

NATIONAL GANGA RIVER BASIN AUTHORITY
(Ministry of Environment and Forests, Government of India)

Consultation Draft

Volume II
Environmental and Social Management Framework
(ESMF)

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List of Abbreviations

BPL	Below Poverty Line
CPRs	Common Property Resources
EMP	Environmental Management Plan
EP	Entitled Person
ESA	Environmental and Social Assessment
ESMF	Environmental and Social Management Framework
GAP	Ganga Action Plan
GEMP	Generic Environmental Management Plan
GOI	Government of India
Ha	Hectare
LAA	Land Acquisition Act
MoEF	Ministry of Environment and Forests
NGO	Non-Government Organization
NGRBA	National Ganga River Basin Authority
NGRBP	National Ganga River Basin Project
NRCD	National River Conservation Directorate
NLCP	National Lake Conservation Plan
PAP	Project Affected Person
PAF	Project Affected Families
PEA	Project Executing Agency
PMG	Programme Management Group
RAP	Resettlement Action Plan
ROW	Right of Way
R & R	Resettlement and Rehabilitation
SC	Scheduled Caste
SPMU	State Programme Management Units
SRCAs	State River Conservation Authorities
ST	Scheduled Tribe
ULB	Urban Local Body
U/s	Under Section
YAP	Yamuna Action Plan

Glossary of Terms

Bigha	1/5 of an acre
Hectare	A unit for measuring land area. (10000 m ²).
Development Block	A number of villages grouped together form a Development Block.
Tehsil/Subdivision	A group of Blocks
Panchayat Samiti	Local Self-governing body at Block level
District Collector /Magistrate	Administrative head of a District.
Divisional Commissioner	Administrative head of a division comprising a number of districts.
Panchayat	Elected local self-governing body at village level.
Sarpanch	Elected Head/chief of a village level body.
Non titleholders	Drawing economic benefits from a piece of land, but not the owner of the land
Pucca	Cement, bricks or concrete build structure
Semi Pucca	Structures with tiles/ thatch roof/ brick cement wall
Kachha	Structures with stone/ mud wall/ thatch roof
Grievance Redress Cell	A cell set up by the project authority at various levels to look in to grievances of a PAP

SECTION 1

PROJECT DESCRIPTION

1.1 Background

1. River Ganga has significant economic, environmental, and cultural value in India. Rising in the Himalayas and flowing into the Bay of Bengal, the river traverses a course of more than 2,500 km through the plains of north and eastern India. The Ganga basin (which also extends into parts of Nepal, China and Bangladesh) accounts for about 26 percent of India's landmass, 30 percent of its water resources, and more than 40 percent of its population. In addition, Ganga is India's holiest rivers and has a cultural and spiritual significance that far transcends the boundaries of the basin.
2. Due to increasing population in the basin and poor management of urbanization and industrial growth, the water quality of River Ganga has significantly deteriorated, particularly in the dry season. The primary sources of pollution are untreated sewage and industrial wastewater. Non-point pollution sources from religious activities at various locations along the river, agriculture and livestock as well as poor solid waste management also contributes to pollution. In addition, substantial abstraction of water, primarily for irrigation, has led to low flows and associated poor water quality in the critical middle stretch of the river.
3. The previous attempts to clean the river, such as Ganga Action Plan (GAP) launched in 1985 and a similar plan for Yamuna - the biggest tributary of Ganga (YAP), have provided some gains in arresting rate of water quality degradation, but are widely perceived as failures.
4. Lessons from earlier experience indicate that improving water quality in the Ganga cannot be achieved by plugging the infrastructure gap alone. Any effective initiative will have to adopt a three-pronged approach by (i) establishing a basin-level multi-sectoral framework for addressing pollution in the river (ii) making relevant institutions operational and effective and (iii) implementing a phased program of prioritized infrastructure investments.
5. As a major first step in this direction, Government of India (GOI) has established National Ganga River Basin Authority (NGRBA) for the comprehensive management of the river. The NGRBA will adopt a river-basin approach and has been given a multi-sector mandate to address both water quantity and quality aspects. The NGRBA has resolved that by year 2020 no untreated municipal sewage or industrial effluents will be discharged into River Ganga.

1.2 The NGRB Project Components

6. Building on the high-level dialogue with GOI on Ganga, The World Bank has been formally requested to provide a long-term support to NGRBA, through several phases of substantive financing and knowledge support. The first project of such several phases of support aims at (i) establishing and operationalizing central and state level

NGRBA institutions capable of planning and implementing a multi sectoral river water quality improvement program and (ii) reducing pollution loads into the river through selected investments. To achieve the above, the project envisages the following components.

- **Component One : Institutional Development:** This component will support the development of the core institutions needed to improve river water quality in the Ganga basin. This component will include:
 - Setting up the NGRBA central and state-level operational units/PPMUs, including staffing and capacity building.
 - Technical assistance for developing the design of the long-term NGRBA program
 - Setting up a Ganga Knowledge Centre
 - Setting up a modern and comprehensive water quality monitoring system
 - Capacity building of environmental regulators, pertinent to conservation of the Ganga
 - Capacity building of relevant ULB service providers in the selected investment locations, focused on improving their financial sustainability and technical and managerial capacity
 - Pilot programs to demonstrate new technologies and approaches, such as technologies for tapping the energy potential of wastewater, and programmatic approach for accessing CDM financing for the river clean up investments
 - Strategic communications and awareness-building program
 - Project management support, including financing of incremental operating costs of the PPMUs

This component would also support specific investment related studies for future projects, including: pre-feasibility/ feasibility studies; detailed designs; technical, environmental, social, economic, financial, and institutional assessments; associated surveys and consultations; procurement documentation; and project implementation plans.

- **Component Two : Infrastructure Investments:** This component will provide a credit facility for supporting priority infrastructure sub-projects aimed at reducing pollution loads in targeted critical stretches of the Ganga. The majority of the investments will be in wastewater (collection and treatment), solid waste management (collection, transport and disposal), industrial pollution control and prevention (e.g. common effluent treatment plants), and river front management (e.g. electric crematoria and river bank development). A framework will be developed for selecting and funding investments under this component, and it will include criteria for eligibility, prioritization, appraisal (technical, financial, institutional, social and environmental) and implementation arrangements. Project investments will be selected and appraised for funding according to the framework, to ensure that they are well-prepared, sustainable, and most effective in reducing the pollution loads. Not all investments will be identified a priori, and instead will be selected from a long-list on an on-going basis.

- **Component Three : Project Implementation Support:** This component will support further activities needed in order to deliver the project efficiently and effectively. This will include funds to cover monitoring and evaluation of project activities, and compliance with Bank fiduciary and safeguards requirements; coordination among states; and special studies, evaluations and expert inputs as needed. This component will also include preparation of a Strategic Social and Environmental Assessment (SSEA) for Ganga basin.
7. While, the overall technical assistance and program development under the proposed project will focus on the entire Ganga Basin; however specific sub-project investments under the first project will focus on critical stretches of five basin states of Bihar, Jharkhand, Uttar Pradesh, Uttarakhand and West Bengal in India.

1.3 The ESMF

8. Given the distributed nature of project investments over a large area in multiple states, the investments under the project may entail significant environmental and social impacts, including acquisition of private land and resettlement issues.
9. The current ESMF document is intended to help manage the social and environmental impacts through appropriate measures during the planning, design, construction and operation of various sub-projects of NGRBP. The framework identifies the level of safeguard due-diligence required for all categories of sub-projects of NGRBP and provides specific guidance on the policies and procedures to be followed for environmental and social assessment along with roles and responsibilities of the implementing agencies.
10. The ESMF essentially comprises the following key sections.
- Project Description
 - A brief summary of key Environmental and Social Impacts
 - Environmental and Social Regulatory Framework applicable for the project
 - Environmental Management Framework
 - Social Management Framework
 - Project Appraisal, Monitoring and Reporting Arrangements
 - Institutional Arrangements
 - Training and Capacity Building for ESMF

SECTION 2 ENVIRONMENTAL AND SOCIAL IMPACTS

2.1 General

11. The implementation of the river pollution mitigation projects under the National Ganga River Basin Project (NGRBP) is anticipated to encounter a variety of environmental and social issues/problems like pollution of surface and ground water bodies or other natural resources, issues related to air pollution or other environmental health and sanitation hazard, inconvenience to public due to traffic diversions and construction activities, issues of land acquisition and rehabilitation and resettlement. The NGRBP, recognize these environmental and social issues and prepares itself to address their mitigation through a set of management procedures elaborated in this Environmental & Social Management Framework (ESMF). NGRBA, through its state level SRCA's will ensure that policies and procedures described in the ESMF are applied to all World Bank supported projects.
12. To evolve its environmental and social management procedures, NGRBA has carefully examined the portfolio of projects previously executed under the river pollution mitigation projects under Ganga Action Plan (Phase I and II) along with similar other urban infrastructure projects implemented elsewhere in the country under various Government of India sponsored schemes, supplemented by field visits and appraisal of sample projects to be implemented under the present NGRBP and accordingly identified the environment and social issues arising from projects, to be implemented under NGRBP.

2.2 Portfolio of Projects

13. The portfolio of river pollution mitigation projects to be implemented under the NGRBP is given in Table 2.1. The implementation of these projects is spread across several cities and/or towns within the Ganga basin states of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal.

Table 2.1 Portfolio of Sub-Projects under NGRBP¹		
S.No.	Portfolio of sub-Projects	Portfolio Components
1	Sewerage and Sanitation Schemes	<ul style="list-style-type: none"> • Provision for an entirely new sewerage network including individual house connections • Extensions to existing sewerage networks in some parts of cities/towns to include areas which are un-sewered hitherto or to newly developed areas in the recent years
2	Sewage Treatment Plants (New / Upgradation)	<ul style="list-style-type: none"> • Entirely new sewage treatment plant/facility • Augmentation of capacities in existing sewage treatment plant/facility • Remodelling /Renovation of existing sewage treatment facilities,

¹ To be implemented within the Ganga basin states of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal

		resulting in better effluent quality and augmented treatment capacity
3	Solid Waste Management	<ul style="list-style-type: none"> • Engineered landfills with leachate collection and treatment systems • Waste segregation and composting facilities • Waste Processing or Waste to Energy Facilities
4	Industrial Pollution Control Initiatives	<ul style="list-style-type: none"> • Common Effluent Treatment Plant • Common Hazardous Waste Management Facilities • Pilot treatment facilities for various industrial sector • Waste Minimization and Clean Technology Programs
5	River Front Development Projects	<ul style="list-style-type: none"> • River Front Development and beautification schemes of river banks • Construction of Bathing Ghats • Redevelopment of Cremation grounds, situated on river banks • Improvements to existing electric crematoriums, situated on river banks • Restoration / enhancement of cultural / heritage / religious monuments

14 The portfolio of projects under the NGRBP mainly aims at preventing discharge of untreated sewage into River Ganga and thus aiding abatement of river water pollution and improvement in water quality. Consequently, this also contributes to the improvement in the status of environment health & sanitation for the citizens of the concerned cities and towns. The projects, which will be implemented under NGRBP, have its own beneficial as well as adverse impacts. The significance of these impacts depends on the individual project, its size and location. In general, the projects under NGRBP are small in size as compared to major infrastructure development projects and/or Industrial projects and therefore relatively have less potential adverse impacts. The likely beneficial impacts of the projects under NGRBP are:

- Improvement in sewerage collection & treatment within the cities/towns
- Prevention of storm drains carrying sanitary sullage or dry weather flow
- Prevention of ground water and soil pollution due to infiltration of untreated liquid waste
- Prevention of discharge of untreated sewage into River Ganga
- Improvement in water quality of River Ganga, a national resource
- Improvement in environmental sanitation health and reduction in associated health hazards within the cities/towns
- Improvement in quality of life, human dignity and increased productivity
- Reduced nuisance of open defecation due to low cost sanitation and reduced malarial risks and other health hazards
- Improved community participation and sense of ownership

2.3 Environmental and Social Impacts

15 While the Project is expected to benefit the Ganga basin communities, the implementation of proposed components of the project could lead to some adverse

impacts on environment, people and land resources. This section identifies the environmental and social impacts of the sub-project activities with a view to facilitate early evaluation of such impacts and integrate suitable mitigation measures during sub-project planning and implementation. The key social impacts can be grouped into three categories viz., (i) direct (loss of properties; loss of income; loss of livelihood); (ii) indirect (loss of access during construction); and (iii) perceived losses (perception of decline in property values adjacent to STP, land fill sites). Based on field visits and discussion with the potential PEA the typical adverse impacts associated with the projects (portfolio wise) under NGRBP are summarized below.

