of EMP |
| SPM – Civil/Architect Engineer  | ● Ensure that all GP Bhavans are in compliance with the requirements of the EMF |
| SPM - Monitoring and evaluation | ● Ensuring that monitoring and evaluation requirement of EMF is integrated into the monitoring and evaluation strategy/plan  
|                                 | ● Ensuring the effective implementation of the same on continuous and consistent basis |
CHAPTER 5: MONITORING, EVALUATION AND REPORTING of the EMF

5.1 Monitoring and internal evaluation
To ensure proper and timely implementation of environmental mitigation measures identified in the planning stages, the implementation of EMP will be monitored regularly. It will be done at regular intervals during implementation and for a specified period in the post GP Bhavan construction stages. Monitoring will help the project implementation team in

- Assessing the progress of activities and their completion against resource allocation
- Identifying any change / improvement needed in the execution of the activity or in the mitigation measures.

Thus the data / information / feedback from the field will be discussed / reported to the implementing officials at different levels / contractor and corrective actions will be taken, where necessary. Reporting, from ground to top level, will follow the line - GP level, block, district and state level project management unit.

Monitoring and evaluation cells have been established at SPMU and DPMUs. Monitoring of civil works / construction will be undertaken by SPM Civil/Architect Engineer and state cell of LAEO. At block level, Block Project Manager will be responsible for monitoring of the project implementation.

The monitoring will cover 100% of the GP Bhavans and will be undertaken prior to, during and after the completion of the GP Bhavan construction. The key aspects to be monitored include:

1. Compliance with the legal and regulatory requirements
2. Agreement with contractors for implementation of recommended mitigation measures
3. Implementation of mitigation measures identified through environmental appraisal
4. Incorporation of environment friendly activities, technicalities and materials into design and construction

Besides the regular reporting of data / information related to these indicators, field level monitoring visits will also be undertaken by SPMU, DPMU and BPMU.

In case of non-compliance of the contractor with the EMP, and in case of any residual Environmental issues of concern, the SPM Civil/Architect Engineer will coordinate with the state cell of LAEO who will follow up with the contractor to ensure that required action is taken at each and every risk identified point. In case of non-compliance of the contractor, LAEO will take appropriate action as provided for in the contract documents.

5.2 External Evaluation

External audits will be conducted by hiring an external agency. SPMU will select and hire the external agency to undertake these audits. External evaluation will be a combination of desk
reviews (to check the management aspects) and field visits (to check on technical aspects) and stakeholder interactions.

5.3 Reporting mechanism
The key responsibilities at different levels related to reporting are as tabulated below:

<table>
<thead>
<tr>
<th>Level</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPMU</td>
<td>Quarterly review of the EMF implementation</td>
</tr>
<tr>
<td></td>
<td>Report to Project Director for overall implementation of the EMF and applicable legislation</td>
</tr>
<tr>
<td>DPMU</td>
<td>Monthly review of the EMF implementation</td>
</tr>
<tr>
<td></td>
<td>Report to SPMU for overall implementation of the EMF and applicable legislation</td>
</tr>
<tr>
<td>BPMU</td>
<td>Fortnightly review of the EMF implementation</td>
</tr>
<tr>
<td></td>
<td>Report to DPMU for overall implementation of the EMF and applicable legislation</td>
</tr>
</tbody>
</table>
Annexure 1: Negative List of Activities
The activities contained in this list will not be supported by the project due to Non-conformance to national and state environmental legislations and due to major environmental Implications. The negative list of activities is as given below;

Due to non conformance with National and State environmental legislations:

- Use of any forest land or any portion of it for any non-forest purposes is not allowed without prior approval of the Central Government - Forest Act 1927, Forest (Conservation) Act, 1980, amended in 1988
- Activities like clearing, kindling fire for vegetation cleaning, damaging trees (felling, girdling, lopping, topping, burning, stripping bark and leaves), quarrying stone, etc in reserved and protected forests is not allowed - Indian Forest (Bihar Amendment) Act, 1939
- Water flow in to or from any wild life sanctuary should not be stopped or diverted – Wild Life (Protection) Act1972
- Destruction, exploitation or removal of any wild life including specified plants and forest produce from a sanctuary or the destruction or diversification of habitat of any wild animal, or diversion, stoppage or enhancement of the flow of water into or outside the sanctuary, cultivation of specified plants is prohibited without a permit granted by the Chief Wildlife Warden - Wild Life (Protection) Act1972
- Do not cause or permit any poisonous, noxious or polluting matter into stream or well or sewer or on land. – Water (Prevention and Control of Pollution) Act, 1972 amended in 1988.
- Do not permit stream any other matter which may impede the proper flow of the water of the stream should not be allowed- Water (Prevention and Control of Pollution) Act, 1972 amended in 1988
- No wells should be sunk in the notified areas without permission from Ground water Department except those fitted with manual (hand operated) pumps –The Bihar Ground Water(Regulation and Control of Development and Management) Act, 2006
- Without the written permission of the concerned Executive Engineer, no person can obstruct or divert any water channel or can make a sluice in any public embankment for the purpose of drainage or irrigation- Bihar Irrigation Act, 1997
- Sound emitting construction equipment shall not be used or operated during night times in residential areas and silence zones (hospitals and educational institutions)- The Noise Pollution (Regulation And Control) Rules 2000

1The specified plants include Aconitum spp, Atropa spp, Acorus spp etc. Source: http://jharenvis.nic.in/files/Medicinal_Survey_Hazaribgah_4.pdf, accessed on 14-October 2010)
Due to non conformance with World Bank’s Environmental Safeguard Policies:

- All activities financed by the project should go through environmental assessment - *Environmental Assessment (OP/BP/GP 4.01)*
- No activities should be carried in protected areas without prior written permission from State Forest Department - *Natural Habitats (OP/BP 4.04)*
- Activities that involve significant conversion or degradation of critical forest areas or related critical natural habitats are not allowed. – *Forests (OP/BP 4.36)*
- Activities involving significant excavations, demolition, movement of earth, flooding, or other environmental changes in, or in the vicinity of, a recognized physical cultural resources site will not be allowed without detailed assessment and management plan. – *Physical Cultural Resources (OP/BP 4.11)*

Due to major environmental implications:

- All bore holes (either at the time of construction or abandoned ones) should be properly covered to prevent accidental fall of children
Annexure 2: Environmental Guidelines - Mitigation measures for adverse environmental impacts of various activities:

**Mitigation measures of adverse environmental impacts due to construction activities:**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Activity / Functions</th>
<th>Adverse Impact on Environment</th>
<th>Mitigation Measure</th>
<th>Costs and Available support</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Grassland development in new land area post construction activity</td>
<td>• Use of chemicals/pesticides in to regain the fertility of soil which eventually lead to soil pollution, ground water contamination and introduction of lethal pesticides in the food chain as the grasses are used for livestock feeding</td>
<td>• Cultivating suitable species of grass which are easy to grow in moderately / low fertile land, if required</td>
<td>• Technical support can be sourced from experts</td>
</tr>
<tr>
<td>2.</td>
<td>Excavation of soil as one of the main ingredient of construction activity</td>
<td>• Loss of fertile top soil eventually leading to triggered soil erosion</td>
<td>• Avoid use of soil from agricultural lands • Vegetation can be grown to avoid erosion</td>
<td>• Technical support can be sourced from experts</td>
</tr>
<tr>
<td>3.</td>
<td>Increases in dust pollution during construction activity</td>
<td>• Health problems of workers and local inhabitants • Damage of local air quality affecting the ecological flora and fauna</td>
<td>• Dust proof measures such as nose masks • Sprinkling of water to be adopted at the time of construction</td>
<td>• Technical support can be sourced from experts</td>
</tr>
</tbody>
</table>
Annexure 3: Screening Guidelines & Checklist for Selection of Site for Panchayat Sarkar Bhawan

Water resources:

- Avoid locations that are prone to water-logging and flooding.
- Avoid locations that can interfere with existing drainage streams or structures – as this can lead to water logging either at the site or in other locations, reduction in in-flows of receptacle water bodies, etc.
- Avoid locations that have existing natural water bodies such as ponds and lakes – as this will interfere in the natural drainage pattern and affect the natural habitats.
- Avoid locations that are in close proximity of water reservoirs – as this can make the site vulnerable to flooding and can also interfere with the drainage pattern.