2.3.1 Sewerage Schemes

16. The projects under this category involve laying of sewer network (both gravity and pressure lines), provision of sewer connections to individual houses, gravity based interception and diversion arrangements to drains carrying sanitary sullage/dry weather flow, construction of new sewage pumping stations including installation of electro mechanical works, renovation and/or remodelling of existing sewage pumping stations among others. Most of these projects would be concentrated in one location except for laying of sewers (both gravity and pressure lines), which are linear projects and the sewers are largely buried below ground or sometimes laid on or above the ground depending upon the available/required slope or gradient.
17. Although there would not be any permanent negative or adverse environmental impacts, **the typical environmental issues** associated with sewerage and sanitation projects are:
 - surface and ground water contamination due to leakage and/or improper joints in sewers
 - severance to utilities and requirements for relocation of utilities due to sewer laying
 - disruption due to local traffic diversions and congestions during sewer laying works
 - impact on public/private properties and other sensitive receptors along the sewer alignment during construction
 - disposal of excess excavated soil and construction debris
 - exploitation of water sources for meeting construction water demand.
 - air and noise pollution from construction equipments
 - health and safety concerns of workers, while laying or rehabilitating existing sewers.
18. As regards to the **Social Impacts**, the requirement of land for these projects is rather small. However, sewerage schemes could displace people (encroachers or squatters) living on the road edges and on sewer alignments areas, which could trigger resettlement issues. This may also result in temporary loss of access to private and common properties during construction.

2.3.2 Sewage Treatment Plants

19. The projects under this category involve construction of new sewage treatment plants, augmentation of treatment capacity in existing sewage plants and renovation and/or re-modeling of existing sewage treatment plants, resulting in improved effluent quality and disposal arrangements as per stipulated standards. Most of these projects would be concentrated in one location and the requirement of land for these projects is rather small as compared to other infrastructure development projects.
20. Although there would not be any permanent negative environmental impacts, the **typical environmental issues** associated with sewerage treatment facility are:
 - change in land use pattern, in case of proposed sewage treatment plants at new locations
 - change in channel hydraulics, triggering erosion and siltation problems, if sewage treatment plants are proposed in flood plains
 - change in hydrology and drainage patterns due to the construction activity, particularly, if sewage treatment facility is located in flood plains
 - issues associated with the disposal of sludge, if sewage is likely to be contaminated with heavy metals due to mix of industrial waste with sewage
 - emission of methane, if not utilized for power generation or any other gainful applications
 - water logging problems due to improper/inadequate disposal arrangements of treated effluent or effluent not conforming to stipulated discharge standards during operation and maintenance phase
 - health and safety issues associated with storage and handling of chemicals for sewage treatment facility operation and maintenance
 - health and safety issues associated with operation & maintenance of sewage treatment facility, particularly exposure to methane and other noxious gases, sludge contaminated with heavy metals etc.
21. Most of these projects would be concentrated in one location and the requirement of land for these projects is rather small as compared to other infrastructure development projects. Hence, the **social impacts** would be minimal. The sewage treatment plants at times would require displacement of people and trigger resettlement issues, if there is need for private land (or) government land that has been occupied/encroached. Displacement may also result in loss of livelihood and income. The land parcels located close to the STPs may see fall in value.

2.3.3 Solid Waste Management Projects

22. These projects involve construction of municipal waste receiving and segregation yards, composting yards, engineered landfills with leachate collection and disposal arrangements among others. Most of these works would be spread over in one location and the requirement of land for these projects is rather small as compared to

other infrastructure development projects. Generally, the land for the solid waste treatment facility will be selected away from habitations.

23. Although there would not be any permanent negative environmental impacts, the **typical environmental issues** associated with Solid Waste Management are:
- surface and ground water contamination due to unmanaged leachate collection and disposal
 - change in channel hydraulics, triggering erosion and siltation problems, if solid waste management facility is proposed in flood plains
 - change in hydrology and drainage pattern, if the facility is located in flood plains
 - air quality, odor and fly nuisance due to the improper operation of waste disposal or processing facilities
 - issues pertaining to siting of facility such as change in land use pattern, proximity to settlements, cultural properties and any other sensitive receptors
 - air and noise pollution from construction equipments
 - health and safety issues associated with operation & maintenance of solid waste treatment facility, particularly of workers manually handling wastes.
24. As regards to the **social impacts**, generally, the land for the solid waste treatment facility will be selected away from habitations. However, the solid waste treatment plant/facility, at times would require displacement of people and trigger resettlement issues, if there is need for private land (or) government land that has been occupied. Displacement may also result in loss of livelihood or sources of livelihood and thus loss of income. The land parcels located close to the solid waste treatment facility may see fall in value.

2.3.4 Industrial Pollution Control Initiatives

25. Sub-projects under this component could involve development of common industrial effluent treatment plants or hazardous waste management plants, etc. These projects by nature of their interventions are aimed at addressing the environmental issues of the Ganga Basin area. However, if the locations and technologies for these pollution control facilities are not appropriately selected, could lead to significant **environmental impacts** such as the following.
- Pollution of water resources
 - Soil contamination due to the disposal of untreated / partially treated effluents and / or hazardous wastes
 - air quality, odor and fly nuisance due to the improper operation of treatment facilities
 - health impacts on the neighboring communities
 - Issues of leachate and loss of productivity to agriculture lands due to the disposal of sludge from the facilities.
26. Similar to the earlier sub-projects, the **Social Impacts** of Industrial Pollution Control sub-projects, could involve displacement of people and trigger resettlement issues, if

there is need for private land (or) government land that has been occupied. Displacement may also result in loss of livelihood or sources of livelihood and thus loss of income. The land parcels located close to the waste treatment facility may see fall in value too.

2.3.5 River Front Development Projects

27. These works involve river front development schemes, beautification of river banks, construction of bathing ghats along rivers, lakes and water bodies improvement, redevelopment of cremation grounds among others. Most of these works would be concentrated in one location. The requirement of land for these works is moderate and much lesser than that is required for the sewage treatment or solid waste treatment facility. Although, these facilities are frequently used by the citizens, the location of these projects will not generally involve displacement of people.
28. There would not be any permanent adverse or negative impacts due to these sub-projects, if there are no major interferences in the river flow channel hydraulics, which can trigger erosion and siltation issues either insitu or elsewhere along the course of the river. The impacts due to community amenity projects could be minimized or mitigated by appropriate interventions and engineering designs.
29. The **environmental issues** that may arise due to community amenity projects like river front development schemes, beautification of river banks, construction of bathing ghats, and redevelopment of cremation grounds are:
- change in land use, and drainage pattern
 - change in channel hydraulics, triggering erosion and siltation problems either at insitu or elsewhere along course of river
 - impact due to inadequate solid and liquid waste disposal arrangements
 - impact due to inadequate sanitation, health and safety facilities
 - impact on river water quality due to proposed amenities
 - impact on environmental aesthetics and cultural value
30. In terms of **Social Impacts**, the requirement of land for these works is moderate and much lesser than that is required for the sewage treatment or solid waste treatment facility. Although, these facilities are frequently used by the citizens, the location of these projects will not generally involve residential displacement, but chances of commercial displacement in form of commercial squatters exists. This may result in loss of source of livelihood and or livelihood.

SECTION 3

ENVIRONMENTAL AND SOCIAL REGULATORY FRAMEWORK

3.1 General

31. The national, state and local environmental and social regulatory requirements that are applicable to the sub-projects proposed under NGRBP are given in this section. As the applicability of these legal requirements would depend on the nature of the specific projects, the exact applicability cannot be determined at this stage. NGRBA has summarized all the regulatory requirements in this ESMF and share it with all the SRCAs & the State level PEAPEA and ensure mandatory compliance to these requirements by all concerned.
32. NGRBA would also verify whether the sub-projects are in compliance with these regulatory requirements prior to granting approval to the projects and disbursement of funds. During implementation, NGRBA would ensure that the all SRCA's monitor the ESMF compliance in all projects to the applicable regulatory requirements on an ongoing basis and periodically report back to NGRBA.

3.2 Applicable Laws And Regulations - Environmental

33. The following are the laws and regulations that are applicable to the environmental and social aspects of the projects to be implemented under NGRBA.
 - Policy and Regulatory Framework of Government of India (GoI)
 - Environmental Policy and Regulations of the respective State Governments
 - Legislations applicable to construction projects
 - Operational Policies and Directives of The World Bank

3.2.1 Legal Framework of Government of India

34. The Government of India has laid out various policy guidelines, acts and regulations pertaining to environment. The Environment (Protection) Act, 1986 is an umbrella legislation for the protection of environment. As per this Act, the responsibility to administer the legislation has been jointly entrusted to the Ministry of Environment and Forests (MoEF) and the Central Pollution Control Board (CPCB)/State Pollution Control Boards (SPCBs).

3.2.2 Key Environmental Laws and Regulations

35. The key environmental laws and regulations as relevant to the projects under the NGRBP are given in **Table 3.1**. The key environmental regulations can also be accessed at www.moef.nic.in/rules-and-regulations

Table 3.1: Environmental Regulations and Legislations

SR. No	Act / Rules	Purpose	Applicable Yes/ No	Reason for Applicability	Authority
1	Environment Protection Act-1986	To protect and improve overall environment	Yes	As all environmental notifications, rules and schedules are issued under this act.	MoEF, GoI, DoE, State Gov. CPCB, SPCB
2	Environmental Impact Assessment Notification 14th Sep-2006	To provide environmental clearance to new development activities following environmental impact assessment	Yes	This notification is applicable only for Sewage Treatment Facility and Solid waste Treatment facility projects under the NGRBP	MoEF, EIAA
3	Municipal Wastes(Management & Handling) Rules, 2000	To manage the collection, transportation, segregation, treatment, and disposal of municipal solid wastes	Yes	This notification is applicable only for Municipal Solid waste Treatment facility projects under the NGRBP	MoEF, EIAA, CPCB, SPCB
4	Notification for use of fly ash	Reuse large quantity of fly ash discharged from thermal power plant to minimize land use for disposal	NO	If thermal plant within 100km from any of the Sewage Treatment Facility and Solid waste Treatment facility projects under the NGRBP.	
5	Coastal Regulation Zone(CRZ) Notification 1991 (2002)	Protection of fragile coastal belt	NO	If Project location is located along coastal belt	
6	National Environment Appellate Authority Act (NEAA) 1997	Address Grievances regarding the process of environmental clearance.	Yes	Grievances if any will be dealt with, within this act.	NEAA
7	The Land Acquisition Act 1894 (As amended in 1985)	Set out rule for acquisition. of land by government	Yes	This act will be applicable to as there will be acquisition of land for projects under NGRBP	Revenue Department State Government
8	MoEF Circular on Marginal Land Acquisition and Bypasses 1999	Defining "marginal land" acquisition relating to the 1997 Notification	NO	Not applicable as per Environmental Impact Assessment Notification 14th Sep-2006	MoEF

SR. No	Act / Rules	Purpose	Applicable Yes/ No	Reason for Applicability	Authority
9	The Forest (Conservation) Act. 1980	To check deforestation by restricting conversion of forested areas into non- forested areas	Yes	This act will be applicable if there is diversion of forest land for non-forest activities i.e. forest land if required for any of the projects under NGRBP	Forest Department, State Government and Ministry of Environment and Forests, Government of India
10	MoEF circular (1998) on linear Plantation on roadside, canals and railway lines modifying the applicability of provisions of forest (Conversation) Act, to linear Plantation	Protection / planting roadside strip as avenue/strip plantations as these are declared protected forest areas.	NO	This act will be applicable if sewers are to be laid along roadside, wherein Roadside tree plantation exists, irrespective of whether tree felling is involved or not.	Forest Department, State Government and Ministry of Environment and Forests, Government of India
11	Wild Life Protection Act 1972	To protect wildlife through certain of National Parks and Sanctuaries	No	This act is will be applicable, if there are any points of wildlife crossing s in proximity to project locations	Chief Conservator Wildlife, Wildlife Wing, State Forest Department and Ministry of Environment and Forests, Government of India
12	Air (Prevention and Control of Pollution) Act, 1981	To control air pollution by & Transport controlling emission of air Department. pollutants as per the prescribed standards.	Yes	This act will be applicable during construction; for obtaining NOC for establishment of workers' camp, construction camp, etc.	SPCB
13	Water Prevention and Control of Pollution) Act1974	To control water pollution by controlling discharge of pollutants as per the prescribed standards	Yes	This act will be applicable during construction for establishments of construction camp, workers' camp, etc.	SPCB

SR. No	Act / Rules	Purpose	Applicable Yes/ No	Reason for Applicability	Authority
14	The Noise Pollution (Regulation and Control) Rules, 2000	The standards for noise for day and night have been promulgated by the MoEF for various land uses.	Yes	This act will be applicable for all construction equipment deployed at worksite of projects under NGRBP	SPCB
15	Ancient Monuments and Archaeological Sites and Remains Act 1958	Conservation of cultural and historical remains found in India	Yes	This act will be applicable, only if any of the projects under NGRBP is in proximity to any Ancient Monument, declared protected under the act.	Archaeological Dept Gol, Indian Heritage Society and Indian National Trust for Art and Culture Heritage (INTACH).
16	Public Liability and Insurance Act 1991	Protection from hazardous materials and accidents.	Yes	Contractor need to stock hazardous material like diesel, Bitumen, Emulsions etc.	SPCB
17	Explosive Act 1984	Safe transportation, storage and use of explosive material	Yes	For transporting and storing diesel, Oil and lubricants etc.	Chief Controller of Explosives
18	Minor Mineral and concession Rules	For opening new quarry.	Yes	Regulate use of minor minerals like stone, soil, river sand etc.	District Collector
19	Central Motor Vehicle Act 1988 and Central Motor Vehicle Rules 1989	To check vehicular air and noise pollution.	Yes	This rule will be applicable to vehicles deployed for construction activities and construction Machinery.	Motor Vehicle Department
20	National Forest Policy 1952 National Forest Policy (Revised) 1988	To maintain ecological stability through preservation and restoration of biological diversity.	NO	This policy will be applicable if any eco sensitive feature exists in and around the projects proposed under NGRBP	Forest Department, State Government and Ministry of Environment and Forests, Government of India
21	The Mining Act	The mining act has been notified for safe and sound mining activity.	Yes	The construction activities for projects under NGRBP will require aggregates. These will be procured through mining from approved quarries	Department of mining, State Government

3.2.3 Other Legislations applicable to Construction Projects under NGRBP

36. Environmental issues during construction activities stage generally involve equity, safety and public health issues. The construction agencies therefore will be required to comply with laws of the land, which include inter alia, the following:

- Workmen's Compensation Act 1923 (the Act provides for compensation in case of injury by accident arising out of and during the course of employment);
- Payment of Gratuity Act, 1972 (gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years);
- Employees PF and Miscellaneous Provision Act 1952 (the Act provides for monthly contributions by the employer plus workers);
- Maternity Benefit Act, 1951 (the Act provides for leave and some other benefits to women employees in case of confinement or miscarriage, etc.);
- Contract Labor (Regulation and Abolition) Act, 1970 (the Act provides for certain welfare measures to be provided by the contractor to contract labour);
- Minimum Wages Act, 1948 (the employer is supposed to pay not less than the Minimum Wages fixed by the Government as per provisions of the Act);
- Payment of Wages Act, 1936 (it lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers);
- 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);
- Payment of Bonus Act, 1965 (the Act provides for payments of annual bonus subject to a minimum of 83.3% of wages and maximum of 20% of wages);
- Industrial Disputes Act, 1947 (the Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment);
- Industrial Employment (Standing Orders) Act; 1946 (the Act provides for laying down rules governing the conditions of employment);
- Trade Unions Act, 1926 (the Act lays down the procedure for registration of trade unions of workers and employers. The trade unions registered under the Act have been given certain immunities from civil and criminal liabilities);
- Child Labour (Prohibition and Regulation) A; 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);
- Inter-State Migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979 (the inter-state migrant workers, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home to the establishment and back, etc.);

- The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Cess Act of 1996 (all the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act; the employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodation for Workers near the workplace, etc.);
- The Factories Act, 1948 (the Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours and rendering information-regarding accidents or dangerous occurrences to designated authorities);
- Hazardous Wastes (Management and Handling) Rules, 1989 (the Rules govern handling, movement and disposal of hazardous waste);
- Manufacture, Storage and Import of Hazardous Chemicals Rules 1989, amended 1994 and 2000 (the Rules provide indicative criteria for hazardous chemicals and require occupiers to identify major accident hazards and prepare on-site and off-site emergency plans).

3.2 4 Safeguard policies of The World Bank

37. The safeguard policies of the World Bank, which are applicable to the subprojects under NGRBP, are given in Table 3.2. The environmental requirements of the World Bank are specified in detail in its Operational Policy (OP) 4.01 and other related Operation Policies. In instances wherein the procedural and regulatory requirements differ, the stringent ones are considered as applicable.
38. The World Bank undertakes environmental screening of each proposed project to determine the appropriate extent and type of Environmental Assessment (EA). The Bank classifies the proposed project into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. The World Bank environmental requirements are based on a four -part classification system as given hereunder:
- Category A -requires a full Environmental Assessment (EA).
 - Category B -projects require a lesser level of environmental investigation.
 - Category C -projects require no environmental analysis.
 - Category FI: A proposed project is classified as Category FI if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impacts

Category A: A proposed project is classified as Category A, if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" situation), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

Category B: A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas—including wetlands, forests, grasslands, and other natural habitats—are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigatory measures can be designed more readily than for Category A projects. The scope of EA for a Category B project may vary from project to project, but it is narrower than that of Category A EA. Like Category A EA, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

Category C: A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

Category FI: A proposed project is classified as Category FI if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impacts.

Table 3.2: Applicability of WB Safeguard Policies for Projects under NGRBP

WB Safe Guard Policy	Subject Category	Applicability for subprojects under NGRBA	Reason For Its Applicability	Mitigation Measures	Safeguard Requirements
OP 4.01	Environmental Assessment	Triggered in case of Category I and II projects	Umbrella policy	All necessary mitigation measures are to be incorporated.	EIA and/or EMP required.
OP 4.04	Natural Habitats	Triggered, in case the projects are in and around close proximity of natural habitats	Eco-sensitive-Forestry and wildlife related issues	All necessary mitigation measures are to be incorporated.	EIA and EMP required
OP 4.36	Forestry	Triggered, in case the projects require diversion of forest lands for specific projects under NGRBP	Diversion of Forest land (to be acquired) for specific projects under NGRBP	Land diversion will be carried out as per Revenue department.	Forest land diversion Application has to be prepared and submitted to forest department
OP 4.09	Pest Management	Not Triggered	Not Applicable	Not Applicable	Not Applicable

WB Safe Guard Policy	Subject Category	Applicability for subprojects under NGRBA	Reason For Its Applicability	Mitigation Measures	Safeguard Requirements
OP 4.12	Involuntary Resettlement	Triggered, in case the projects under NGRBP require land which are either occupied or encroached upon by people	If land acquisition will lead to loss of livelihoods, loss of land and Buildings etc	To be Incorporated in RAP	Resettlement Action Plan
OP 4.10	Indigenous people	Triggered, in case the projects under NGRBP require land which and are either occupied or encroached upon or affect the indigenous people	Separate Indigenous people development Plan is required for the Project.	Separate Indigenous people development Plan to be prepared	Indigenous people development Plan
OP 4.11 (draft)	Cultural Property	Triggered, in case the specific projects are in close proximity of Archeological/Historical monuments	Triggered, in case the specific projects are in close proximity of Archeological/Historical monuments	Required permissions from the Department are to be obtained prior to commencement of construction	Application has to be prepared and submitted to Archeological department

3.3 Applicable Laws And Regulations - Social

39. All strategic interventions on human development, spread across all social issues, need directives of policies and legal support to operationalise the appropriate actions. These policies and legislations help to overcome the constraints and support administrator, implementer, community and individual in delivery of justice. This chapter includes the World Bank as well as National policies and Acts as detailed under:

World Bank Social Safeguard Policies

- i) Operational Policy 4.10 on Indigenous Peoples/Tribes
- ii) Operational Policies 4.12 on Involuntary Resettlement

National Policies and Acts

- i) National Tribal Policy, 2006
- II) National Resettlement and Rehabilitation Policy, 2007
- ii) (Land Acquisition Act 1894 as modified in 1985)
- iii) 73rd Constitution Amendment Act, 1992

3.3.1 World Bank Operational Policies

OP 4.10 on Indigenous Peoples/Tribes

40. The World Bank Policy on indigenous peoples, OP/BP 4.10, Indigenous Peoples, underscores the need for borrowers and Bank staff to identify indigenous peoples, consult with them, ensure that they participate in, and benefit from Bank-funded operations in a culturally appropriate way - and that adverse impacts on them are avoided, or where not feasible, minimized or mitigated.

OP 4.12: Involuntary Resettlement

41. Involuntary Resettlement is triggered in situations involving involuntary taking of land and involuntary restrictions of access to legally designated parks and protected areas. The policy aims to avoid involuntary resettlement to the extent feasible, or to minimize and mitigate its adverse social and economic impacts. It promotes participation of displaced people in resettlement planning and implementation, and its key economic objective is to assist displaced persons in their efforts to improve or at least restore their incomes and standards of living after displacement. The policy prescribes compensation and other resettlement measures to achieve its objectives and requires that borrowers prepare adequate resettlement planning instruments prior to Bank appraisal of proposed projects.