Forests and Trees:

- Avoid locations in land that is designated as a forest (reserve forest, sanctuary, national park, etc.) – as this will affect the natural habitat.
- Avoid locations that have significant number of fully grown/mature trees – as this will affect the natural habitat (especially as the state has limited forest and tree cover).
- Avoid locations that have any tree that is being utilized by water birds for roosting or resting. Some of the endangered/vulnerable/threatened water bird species of Bihar include: Greater Adjutant Stork (local name: Bada Garud), Lesser Adjutant Stork (local name: Chota Garud), Darter or Snake Bird (local name: Baanwe), Painted Stork (local name: Janghil).

Cultural Heritage:

- Avoid locations that are in close proximity of any site of archeological, historical, etc., value. This includes all protected monuments. Construction within a radius of 100 meters from a protected monument is prohibited.

Detailed checklist can be seen on next page
Screening Checklist for Selection of Site for Panchayat Sarkar Bhawan

NOTE: Enclosures with the filled in Screening Checklist:
1. Photo of site.
2. GPS coordinates of site.
3. KML file of the site (that can be opened on Google Maps, Google Earth, etc.) with the site boundaries marked as a polygon and with place marks identifying key features.
4. Sketch of site showing site boundaries and key features including: nearest road, neighboring structures, location of trees, drainage lines, water bodies, etc.

Responsibility to compile Photos, GPS Co-ordination & KML file will be of BGSYS Representative

A. Name of GP: _________________________
B. Name of Block: ________________________
C. Name of District: ________________
D. Area of Site (in square meters): ________________
E. GPS Coordinates of Site: ________________

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Checklist Item</th>
<th>Response (Yes/No)</th>
<th>Course of action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the site low-lying and/or is prone to waterlogging?</td>
<td>☐ Yes ☐ No</td>
<td>If yes, choose alternate site.</td>
</tr>
<tr>
<td>2</td>
<td>Does the site have any drainage stream or structure within it (e.g., nala, stream, culvert, pyne, irrigation channel, etc.)?</td>
<td>☐ Yes ☐ No</td>
<td>If yes, choose alternate site.</td>
</tr>
<tr>
<td>3</td>
<td>Does the site have any water body located fully or partly within it (e.g., pond)?</td>
<td>☐ Yes ☐ No</td>
<td>If yes, choose alternate site.</td>
</tr>
<tr>
<td>4</td>
<td>Is the site located within 30 meters from the FTL of any reservoir, or, from any nahar, or, from any similar water reservoir?</td>
<td>☐ Yes ☐ No</td>
<td>If yes, choose alternate site.</td>
</tr>
<tr>
<td>5</td>
<td>Is the site located within 100 meters of a protected monument (site or building with historical, archaeological value)?</td>
<td>☐ Yes ☐ No</td>
<td>If yes, choose alternate site.</td>
</tr>
<tr>
<td>6</td>
<td>Is the site located within designated forest land?</td>
<td>☐ Yes ☐ No</td>
<td>If yes, choose alternate site.</td>
</tr>
<tr>
<td>7</td>
<td>Does the site have 5 or more mature/fully grown trees which will have to be cut for the construction?</td>
<td>☐ Yes ☐ No</td>
<td>If yes, choose alternate site.</td>
</tr>
<tr>
<td>S. No.</td>
<td>Checklist Item</td>
<td>Response (Yes/No)</td>
<td>Course of action</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Does the site have any trees that are used by water birds as roosting or nesting sites? E.g., adjutant storks (garud), darters (baanwe), painted storks (janghil), etc.</td>
<td>[ ] Yes [ ] No</td>
<td>If yes, choose alternate site.</td>
</tr>
<tr>
<td>9</td>
<td>Does the site have any other feature that poses significant, adverse risk to the environment and human safety?</td>
<td>[ ] Yes [ ] No</td>
<td>If yes, choose alternate site.</td>
</tr>
</tbody>
</table>