3.3.2 National Policies And Acts

The National Tribal Policy (2006)

42. The Policy has the following objectives:

Regulatory Protection

- Providing an environment conducive to the preservation of traditional and customary systems and regime of rights and concessions enjoyed by different ST communities, and reconciliation of modes of socio-economic development with these.
- Preventing alienation of land owned by STs and restoring possession of wrongfully alienated lands.
- Protection and vesting of rights of STs on forestlands and other forest rights including ownership over minor forest produce (MFP), minerals and water bodies through appropriate legislations and conversion of all forest villages into revenue villages.
- Providing a legislative frame for rehabilitation and resettlement in order to minimize displacement, ensure that affected persons are partners in the growth in the zone of influence, provide for compensation of social and opportunity cost in addition to market value of the land and rights over common property (NPV).
- Empowerment of tribal communities to promote self-governance and self-rule as per the provisions and spirit of the Panchayats (Extension to the Scheduled Areas) Act, 1996.

- Protection of political rights to ensure greater and active participation of tribal peoples in political bodies at all levels.

Alienation of Tribal Land

- Alienation of tribal land is the single most important cause of pauperization of tribal peoples, rendering their vulnerable economic situation more precarious. Poor land record system in tribal areas coupled with the illiteracy, poverty and ignorance of tribal peoples and the greed of others have resulted in the continuous transfer of resources from tribals to non-tribals for several decades. Competent legal aid will be made available timely to tribals at all stages of litigation.
- State Land laws will be in conformity with the PESA Act (The Provisions of the (Extension to the Scheduled Areas) Act, 1996". The Act is meant to enable tribal society to assume control over their own destiny to preserve and conserve their traditional rights over natural resources.

Displacement, Rehabilitation and Resettlement

- The principle of least displacement would be mandatorily followed.
- An exhaustive **social impact assessment** would be conducted before initiating a development project.
- Displacement would be after mandatory consultation with the community as provided in the **PESA Act**.
- The principle of '**land for land**' in the command area or zone of influence would be followed scrupulously.
- There will be mandatory consultations with **Tribes Advisory Councils** in case of displacement of STs from the Scheduled Areas.
- STs displaced from Scheduled Areas shall be allotted alternative lands in Scheduled Areas only.
- Compensation would be computed not merely on the basis of the replacement value of the individual land rights lost, but on the market value of land, the concept of **net present value**, loss of opportunity cost, community rights, and livelihoods.
- The **PAFs** would have first right to get employment in the project. Training should be organized for the induction of PAFs even before the project is initiated.
- The implementation of R&R would be upfront to make the process of displacement more humane.
- A ground level monitoring mechanism, involving representatives of the PAFs and post implementation social audit will also be ensured.
- In application to Scheduled Areas, the provisions of the Land Acquisition Act, 1894, the National Policy on Resettlement and Rehabilitation– 2007, the Coal Bearing Areas (Acquisition and Development) Act, 1957 and the National mineral Policy, 1993 will be amended to harmonize with those of the PESA Act, 1996.

Empowerment

- The Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996 (PESA) came into force on 24th December, 1996 with the objective of safeguarding and preserving the traditions and customs of the people living in the Fifth Schedule areas, their social, religious and cultural identities, and traditional management practices of community resources.

National Resettlement and Rehabilitation Policy for Project Affected Families - 2007

43. The national policy on resettlement and rehabilitation represents a significant milestone in the development of a systematic approach to addressing resettlement. The policy establishes a framework for extending additional assistance to project-affected families, over and above the compensation for affected assets provided under the Land Acquisition (LA) Act.
44. This policy strikes a balance between the need for land for developmental activities & protecting the interests of land owners and others. The benefits under the new policy are available to all Project Affected Persons (PAP) & families whose land, property or livelihood is adversely affected by land acquisition, involuntary displacement due to natural calamities, etc.

Land Acquisition Act, 1894 (As Modified Until 1st September, 1985)

45. The act is applicable to the whole of India except the state of Jammu and Kashmir. The policy provides a broad guideline of procedure of land acquisition. The Land Acquisition (LA) Act of 1984 is commonly used for acquisition of land for any public purpose. It is used at the State level with State amendments made to suit local requirements. Expropriation of and compensation for land, houses and other immovable assets are carried out under the Land Acquisition (Amendment) Act, 1984. The Act deals with compulsory acquisition of private land for public purpose. The LA Act does not contain any provision specifically dealing with resettlement including income restoration aspects.

Table 3.3: The Land Acquisition Process

Legal Provision	Actions
Section 4	Draft prepared by requiring body, verified by the Ministry of Law, printing and proof reading. Publish in official gazette and two local newspapers; post notice locality No further land sales, transfers or subdivisions after notice Appoint Land Acquisition Officer (LAO) to survey land Notices under section 4(1) issued to individual owners and interested parties (one month)
Declaration of Public purpose	Government certifies that land is required for a public purpose Declaration is published Collector / Deputy Commissioner receives order from Revenue Department, State Government Land appraisal begins (two weeks to a month)
Section 5(a) Enquiry	Enquire objections to LA Land owners and interested parties appear before LAO Revenue commissioner calls for comments of acquiring agency if objections are raised – (one to three months)
Section 6	State government issues notices LAO serves individual notice on all interested parties of government's intention to take possession of land Time and place set for claims to LAO Public notice given Collector or LAO investigate claims (12 months)
Section 9	LAO conducts on-site inquiry regarding area of LA and compensation payable LAO determines compensation (12 months)
Section 11 and 12	Declaration of final award by Collector/Commissioner/State Government after inquiry of total valuation Notice of awards given to interested parties for payment of compensation Government can take possession of land and hand over to implementing agency (14 months)

Seventy Third Constitution Amendment Act, 1992

46. The Act enables participation of Panchayat level institutions in decision-making by broadening the village level functions, supporting implementation of development schemes. As per the amendment, the rights and duties of the Panchayat have been included in the XI Schedule of the Constitution. The Act provides for involvement of the PRIs especially, the Gram Sabha/ Panchayat during project preparation and implementation. The Panchayats at the village level will be involved for preparation and implementation of the project. The Gram Panchayat/Sabha will coordinate with the PIU to finalize the alignment, land width accretion, incorporation of suggestions made by the community, identification of eligible persons, entitlement provisions, grievance redressal and collection of MoU/Affidavit for land transfer or assets.

Forest Rights Act 2006

47. The Act basically does two things:
- Grants legal recognition to the rights of traditional forest dwelling communities, partially correcting the injustice caused by the forest laws.
 - Makes a beginning towards giving communities and the public a voice in forest and wildlife conservation

SECTION 4

ENVIRONMENTAL MANAGEMENT FRAMEWORK

4.1 Objective

48. The Objective of ESMF is to ensure environmentally sustainable development in NGRBA's endeavor of **Mission Clean Ganga** by providing a framework that helps effective management of environmental and social issues in all the sub-projects with a special focus on the following:
- ensure that all sub-projects under NGRBP adhere to the national, state and local regulatory requirements during the design, implementation and operation stages
 - ensure that best environmental practices are mainstreamed / integrated during design, implementation and operation of the sub-projects
 - strive to enhance environmental conditions wherever feasible
 - undertake to develop communication strategy, capacity building and training initiatives for all stakeholders such as the SPMUs, PEAs, ULBs, NGOs and common citizens.

4.2 Purpose of the ESMF

49. The purpose of the ESMF is to facilitate the management of environmental and social issues of the river pollution mitigation projects, proposed to be implemented under the National Ganga River Basin Project (NGRBP). At this stage, although the category or portfolio of projects to be implemented under the NGRBP has been broadly identified, the specific projects, i.e. the size, type and location are not available or yet to be identified. Therefore, at this stage it is not possible to develop specific environment and social management plans for each of the specific projects. Considering that the specific project identification is a need based/demand-driven process in consonance with the overall objective of 'Mission Ganga', it is considered appropriate to have an Environmental and Social Management Framework (ESMF), that could be used as an umbrella by the NGRBA, SRCAs and all implementing agencies under NGRBP, while preparing and /or appraising, approving and implementing the projects.
50. Through the ESMF, the SRCAs and NGRBA will also be implementing international good practices for managing social and environmental issues of the sub-projects under the NGRBP using an explicit management framework.

4.3 Environmental Categorisation of Sub-Projects

51. The portfolio of potential sub-projects under NGRBP, depending on its location, size and nature of project activities, will have varying impacts on environment. The extent of assessment required to identify and mitigate the impacts largely depends upon the complexities of project activities. To facilitate effective screening, the portfolio of projects to be implemented under NGRBP, have been grouped into the following two

categories, based on the severity of its potential impacts, regulatory requirements of Government of India (GoI) as well as State Governments apart from the safeguard requirements of the World Bank:

- Category I – Sub-Projects requiring Environmental and Social Assessment and development of RAP (Category A and B projects as per OP 4.01 of The World Bank)
- Category II – Sub-Projects requiring implementation of generic environmental management plans (Category C, as per OP 4.01 of The World Bank)

4.3.1 Category I Sub-Projects

52. A proposed sub-project is classified as Category I, if it is likely to impact (adverse or moderate) the environmental and social aspects of the project influence area (including land acquisition). The category I projects will also essentially include all those projects, which require the mandatory environmental clearance as per the EIA notification S.O 1533 (E) dated Sept 2006, published by Ministry of Environment and Forests.
53. The sub-projects categorized as I would require conducting an Environmental and Social Assessment (ESA) by an independent agency (other than the agency designing the project) and the scope of the assessment will be decided based on the nature of the project and the environmental and social sensitivity of the project area. The ESA shall examine all the potential negative and positive environmental and social impacts of the project, compare them with those of feasible alternatives (including the "without project" situation), and recommend any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

4.3.2 Category II Sub-Projects

54. Category II projects are those, which are likely to cause minimal or no adverse environmental impacts on human populations. The impacts in case of category II projects are largely localized and are temporary in nature. In most cases mitigation measures are readily available. In view of the above, these projects would require preparation of an Environmental and Social Analysis, as part of the DPR, and implementation of Generic Environmental Management Plan (GEMP), relevant to the project.
55. Based on the above criteria, the categorization of potential sub-projects of the NGRBP is presented in **Table 4.1**. The classification, as described above, is based on the perceived sensitivity, severity of potential impacts and regulatory requirements and is developed to serve as a guidance tool. However, the environmental sensitivity of each of the sub-project location will be analyzed during sub-project preparation and the category of each project will be determined on a case to case basis and necessary environmental due-diligence will be carried out.

56. While the SPMUs can decide upward categorization of the sub-project indicated below (for instance from II to I), but scaling down of category should be carried out only on the prior approval of the NGRBA and World Bank after submitting relevant justifications for it.

Table 4.1: Categorisation of NGRBP Projects	
Portfolio components	Environmental Category
A. Sewerage/Sanitation	
1. Extension of existing or new sewer net work (without sewage pumping stations and/or sewage treatment facility)	II
2. Extension of existing or new sewer net work with sewage pumping stations and/or sewage treatment plants, involving fresh land acquisition	I
3. Low cost sanitation Programs	II
B. Sewage Pumping stations and Sewage Treatment Plant/Facility	
1. New sewage pumping station/facility involving fresh land acquisition	I
2. New Sewage Treatment Plant/Facility involving fresh land acquisition	I
3. Capacity augmentation of existing sewage pumping station/facility but not involving fresh land acquisition	II
4. Capacity augmentation of existing Sewage Treatment Plants, but not involving fresh land acquisition	II
C. Industrial Pollution Control Projects	
1. New Common Effluent Treatment Plant/facility	I
2. New hazardous waste receiving, treatment storage and disposal facility	I
3. Pilot projects on IPC technologies	I
4. Waste Minimization and clean technology programs	II
D. Solid Waste Management	
1. Sanitary Landfill Sites with leachate collection and disposal arrangements with or without fresh land acquisition	I
2. Solid waste segregation and compositing facilities with or without fresh land acquisition	I
1. Solid Waste collection & transportation Projects	II
E. River Front Development Schemes	
1. River front management projects without land acquisition and without potential to interfere with waterway hydrology	II
2. River front management projects with land acquisition and / or with potential to interfere with waterway hydrology	I
3. Redevelopment of cremation grounds situated on river banks	II
4. Electric and/or CNG crematoria along river banks	II

4.4 Safeguard Management Requirements for Sub-Projects

57. All the sub-projects classified as Category I would require conducting an ESA by an independent agency or consultant, not associated with the project design. The ESA

should examine the project's potential negative and positive environmental and social impacts, compare them with those of feasible alternatives (including the "without project" situation), and recommend measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve safeguard performance. The ESA shall include all the suggested mitigation measures in the form of a project specific environmental management plan (EMP), Rehabilitation Action Plan (RAP) and Social Management Plan (SMP) along with bill of quantities and cost estimates. The bill of quantities of the EMP shall be included in the bid/contract document and shall be implemented accordingly.