Signed by:

**Representative of Gram Panchayat (Panchayat Secretary):**
Name: _____________________________
Designation: _____________________________
Date: _____________________________
Signature: _____________________________

**Representative of BGSYS:**
Name: _____________________________
Designation: _____________________________
Date: _____________________________
Signature: _____________________________

**Junior Engineer of LAEO:**
Name: _____________________________
Designation: _____________________________
Date: _____________________________
Signature: _____________________________

**BDO:**
Name: _____________________________
Designation: _____________________________
Date: _____________________________
Signature: _____________________________

**Circle Officer:**
Name: _____________________________
Designation: _____________________________
Date: _____________________________
Signature: _____________________________

**District of Panchayati Raj Officer:**
Name: _____________________________
Designation: _____________________________
Date: _____________________________
Signature: _____________________________
Annexure 4: Detailed Environmental Appraisal and Environmental Management Plan

Name of Gram Panchayat: Date:

Location: (GPS COORDINATES):

Block: District:

Total area: Ownership:

Area to be constructed: Ground Coverage

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Aspects</th>
<th>Potential Impacts</th>
<th>Actions to be taken to mitigate (remove/reduce) negative impacts</th>
<th>Time frame</th>
<th>Responsible agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regulatory Compliance</td>
<td>Legal non compliance</td>
<td>Permission of Forest Department (required in cases where forest land is involved)</td>
<td>Before start of Construction</td>
<td>Permission to be secured by Implementation agency. Plantation to be undertaken and maintained.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Try to avoid cutting of trees by adjusting the layout/alignment.</em>&lt;br&gt;<em>If cutting of trees is unavoidable:</em>&lt;br&gt;<em>Take permission from concern authority.</em>&lt;br&gt;<em>Undertake compensatory plantation of at least twice the number of native trees to compensate for the trees to be cut.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Permission of Department of Archaeology and Museums (required in case site is within 300 m of a protected monument)</td>
<td>Before start of Construction</td>
<td>Permission to be secured by</td>
</tr>
<tr>
<td>S. No.</td>
<td>Aspects</td>
<td>Potential Impacts</td>
<td>Actions to be taken to mitigate (remove/reduce) negative impacts</td>
<td>Time frame</td>
<td>Responsible agencies</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
<td>-----------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plantation to be undertaken and maintained. Make arrangements for after-care of</td>
<td>Permission to be secured before construction phase; Compensatory</td>
<td>Permission to be secured</td>
<td>Implementation agency. Plantation to be undertaken and maintained.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the saplings.</td>
<td>plantation to be undertaken before/during construction phase;</td>
<td>by Implementation agency.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Maintenance of compensatory plantation to be undertaken.</td>
<td>Plantation to be undertaken</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sitting and design</td>
<td>Use of unapproved site. Land acquisition Destruction of disturbance to wildlife</td>
<td>Ensure that Environment screening has been carried using approved</td>
<td>Before start of Construction</td>
<td>Activity to be carried out before DPR finalization.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>habitat. Flooding and water logging Tree felling.</td>
<td>Environment screening checklist. The building design and DPR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>should factor in the design &amp; material safety aspects.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### ENVIRONMENT MANAGEMENT FRAMEWORK: Bihar Panchayat Strengthening Project (BPSP)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Aspects</th>
<th>Potential Impacts</th>
<th>Actions to be taken to mitigate (remove/reduce) negative impacts</th>
<th>Time frame</th>
<th>Responsible agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Building design to incorporate:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• rain water harvesting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• adequate ventilation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• adequate sanitation facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Locally available / environment-friendly construction materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Not use asbestos containing materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CONSTRUCTION PHASE:

The following section contains instruction to the contractors, which should be adhered to while carrying out the construction activity. This section should be appended into the relevant bid document.

| 3      | Construction waste management | Disposal of construction waste at inappropriate locations | Reuse the construction waste as much as possible. As there is no dismantling of any existing structure prior to construction at this site, there is unlikely to be any | Approval to be secured before construction. | List of approved disposal sites to be made |
## ENVIRONMENT MANAGEMENT FRAMEWORK: Bihar Panchayat Strengthening Project (BPSP)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Aspects</th>
<th>Potential Impacts</th>
<th>Actions to be taken to mitigate (remove/reduce) negative impacts</th>
<th>Time frame</th>
<th>Responsible agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Significant amount of construction waste that has to be disposed. All the construction waste generated during earth work will be reused at the site for backfilling. Verify appropriateness of all construction waste disposal sites and obtain approval of concern authority. Use the following approved disposal sites:</td>
<td>Site 1: _____________ Site 2: _____________ Site 3: _____________</td>
<td>available by implementation agency; Construction waste to be disposed at approved sites by Contractor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Usage of Materials for construction</td>
<td>Extraction of materials from illegal or inappropriate locations Verify suitability of all material sources and obtain approval of concern authority. Use the following approved quarry sites and sources: Sand: PURCHASE FROM GOVT. APPROVED QUARRY (SON RIVER) Coarse aggregate: PURCHASE FROM GOVT. APPROVED QUARRY Bricks: PURCHASE FROM MANUFACTURER WITH GOVT. PERMIT</td>
<td>List of approved sources for materials to be made available by implementatio n agency; Material to be sourced from approved sources by Contractor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Air Quality &amp; Pollution</td>
<td>Dust pollution due to excavation and construction work The activities of construction shall be scheduled taking into consideration factors such as sowing of crops, harvesting, availability of labour during particular periods and other site specific conditions. All earth work in habitation areas will be protected to minimize generation of dust.</td>
<td>During construction phase</td>
<td>Contractor</td>
<td></td>
</tr>
</tbody>
</table>
## ENVIRONMENT MANAGEMENT FRAMEWORK: Bihar Panchayat Strengthening Project (BPSP)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Aspects</th>
<th>Potential Impacts</th>
<th>Actions to be taken to mitigate (remove/reduce) negative impacts</th>
<th>Time frame</th>
<th>Responsible agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Noise &amp; Vibration</td>
<td>Noise Pollution</td>
<td>Sprinkling of water on construction sites in habitation areas using water tanker as and when necessary during dry weather.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Drainage and Water Bodies</td>
<td>Water-logging and creation of mosquito breeding grounds Possible ground water contamination (by oil and grease), especially during the construction phase</td>
<td>The activities of construction shall be scheduled taking into consideration noise level factors at particular periods in the day time and site specific conditions. Maintenance of machinery and vehicles should be enhanced to keep their noise at a minimum.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Usage of Potable Water during construction</td>
<td>Exploitation of potable water sources due to construction activities</td>
<td>Storage of petrol/oil/lubricants – brick on edge flooring or sand flooring should be provided at the storage sites to avoid soil and/or water contamination due to spillage. Proper waste management and disposal of oil and other hazardous wastes as per Hazardous Wastes (Management and Handling) Rules, 1989. a) Solid/liquid/construction/domestic waste, contaminants (oil/grease etc.) shall not be disposed in water bodies/open lands. b) Construction debris shall be disposed separately and properly.</td>
<td>During Construction</td>
<td>Contractor</td>
</tr>
<tr>
<td>9</td>
<td>Disposal of Water</td>
<td>Improper disposal of dewatered water</td>
<td>Requirement for dewatering is not expected at this site (refer to soil testing report). In case of a need for dewatering, dewatered water is to be disposed into appropriate drains or disposal sites. Dewatered water is to be disposed into appropriate drains or disposal sites.</td>