58. A sample terms of reference (TOR) for conducting EA for category I projects is provided in Annex I.
59. For category II sub-projects, an analysis of environmental and social issues shall be provided in the DPR and generic environmental management measures shall be implemented to mitigate the temporary impacts, mostly anticipated during the construction phase of the project. This shall also include preparation of bill of quantities and cost estimate. Wherever applicable, the GEMP requirements shall be included in the bid/contract documents and it will be ensured that all measures are implemented by the project.
60. A sample Generic Environmental Management Plan (GEMP) for category II projects is provided in Annex II. However, during the project preparation phase, this EMP is to be validated with actual site conditions and updated to make it more project-specific.

4.5 Stakeholder Consultations and Disclosure

61. Planning and design of all the sub-projects of NGRBP will include adequate consultations with the project-affected groups and other stakeholders and will specifically focus on the project's environmental and social impacts. For Category I sub-projects, the consultation with these groups shall be carried out at least twice: (a) shortly after screening and before the terms of reference for the ESA are finalized; and (b) once a draft ESA report is prepared. In addition, such groups will be consulted throughout project implementation as necessary to address ESA-related issues that affect them. This will enable to elicit the concerns of the stakeholders and address them upfront in the project design during the project preparation phase itself.
62. In order to facilitate meaningful consultations and also effective participation of the stakeholders in the project, all the project related information will be shared with the likely project-affected groups and local NGOs, in a timely manner prior to consultation and in a form and language that are understandable and accessible to the groups being consulted.
63. In case of Category I projects, a summary of the proposed project's objectives, description, and potential impacts will be provided for the initial consultation. For consultation after the draft ESA report is prepared, a summary of the ESA's conclusions will be provided. In addition, the draft ESA report will be made available at all relevant public locations, accessible to project-affected groups and the

stakeholders. The ESA report will also be disclosed in website of the SRCA, NGRBA and the World Bank's Infoshop.

4.6 Environmental Regulatory Compliance

64. In addition to the above, the sub-projects should also comply with all the applicable environmental regulations and should secure required clearances / authorizations. Tables **Table 4.2 and 4.3** provide a summary of such clearances and permissions.

Table 4.2: Environmental Regulatory Requirements for NGRBA Sub-Projects

S. No.	Type of Clearance	Applicability	Project Stage	Responsibility	Time Required
1	Environmental Clearance from MoEF/SIAA	Applicable for select projects	Pre Construction	SPMU	Not Applicable
2	Forest Clearance for land diversion	For forest land acquisition	Pre Construction	SPMU	6-8 Months
3	Tree felling permission	For roadside tree cutting, incase sewers are to be laid	Pre construction	SPMU	15 days
4	NOC and consents under Air, Water & Environment Act and noise rules from SPCB	For establishment of construction camp.	Construction stage (Prior to initiation of any work)	Contractor	2-3 Months
5	NOC and consents under Air, Water & Environment Act and noise rules from SPCB	For operating construction plant, crusher, batching plant etc.	Construction stage (Prior to initiation of any work)	Contractor	1-2 Months
6	Explosive License from Chief Controller of Explosives,	For storing fuel oil, lubricants, diesel etc. at construction camp	Construction stage (Prior to initiation of any work)	Contractor	2-3 Months
7	Permission for storage of hazardous chemical from CPCB	Manufacture storage and Import of Hazardous Chemical	Construction stage (Prior to initiation of any work)	Contractor	2-3 Months
8	Quarry Lease Deed and Quarry License from State Department of Mines and Geology	Quarry operation (for new quarry)	Construction stage (Prior to initiation of any work)	Contractor	2-3 Months
9	Permission for extraction of ground water for use in road construction activities from State Ground Water board	Extraction of ground water	Construction stage (Prior to initiation of any work)	Contractor	2-3 Months
10	Permission for use of water for construction purpose from irrigation department	Use of surface water for construction	Construction stage (Prior to initiation of any work)	Contractor	2-3 Months
11	Labor license from labor commissioner office	Engagement of Labor	Construction stage (Prior to initiation of any work)	Contractor	2-3 Months

Table 4.3: Environmental Regulatory Compliance during Construction and Operation of NGRBA Sub-Projects

Project Portfolio	Applicable Legislations	Obligations	Responsibility
A Sewerage & Sanitation Projects			
1. Laying entirely new sewer Net Work or extension to existing network including providing house connections and gravity based interception and diversion arrangements to drains carrying sanitary sullage/dry weather flow	None	<ul style="list-style-type: none"> • Ensure Air and Noise Quality is within stipulated limits of SPCB's • Ensure minimum hindrance to traffic, pedestrians and minimum interruption to services 	<ul style="list-style-type: none"> • Contractor during construction and operating agency during operation & maintenance • ULB/PEA ULB/Operating Agency
1. Sewerage Network and Pumping Stations	Air Act, 1981 & Noise Rules as per EP Act, 1986	<ul style="list-style-type: none"> • Ensure Air and Noise Quality is within stipulated limits of SPCB's 	<ul style="list-style-type: none"> • Contractor during construction and operating agency during operation & maintenance • ULB/PEA ULB/Operating Agency
2. Sewerage Network, Pumping Station and Treatment Plant	Water Act, 1974 Hazardous Wastes (Management and Handling) Amendment Rules, 2000	<ul style="list-style-type: none"> • Secure Consent to establish and Operate for sewage treatment plant from SPCBs and Ensure Air and Noise quality is within the stipulated limits of SPCB and CPCB 	<ul style="list-style-type: none"> • Contractor during construction and operating agency during operation & maintenance • ULB/PEA ULB/Operating Agency
3. Low Cost Sanitation	None	<ul style="list-style-type: none"> • Ensure Air and Noise Quality is within stipulated limits of SPCB's • Ensure minimum hindrance to traffic, pedestrians and minimum interruption to services 	
4. Generators at Sewage Pumping Stations and Sewage Treatment Plant	Air Act 1981 & Noise Rules as per EP Act, 1986	<ul style="list-style-type: none"> • Secure Consent to establish and Consent to Operate for sewage treatment plant from SPCBs • Ensure Air and Noise quality is within the stipulated limits of SPCB and CPCB 	<ul style="list-style-type: none"> • ULB/PEA ULB/Operating Agency
B Industrial Pollution Control Projects			
1. Common Effluent Treatment Plants	Hazardous Wastes (Management and Handling) Amendment Rules, 2000	<ul style="list-style-type: none"> • Secure the Consent to Establish and Consent to Operate from SPCBs • Obtain Environmental Clearance from MOEF • Ensure Air, water(surface and ground) and Noise Quality is within stipulated limits of SPCB's/CPCB 	ULB/ PEA ULB / Operating Agency
2. Hazardous Waste Receiving, Treatment, Storage and Disposal Facilities	Hazardous Wastes (Management and Handling) Amendment	<ul style="list-style-type: none"> • Secure the Consent to Establish and Consent to Operate from SPCBs • Obtain Environmental Clearance from MOEF 	ULB/ PEA ULB / Operating Agency

Project Portfolio	Applicable Legislations	Obligations	Responsibility
	Rules, 2000	<ul style="list-style-type: none"> Ensure Air, water(surface and ground) and Noise Quality is within stipulated limits of SPCB's/CPCB 	
C Solid Waste Management Facilities			
A. Engineered Landfill Sites	MSW Rules, 2000 Air, Act, Water Act and EPA	<ul style="list-style-type: none"> Secure the Consent to Establish and Consent to Operate from SPCBs Obtain Environmental Clearance from MOEF Ensure Air, water(surface and ground) and Noise Quality is within stipulated limits of SPCB's/CPCB 	<ul style="list-style-type: none"> ULB/ PEA ULB / Operating Agency
B. Composting Facilities	MSW Rules, 2000 Air Act Water Act and EPA	<ul style="list-style-type: none"> Secure the Consent to Establish and Consent to Operate from SPCBs Obtain Environmental Clearance from MOEF Ensure Air, water(surface and ground) and Noise Quality is within stipulated limits of SPCB's/CPCB Ensure no odor and fly nuisance in and around the waste segregation units within the compost yard through appropriate mitigation measures 	<ul style="list-style-type: none"> ULB/ PEA ULB / Operating Agency
D River Front Development Schemes			
A. River front development and beautification schemes	None	<ul style="list-style-type: none"> Ensure Air and Noise Quality is within stipulated limits of SPCB's Ensure minimum hindrance to traffic, pedestrians and minimum interruption to services 	ULB/ PEA ULB / Operating Agency
B. Construction of Bathing Ghats	None	<ul style="list-style-type: none"> Ensure Air and Noise Quality is within stipulated limits of SPCB's Ensure minimum hindrance to traffic, pedestrians and minimum interruption to services 	ULB/ PEA ULB / Operating Agency
C. Redevelopment of cremation grounds situated along river banks	None	<ul style="list-style-type: none"> Ensure Air and Noise Quality is within stipulated limits of SPCB's Ensure minimum hindrance to traffic, pedestrians and minimum interruption to services 	ULB/ PEA ULB / Operating Agency
D. Modification of electric /CNG crematoriums situated along river banks	Air Act, 1981	<ul style="list-style-type: none"> Secure No Objection Certificate from SPCB Consent to establish Consent to Operate Ensure Water, Air and Noise quality is within the stipulated limits of SPCB. 	ULB/ PEA ULB / Operating Agency

SECTION 5

SOCIAL MANAGEMENT FRAMEWORK

5.1 General

65. This framework describes the policy, principles and approach to be followed in minimizing and mitigating adverse social and economic impacts by the sub projects. The social management framework has four parts viz., (i) Resettlement Policy and Land Acquisition Framework; (ii) Indigenous Peoples Management Framework (IPMF); (iii) Gender Assessment and Development Framework (GAD); and (iv) Consultation framework.

5.2 Resettlement Policy and Land Acquisition Framework

66. The guidelines are prepared for addressing the issues limited to this project for resettlement and rehabilitation of the PAPs. This policy has been developed based on the National Resettlement and Rehabilitation Policy, 2007 and the World Bank OPs 4.12 on involuntary resettlement and 4.10 on indigenous peoples.

5.2.1 Broad Principles

67. The 'Social Policy' of NGRBP aims to resettle and rehabilitate the affected persons on account of its sub projects in a manner that they do not suffer from adverse affects and shall improve or at the minimum retain their previous standard of living, earning capacity and production levels. It is also the endeavor of the NGRBP that the resettlement shall minimise dependency and be sustainable socially, economically and institutionally. Special attention will be paid for the improvement of living standards of marginalised and vulnerable groups.