<td>During construction phase</td>
<td>Contractor</td>
</tr>
<tr>
<td>S. No.</td>
<td>Aspects</td>
<td>Potential Impacts</td>
<td>Actions to be taken to mitigate (remove/reduce) negative impacts</td>
<td>Time frame</td>
<td>Responsible agencies</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>------------------</td>
<td>---------------------------------------------------------------</td>
<td>-----------</td>
<td>---------------------</td>
</tr>
<tr>
<td>10</td>
<td>Access for Public</td>
<td>Hindrance/Obstruction in access to village/farmlands for villagers/public due to construction activities</td>
<td>Proper alternative access to be provided to public</td>
<td>During Construction</td>
<td>Contractor</td>
</tr>
<tr>
<td>11</td>
<td>Labour camps.</td>
<td>Impact on workers health and safety. Impact on public safety.</td>
<td><strong>Labour Camps not envisaged for the project. However, in case labour camps are established, the following need to be adhered:</strong> All relevant provisions of the Factories Act, 1948 and the Building and the other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 shall be followed for construction and maintenance of labour camp. a) Avoid Irrigated agricultural lands/forest land/grazing land b) Avoid Lands within 100m of community water bodies &amp; water sources as rivers 2. The contractor shall also guarantee the following: a) The location, layout and basic facility provision of each labour camp will be submitted to Engineer prior to their construction. b) The construction will commence only upon the written approval of the Engineer. c) The Contractor shall construct and maintain all labour accommodation in such a fashion that uncontaminated water is available for drinking, cooking and washing. d) Supply of sufficient quantity of potable water (as per IS) in every workplace/ labour camp site at suitable and easily accessible places and regular disposal</td>
<td>During Construction</td>
<td>Contractor</td>
</tr>
<tr>
<td>S. No.</td>
<td>Aspects</td>
<td>Potential Impacts</td>
<td>Actions to be taken to mitigate (remove/reduce) negative impacts</td>
<td>Time frame</td>
<td>Responsible agencies</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------</td>
<td>------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>12</td>
<td>Occupational Health and Safety</td>
<td>Risk of accidents and occupational health impacts</td>
<td>Implement Health and Safety measures including: (a) excluding public from the site (including setting up barricades and warning signs); (b) ensuring all workers are provided with and use Personal Protective Equipment including: helmet, gloves and gumboots at concreting locations, nose mask at dust producing areas, safety belt during work at height, hearing protection at noise producing locations; (c) documentation of work-related accidents; (d) First Aid box shall be easily accessible throughout the site; (e) Provide supplies of potable drinking water at labour camp and work site.</td>
<td>During construction phase</td>
<td>Contractor</td>
</tr>
</tbody>
</table>
ENVIRONMENT MANAGEMENT FRAMEWORK: Bihar Panchayat Strengthening Project (BPSP)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Aspects</th>
<th>Potential Impacts</th>
<th>Actions to be taken to mitigate (remove/reduce) negative impacts</th>
<th>Time frame</th>
<th>Responsible agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(f) Provide toilet facility at labour camp</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**POST CONSTRUCTION/OPERATION PHASE:**

The following section contains instructions to the respective Line Departments / Local community entrusted with the operation and maintenance of the sub-project activity to ensure long term sustainability

| 13    | Clearance and Restoration of Construction Sites | Risk of improper clearance and restoration of construction sites | On completion of the works, all temporary structures will be cleared away, all rubbish cleared; borrow pits, trenches, etc., filled/levelled and effectively sealed off and the site left clean and tidy. | During construction phase | Contractor |

Environmental Management Plan prepared by:

Name: _______________

Designation: __________

Environmental Management Plan Verified by:

Name: _______________

Designation (LAEO): __________
ENVIRONMENT MANAGEMENT FRAMEWORK: Bihar Panchayat Strengthening Project (BPSP)

Name: _______________

Designation (BGSYS): __________