68. The broad principles of the policy are as below:

- The adverse impacts on persons affected by the project would be **avoided** to the extent possible.
- Where the adverse impacts are unavoidable, the project-affected persons will be assisted in improving or regaining their standard of living. Vulnerable groups will be identified and assisted to improve their standard of living.
- All information related to resettlement preparation and implementation will be disclosed to all concerned, and community participation will be ensured in planning and implementation.
- Private negotiations will also be used for land acquisition as required.
- The persons affected by the project who does not own land or other properties but who have economic interest or lose their livelihoods will be assisted as per the broad principles brought out in this policy.
- Before taking possession of the acquired lands and properties, compensation and R&R assistance will be made to those who are available and willing to receive the entitlements in accordance with this policy.

- There would be no/or minimum adverse social, economic and environmental effects of displacement on the host communities but if needed specific measures would be provided.
- Broad entitlement framework of different categories of project-affected people has been assessed and is given in the entitlement matrix. Provision will be kept in the budget. However, anyone moving into the project area after the cut-off date will not be entitled to assistance.
- Three tier appropriate grievance redress mechanism has been established at project level to ensure speedy resolution of disputes.
- All activities related to resettlement planning, implementation, and monitoring would ensure involvement of women. Efforts will also be made to ensure that vulnerable groups are included.
- All consultations with PAPs shall be documented. Consultations will continue during the implementation of resettlement and rehabilitation works.
- As required, a Resettlement Action Plan will be prepared including a fully itemized budget and an implementation schedule.

5.2.2 Definitions

69. The following definitions are used in the documents.
70. **Cut-off date:** In the cases of land acquisition affecting legal titleholders, the cut-off date would be the date of issuing the notice u/s 4(1) of the LA Act, 1894. In cases where people lack title, the cut-off-date shall be a year prior to the date of start of the Census survey undertaken by the project authority.
71. **Project Affected Person:** Affected persons are those who stand to lose all or part of their physical and non physical assets including homes, productive land, community resources, commercial properties; livelihood; and socio-cultural network.
72. **Project Displaced person:** A displaced person is a person who is compelled to change his/her place of residence and/or work place or place of business, due to the project.
73. **Affected family means:** A family whose primary place of residence or other property or source of livelihood is adversely affected by the acquisition of land for a project or involuntary displacement for any other reason
74. **Definition of Family:** "Family" shall mean husband, wife and dependants including parents and children in case of joint family on the date of section 4 of LA Act or entry in the family register of Panchayat. Major sons and daughters will be treated as separate family if their livelihood is separately affected by the project.

75. **Wage Earner:** A person who is working with a commercial establishment or working as a labour in an agriculture land, which is being affected by the project.
76. **Encroacher::**A person, who has trespassed Government land, adjacent to his/her own land or asset, to which he/she is not entitled, and deriving his/her livelihood prior to the cut-off date.
77. **Squatter:** Squatter is a person who is land less and has settled on publicly owned land without permission and has been occupying publicly owned building without authority prior to the cut-off date.
78. **Poverty Line (BPL):** A family whose annual income from all sources is less than a designated sum as fixed by the concerned State Government in which the project falls, will be considered to be below Poverty Line.
79. **Income:** Income of a PAP shall mean the amount of income as shown in his Income Tax Return prior to the cut-off date. In absence of such a return, his income shall be calculated by an objective assessment. The certificate of BPL from the Block / Tehsil will be used for identifying the BPL
80. **Vulnerable Person:** Unless otherwise specifically mentioned in this document, a person who has been designated under 'Below Poverty Line' category as identified by the concerned State Government will be considered a vulnerable person. Disadvantaged persons belonging to SC, ST, disabled/handicapped, and woman heading the household are also recognized as vulnerable persons. Also vulnerable persons such as the disabled, destitute, orphans, widows, unmarried girls, abandoned women ,or persons above fifty years of age; who are not provided or cannot immediately be provided with alternative livelihood , and who are not otherwise covered as part of family;
81. **Entitled Person:** person adversely impacted by the project and is entitled to some kind of assistance as per the project entitlement framework
82. **Titleholders (THs):** Persons who possess legal documents in support of claims made towards ownership of structure or land are titleholder.
83. **Sharecroppers:** Persons who cultivate land of a titleholder on certain and conditions
84. **Host population:** People living in or around areas to which people physically displaced by a project will be resettled who, in turn, may be affected by the resettlement.
85. **Kiosk:** Kiosk is a temporary structure not fixed to ground. Normally kiosks are wooden structure on four legs on the ground and can be easily moved.

5.2.3 The Process

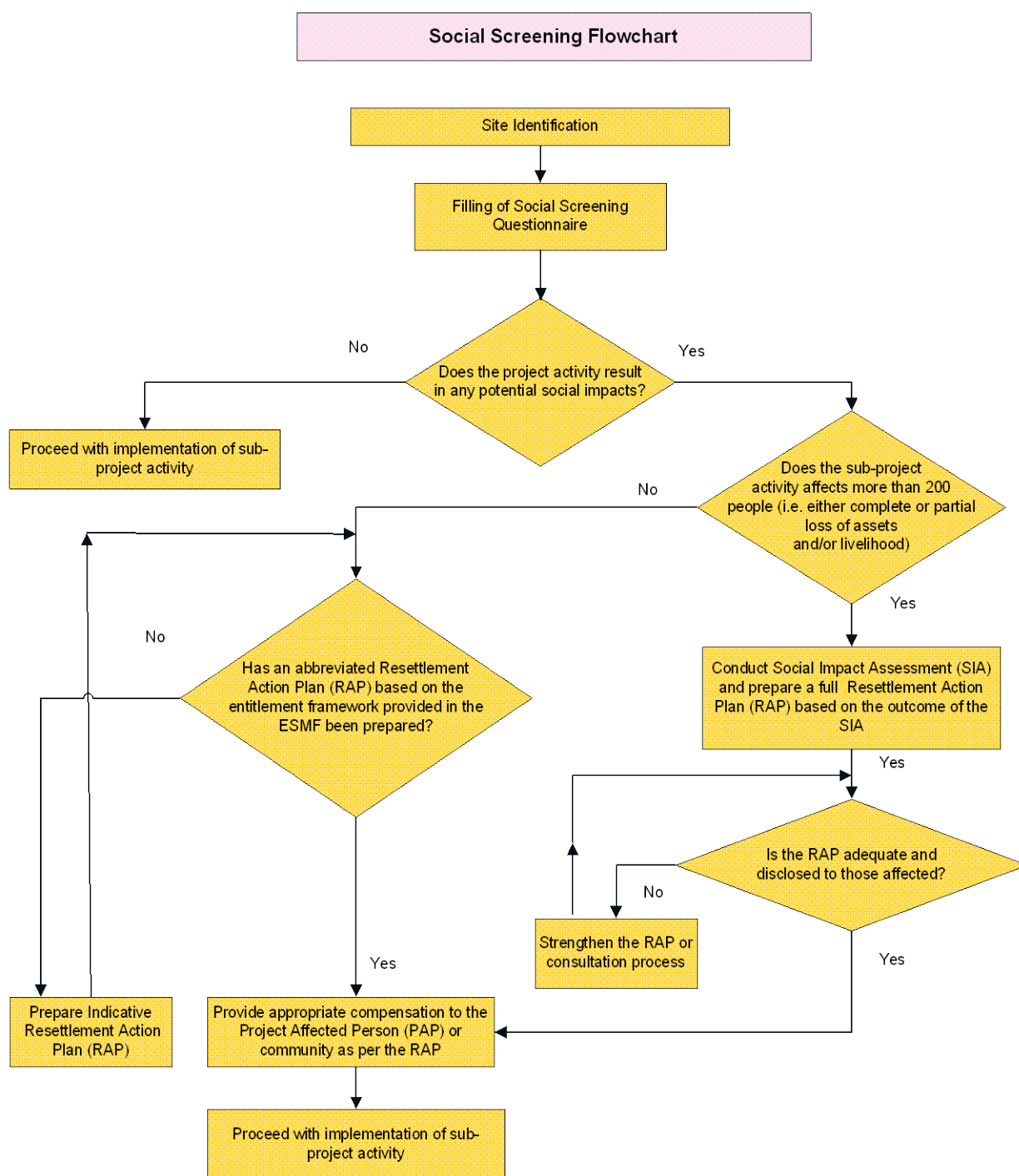
Declaration of the project and its impact zone

86. The Project Executing Agency (PEA) will inform the community well in advance about the project, its feature and likely adverse impact if any and also the positive impact of the project.

Social Screening: Identification of Impacts and categorization

87. Screening is the first step in the ESMF process. The purpose of screening is to get an overview of the nature, scale and magnitude of the issues in order to determine the need for conducting SIA and preparing Resettlement Action Plan (RAP). After identifying issues, the applicability of the Bank's environment and social safeguard policies is established along with Government of India's regulatory requirements. Based on this, boundaries and focus areas for the SIA along with the use of specific instruments are determined.
88. Though it is envisaged that the subproject activities will have very generic social issues that are manageable through standards and codes of practice, there might be some sub-project activities proposed in due course, that carry a higher risk social disruptions and/or impacts. The possibility of such an issue arising in the sub-project site will be identified during the screening process. The screening format has been designed to identify sub-project/s with potential social issues that may need to be addressed at the project planning stage.
89. The outcome of the screening process will help prioritize the various investments and where required, start the clearance process in a timely manner e.g. project sites (in particular requiring Forest Clearance etc) wherein clearance process is expected to take longer duration can be sequenced/phased later in overall project implementation but the clearance process for such sites is initiated at the start of the overall project. This shall help ensure that no sub projects are dropped merely due to delay in the clearance procedures. The social screening flowchart depicted in Figure 5.1 below illustrates the overall screening process.

Figure 5.1: Social Screening flowchart



Preparation of Resettlement Action Plans

90. Having identified the potential impacts of the relevant sub-projects, the next step is to develop action plans to mitigate the impacts. The RAPs provides a link between the impacts identified and proposed mitigation measures to realize the objectives of involuntary resettlement. The RAPs will take into account magnitude of impacts and

accordingly prepare a resettlement plan that is consistent with this framework for Bank approval before the sub-project is accepted for Bank financing.

- a) Sub-projects that will affect more than 200 people due to land acquisition and/or physical relocation and where a full Resettlement Action Plan (RAP) must be produced.
- b) Sub-projects that will affect less than 200 people will require an abbreviated RP.
- c) The above plans will be prepared as soon as subproject is finalized, prior to Bank's approval of corresponding civil works bid document.
- d) Projects that are not expected to have any land acquisition or any other significant adverse social impacts; on the contrary, significant positive social impact and improved livelihoods are exempted from such interventions.

Sub Project Approval

91. In the event that a subproject involves land acquisition against compensation or loss of livelihood or shelter, the implementing agency shall:
 - a) not approve the subproject until a satisfactory RAP has been prepared and shared with the affected person and the local community; and
 - b) not allow works to start until the compensation and assistance has been made available in accordance with the framework.

Procedure to be followed for social impact assessment (SIA)

92. The PEA will undertake a survey for identification of the persons and their families likely to be affected by the project. Every survey shall contain the following municipality or ward / village-wise information of, the project affected families:
 - i. members of families who are residing, practicing any trade, occupation or vocation in the project affected area;
 - ii. Project Affected Families who are likely to lose their house, commercial establishment, agricultural land, employment or are alienated wholly or substantially from the main source of their trade occupation or vocation or losing any other immovable property.
 - iii. Agricultural labourers and non-agriculture labourers.
 - iv. Losing access to private property or common property resources
93. The PEA on completion of the survey will disseminate the survey results among the affected community. Based on the social impact assessment survey, PEA will prepare an action plan to mitigate or minimize the adverse impacts as identified during the survey. The draft mitigation plan in form of resettlement action plan (RAP) will be again disseminated among the affected individuals / community. The feedback received from the affected groups will be incorporated to the extent possible before finalization of the RAP.

94. Every-draft Resettlement Action Plan (RAP) prepared shall contain the following particulars namely.
- a) the extent of area to be acquired for the project and the name(s) of the corresponding village(s) / municipality area.
 - b) village wise or municipality wise list of project affected families and likely number of displaced persons by impact category
 - c) family-wise and the extent and nature of land and immovable property in their possession indicating the survey numbers thereof held by such persons in the affected zone;
 - d) a list of agricultural labourers in such area and the names of such persons whose livelihood depend on agricultural activities;
 - e) a list of persons who have lost or are likely to lose their employment or livelihood or who have been alienated wholly and substantially from their main sources of occupation or vocation consequent to the acquisition of land and / or structure for the project;
 - f) a list of occupiers; if any
 - g) a list of public utilities and Government buildings which are likely to be affected;
 - h) a comprehensive list of benefits and packages which are to be provided to project affected families by impact category;
 - i) details of the extent of land available which may be acquired in settlement area for resettling and allotting of land to the project affected families;
 - j) details of the basic amenities and infrastructure facilities which are-to be provided for resettlement;
 - k) the time schedule for shifting and resettling the displaced families in resettlement zones;
 - l) such other particulars as the Administrator for Resettlement & Rehabilitation may think fit to include for the information of the displaced persons.

5.2.4 R&R Benefits for Project Affected Families

95. The resettlement and rehabilitation (R&R) benefits shall be extended to all the Project Affected Families (PAF) whether belonging to below poverty line (BPL) or non-BPL. The details are provided in the entitlement matrix. For tribal the following provisions will be adhered.
- Each Project Affected Family of ST category shall be given preference in allotment of land.
 - Tribal PAFs will be re-settled close to their natural habitat in a compact block so that they can retain their ethnic/linguistic and cultural identity
 - The Tribal Land Alienated in violation of the laws and regulations in force on the subject would be treated as null and void and-the R&R benefits would be available only to the original tribal land owner.

5.2.5 Entitlement Matrix

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
Loss of Land and structures - (Titleholder/customary/usufruct right holders)			
(1) Loss of agricultural land	Titleholders/Household	Compensation at replacement cost Special provisions for vulnerable	<ul style="list-style-type: none"> • Direct purchase at negotiated price (or) compensation for land at replacement value • If AP is from vulnerable group, compensation for the land by means of land for land will be provided if AP wishes so, provided that government land of equal productive value is available. If allotted land is waste land/degraded land, one time assistance of Rs 15,000 per hectare will be provided towards land development charges. • If the residual plot (s) is (are) not viable, the affected person becomes a marginal farmer any of the following two options are to be given to AP, subject to his/her acceptance: <ol style="list-style-type: none"> (a) The AP remains on the plot, and the compensation and assistance paid to the tune of required amount of land to be acquired (b) Compensation and assistance are to be provided for the entire plot including residual part, if the owner of such land wishes that his/her residual plot should also be acquired by the NGRBP. The NGRBP will acquire the residual plot and pay the compensation for it. • Reimbursement of registration and stamp duty charges
(2) Total loss of homestead/commercial land and structure	Titleholders/Household	Compensation at replacement cost Special provisions for vulnerable	<ul style="list-style-type: none"> • Direct purchase at negotiated price (or) compensation for land at replacement value • Compensation for loss of affected structural area will be paid at the replacement cost to be calculated as per latest prevailing basic schedules of rates (BSR) without depreciation. • Shifting assistance of Rs 10000 • Right to salvage material from the demolished structure and frontage, etc • Rental assistance as per the prevalent rate in the form of grant to cover maximum three/Six months rentals • Reimbursement of registration and stamp duty charges • For vulnerable groups losing residential/commercial structures and do not

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
			have any other housing units within limit of the local bodies, shall be given preference to allot a house under any housing scheme at cost.
(3) Partial loss of homestead/commercial land and structure	Titleholders/Household	Compensation at replacement cost	<ul style="list-style-type: none"> ○ Direct purchase at negotiated price (or) compensation for land at replacement value ○ Compensation for loss of affected structural area will be paid at the replacement cost to be calculated as per latest prevailing basic schedules of rates (BSR) without depreciation. ○ Right to salvage material from the demolished structure and frontage, etc
Loss of Structure by Non Titleholder			
(4) Loss of structure (immovable assets constructed by squatters and encroachers)	Household	Compensation at replacement cost Special provisions for vulnerable	<ul style="list-style-type: none"> ● Squatters will be notified and given one month time to remove their assets. ● No compensation for land ● Compensation for squatters for loss of affected structural area will be paid at the replacement cost to be calculated as per latest prevailing basic schedules of rates (BSR) without depreciation. ● Shifting assistance of Rs. 10000/- for squatters. ● Right to salvage material from the demolished structure. ● Encroachers will be notified and given one month time to remove their assets and harvest their crops.
Livelihood losses			
(5) Income/livelihood losses	Titleholders losing income through business	Rehabilitation Assistance	● Title holders losing their business establishment due to displacement will be provided as per the prevailing MAWs for 200 days./ Income from Unit for 3 months
	Titleholders losing income through agriculture	Rehabilitation Assistance	<ul style="list-style-type: none"> ● Title holders losing their primary source of income due to displacement will be provided with as per the prevailing MAWs for 200 days. ● Training Assistance will be provided for income generating vocational training and skill upgradation options as per APs choice ● Employment opportunity for APs in the sub project works, if available and if so desired by them.
	Squatters (NTH)/Agricultural	Rehabilitation assistance	● Assistance to be paid as per the prevailing MAWs for 180 days

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
	laborer/sharecropper losing primary source of income		<ul style="list-style-type: none"> • Training would be provided for upgradation of skills to the APs. • Employment opportunity for APs in the sub project works, if available and if so desired by them. Or <ul style="list-style-type: none"> • National/State level job card under National Rural Employment Guarantee Program.
	Licensed mobile vendors and kiosk operators	Rehabilitation Assistance	<ul style="list-style-type: none"> • Mobile vendors are not eligible for compensation or assistance. • Those mobile vendors in possession of a permit from local authorities to operate in the affected area will be treated as kiosk operators. • Kiosk operators and vendors licensed to operate from affected locations will be entitled to a one time lump sum assistance of Rs. 4000/-.
Loss of Trees and Crops			
(6) Loss of Trees	a) Land holders b) Sharecropper c) Lease holders	Compensation at Market value to be computed with assistance of horticulture department	<ul style="list-style-type: none"> • Advance notice to APs to harvest fruits and remove trees • For fruit bearing trees compensation at average fruit production for next 15 years to be computed at current market value • For timber trees compensation at market cost based on kind of trees
(7) Loss of Crops	a) Land holders b) Sharecropper c) Lease holders	Compensation at Market value to be computed with assistance of agriculture department	<ul style="list-style-type: none"> • Advance notice to APs to harvest crops • In case of standing crops, cash compensation at current market cost to be calculated of mature crops based on average production.
Other Impacts			
(8) Additional Assistance to vulnerable groups	Vulnerable households including BPL, SC, ST, WHH, disabled and handicapped	Special Assistance	<ul style="list-style-type: none"> • One time lump sum assistance of Rs. 10000/ to vulnerable households. (This will be paid above and over the other assistance(s) as per this framework)
(9) Adverse indirect impacts on	Community/	Special	<ul style="list-style-type: none"> • Allocation of one percent of capital cost of the sub project cost as Neighborhood

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
neighborhood and drop in land values due to location of landfill and/or STP	Titleholder	assistance	<p>Development Fund</p> <ul style="list-style-type: none"> One time financial assistance to the immediate private land owners adjacent to the project site @ Rs 15000 per hectare to each person in the records of rights Green belt around the landfill site and / or STP site.
(10) Loss of community infrastructure/ amenities	Community	Special assistance	<ul style="list-style-type: none"> The common property resources and the community infrastructure shall be relocated in consultation with the community
(11) Loss of access to private and / or common resource property	Community/households	Special assistance	<ul style="list-style-type: none"> Provide alternative access
(12) Temporary impact during construction like disruption of normal traffic, damage to adjacent parcel of land / assets due to movement of heavy machinery and plant site	Community / Individual	Compensation	<ul style="list-style-type: none"> The contractor shall bear the cost of any impact on structure or land due to movement of machinery during construction or establishment of construction plant All temporary use of lands outside proposed RoW to be through written approval of the landowner and contractor. Location of Construction camps by contractors in consultation with PEAPEA
(13) Any other impact not yet identified, whether loss of asset or livelihood			<ul style="list-style-type: none"> Unforeseen impacts shall be documented and mitigated based on the principles agreed upon in this policy framework.

5.2.6 Land Acquisition and Compensation Disbursement Process

96. According to the assessment of the preliminary list of prioritized works, there will be need for private land acquisition which will result in involuntary displacement and loss of livelihood in both urban and rural areas and therefore OP 4.12 has been triggered. However, involuntary resettlement is likely to be of small scale and would not trigger the need for a full resettlement action plan. Nevertheless, as a precaution, the classification of subprojects of the ESMF describes actions and procedures to be followed in case any involuntary displacement does occur. In the event that involuntary displacement as defined in the bank's policy 4.12 takes place, the principles and procedures defined in the project's RPLAF will apply

97. As part of the ESMF, the project counterparts are developing a Resettlement Policy and Land Acquisition Framework (RPLAF), which specifies the procedures, eligibility,

grievance redressal and other measures to be followed in the event that resettlement or land acquisition is required for any sub-project. Once the location of the works is known during project implementation, individual resettlement or land acquisition plans will be prepared for each sub-project necessary. The Resettlement Action Plans will be reviewed and approved by the bank before being implemented. The RPLAF will also apply to other components of the project that in the judgment of the Bank, are (a) directly and significantly related to the Bank assisted project, (b) necessary to achieve its objectives as set forth in the project documents; and (c) carried out, or planned to be carried out, contemporaneously with the project.

98. Since the projects will have two stage clearances-first at the feasibility level and second at the DPR level, the tentative site for any sub project will be identified at the feasibility level itself. During DPR preparation, analysis of alternatives will be carried out to avoid or reduce involuntary taking of private land. Once the site is finalized and land parcel to be acquired are identifies, detailed land plan schedule will be prepared. The process of land acquisition will be initiated once; the feasibility report is cleared so that by the time DPR is finalized, notification under section 6 will also be ready. On the final approval of sub project, notifications under 6, 9, and 11 will be issued so that the entire land required for the sub project is acquired before the mobilization of contractor. In Jharkhand private land acquisition owned by a tribal family will be carried out under Santhal Pargana Tenacy Act 1949.

5.2.7 Land Acquisition

99. Land acquisition will be in accordance with the following
- (a) Land needed for the project shall be acquired by direct negotiation as outlined in this policy framework. However, record of all those cases where negotiations have failed and reasons for failure of negotiations shall be maintained for future reference.
 - (b) The Emergency Clause of the Land Acquisition Act, 1894 contained in Section 17 thereof, shall not be invoked for land acquired for this project.
 - (c) A time period of 45 days would be available for carrying out negotiations with the landowners.
 - (d) The negotiations shall begin by offering a minimum of 1.5 times of the registered value or stamp duty value/circle rate (whichever is higher) in order to make the propositions financially attractive to the landowners (sellers). If the registered value/stamp duty or circle rates are more than a year old at time of negotiations, 10% per annum will be added to bring the rates to currents levels. Such PAFs shall be entitled to 30% solatium. Those PAFs losing land shall be eligible for additional assistance equivalent to registration cost of land lost and expenditure incurred on paper work during the purchase of the land.
 - (e) A maximum of 4 rounds of negotiations may be conducted with the landowners.
 - (f) After every round of negotiation, record would be sent to the SPPMU for information.
 - (g) The negotiations shall be conducted village-wise, involving groups in order to maintain transparency.
 - (h) If land acquisition by negotiation is finalized, the entire negotiated amount will be paid in a single instalment within three months of negotiations Interest @ 9% will be paid for any delays in the payment of compensation beyond three months.

- (i) Entitled person has an option to surrender residual plot to project authority and be compensated as per provisions of the policy.
 - (j) All land measurements shall be based on the latest revenue map of the concerned village.
100. Land acquisition will be the responsibility of the Executing agency (EA). The Land Acquisition Plan (LAP) as per the detailed design giving details of each plot such as Plot No., total area of affected land, area of land to be acquired, percentage of total land area affected, names of interested persons, type of land, present use of land, etc along with revenue map shall be prepared by the Executing Agency.
- (a) In case of land being acquired through negotiation, the requiring agency will pay the entire negotiated amount to the land losers as bullet payment.
 - (b) After approval of micro-plan, the Project Authority will pay all kinds of assistance to affected persons in a transparent manner.
 - (c) In case of land being acquired through LA Act, the compensation amount will be paid to the land losers as per provisions of the Act. The EA will deposit the entire amount of compensation with the concern Land Acquisition Collector. The completion of land acquisition is considered only when the landowner receives the notice for collection of compensation amount.
 - (d) In case when some claimants are pending even after several reminders (maximum 4) and notifications, the compensation money will be kept with the EA in a separate account till the currency of the project. Interested parties either directly or through their legal heirs, as the case may be, may claim their compensation before the Land Acquisition Collector after satisfactory documentary verification. After project completion however, the money may be kept in the Govt. treasury as “unclaimed money”.

Steps to be followed for Private Negotiations

101. The following steps will be followed for private negotiations.
- 1. A time period of 45 days would be available for carrying out negotiations with the Landowners.
 - 2. A maximum of 4 rounds of negotiations may be conducted with the landowners.
 - 3. After every round of negotiation, record (Documentation) would be sent to the District Collector / Magistrate and SPPMU for information.
 - 4. The negotiation shall be conducted village-wise, involving groups in order to maintain transparency

Defining Negotiation Rates

102. The EA will collect the details of land rates (Circle Rate & Registry Rate) of the affected villages. On the basis of circle rate/registry rate calculate base rate / minimum offer rate to start negotiation, as given in this framework.

Arrange for Meeting in the Village of PAPS

103. EA will arrange the venue, in consultation with land owners. It is better to fix a convenient place within the village. In case of unavailability of venue, same could be arranged in Office of the District Magistrate and ensure transportation of land owners from village to venue.
104. A written invitation will be given to each land owner and Patwari of concerned villages with date & time and venue of negotiation. In case of any change in the programme, prior information should reach the PAPs.
105. Before the start of negotiation, related documents i.e., Resettlement Policy Framework, circle rate, etc. will be made available to land owner by EA
106. During negotiation, it is required that Patwari should bring the revenue record along with him, for clarification and reference.

Negotiations of Land Rates

107. The negotiation shall begin by offering a minimum of basic land rate/value i.e, circle rate. If the circle rate is more than one year old at the time of negotiation, additional 10% per year will be to added) +1.5 times + 30% .(See table 5.1 for calculation of basic rate):

Table 5.1 : Calculation sheet for land rate

Calculation sheet for Land Rate							
S. No.	Particulars	Circle Rate /Acre (Rs.)	Adjusting old rate at par with new rates (10% for every year of old circle rate)	After Adjustment Circle Rate {3+4}	1.5 times of {3+4} Enhanced circle rate	Entitle-ment of solatium (30% of 6)	Total Base Rate
1	2	3	4	5	6	7	8
1	Circle Rate (2007)	100.00	-	-	150.00	195.00	195.00
2	If circle rate is of 2006	100.00	10.00	110.00	165.00	214.50	214.50
3	If circle rate is of 2005	100.00	20.00	120.00	180.00	234.00	234.00

Approval of final negotiated land rate

108. The revenue officials (representative of DM such as ADM (LA) or ADM himself/ herself), members of negotiation committee and EA representative should be there during negotiation with land owners. For the first round, a introduction will be given by the representative of EA. Once final negotiated rate is given to DM, he will send it

to government for approval. Once the rates are approved by the government EA/ NGO will prepare the Micro plan/ issue identity cards & will help PAPs to open joint Bank Account so that compensation and assistance can be paid immediately.

Award of compensation

109. Disbursement of compensation is primarily the responsibility of revenue department. After land rate have been fixed by the competent authority and approved by the concerned state government, the rate and the calculated amount (as per micro-plan, title-holder) will be sent to SPPMU for funds. The SPPMU will deposit the required fund in account of the Land Acquisition Collector for announcement of award. The actual payment to each land owner has to be made by the SDM-cum-LAC.

Precautions to be taken during negotiation meeting:

110. Following precautions will be taken
1. Outsiders should not be allowed in meeting place. Only PAP's (landowner), opinion leaders, members of negotiation committee and their officials shall be allowed in the meeting.
 2. A signed acceptance letter needs to be taken from every landowner after final negotiation.
 3. Copy of minutes of meeting shall be given to each land owner, opinion leaders, members of Negotiations Committee and SPPMU
 4. Efforts shall be made that the meeting once fixed with the PAP's and opinion leader is not postponed.
 5. Verified list of land owners and their revenue details must be kept during negotiation.

5.3. Indigenous Peoples Management Framework (IPMF)

5.3.1 Introduction

111. The guiding principles enshrined in the constitution of independent India as also various plans and policies for safeguarding the interests of scheduled tribes notwithstanding, the benefits of development of free and shining India have by and large by-passed the scheduled tribes. This issue is source of anxiety and worry for the administrators, implementers and researchers of the country. This anxiety and worry has to be understood in the context of all kinds of development projects that have been/are being carried out across the country, including the National Ganga River Basin Project (NGRBP).
112. The Indigenous People (IPs) in India are categorized as tribal who often become vulnerable in development projects because of their cultural autonomy which is usually undermined and also because this group endure specific disadvantages in terms of social indicators of quality of life, economic status and usually as subject of social exclusion. Out of the five states through which the main stem of river Ganga flows, only Jharkhand (26.34%) has significant proportion of tribal population followed by West Bengal (5.49%) and Uttarakhand (3.02%). In Uttar Pradesh and Bihar, tribes are less than 1% of the total population. In all states, tribes are present

in all districts along the river Ganga except for two districts in Uttar Pradesh, though the spatial distribution varies from state to state. The only district along the Ganga in Jharkhand is Sahebganj where tribes are 31% of the total population. In West Bengal distribution of tribes varies from 0.2% in Kolkatta district to 8.3% in Medinipur district. In Uttarakhand, it varies from 0.1% in Tehri Garhwal to 0.9% in Uttarkashi. In Uttar Pradesh, it varies from 0.1% in Ghazipur, Bullandshahr and Ballia to 0.9% in Allahabad. Two districts namely Jyotibaphule Nagar and Kannauj do not have any tribal population. In Bihar, percentage of tribes to the population to the total population varies from 0.03% in Khagaria district to 5.87% in Katihar.

5.3.2 Indigenous Peoples Management Framework

113. OP 4.10 has been triggered though to the extent possible, private land owned by a tribal family will not be acquired. As part of ESMF, an Indigenous Peoples Management Framework (IPMF) is being prepared. The IPMF aims at affectively promoting IP participation throughout the project cycle. The general objective of the IPMF is the inclusion of IP communities in the project in order to achieve the highest possible positive impact of the interventions to improve their quality of life, throughout strengthening of their organization, self management, and integral capacity of their members. The specific objectives of the IPMF are to ensure that: (a) works are culturally appropriate (b) works and services provided do not inadvertently induce inequality by limiting project benefits to the elite elements of the community, (c) the project engages with communities through a consultation process appropriate to the local cultural context and local decision making process; and (d) establish appropriate information-, communication-, and diversity-training strategies with the different IPs and communities in all stages of the project.
114. Consultation being a continuous process, the ESMF's disclosure on the websites of the SPPMU and PMG will continue during project implementation. The Environmental Management Plan (EMP) and Resettlement Action Plans (RAPs) will also be disclosed in line with the general principles and procedures of the ESMF disclosure and consultation plan. The draft EMP and RAP will be discussed with the affected community and final EMP and RAP will be disclosed on the website of the state and national PPMU. The copies of EMP and RAP will be placed at the offices of executing agencies, district magistrate and contractor's office. The executive summary of EIA and RAP will also be translated in local language and will be place in the office of Gram Panchayat of the affected villages. The list of affected persons will be pasted on the conspicuous place in all the affected villages. The ESMF and its specific instruments provide guidelines and procedures for further consultations during project implementation, in particular in defining and designing subprojects and specific works. The consultation frameworks provide systematic guidance to address potential risks and to enhance quality, targeting, and benefits to the population. Dialogue and disclosure actions during the assessment and execution process of a subproject are designed that those stakeholders involved, whether they benefit from or are affected by the impacts of works, are well informed and participate in the decision-making process. The ESMF procedures consider the level f environmental and social risk of each work to allocate time and effort to consultation.

5.3.2.1 Issues

115.. Based on a rapid assessment of the field situation in the project areas, consultations with the stakeholders, and findings of several studies, it is found that there are number of constraining factors as important for enabling the indigenous people to participate in the project and to derive benefits at par with others. These comprise: (i) limited exposure to emerging market; (ii) limited access to institutional credit, farm inputs and agricultural extension services; (iii) lack or poor leadership quality and lack or inadequate representation/participation in decision-making; and (v) lack of consultation with them on developmental issues. Poverty, illiteracy, landlessness/ low amount of the land holding, limited access to the available agricultural extension services (such as the improved seeds, fertilizers and improved farm practices, etc) have also been the constraining factors of their participation in the overall development process. However, it would be unrealistic to assume that all the issues mentioned above will be addressed by the project. Especially, when there are several other programs of the government and NGOs addressing most of these issues, it would be a right approach that the NGRBP aims at creating implementation strategies to dovetail such development programs for the benefits of the indigenous and disadvantaged groups in sub-project areas. However, the project would focus on issues that are directly related to their involvement in project activities and accessing project benefits. The bottom-line is to ensure equitable opportunities for the indigenous to get project benefits. The main objective of the indigenous group development strategy would be, therefore, to ensure that the indigenous people are actively involved with the project activities and they have access to project benefits at par with the rest of the community. The strategy also aims at minimizing any negative impacts like creating further sources of social and economic imbalances between communities. The development strategy for the indigenous groups is summarized in the table below:

5.3.2.2 Objectives

116. This framework is based on the National Tribal Policy 2006 of Government of India and World Bank's operational policy 4.10. The principal objectives of the framework are to:
- (i) ensure that project engages in free, prior, and informed consultation with the indigenous community wherever they are affected.
 - (ii) ensure that project benefits are accessible to the indigenous community living in the project area
 - (iii) avoid any kind of adverse impact on the indigenous community to the extent possible and if unavoidable ensure that adverse impacts are minimized and mitigated
 - (iv) ensure indigenous peoples participation in the entire process of preparation; implementation and monitoring of the sub project activities
 - (v) minimize further social and economic imbalances within communities; and
 - (vi) develop appropriate training / income generation activities in accordance to their own defined needs and priorities.

117. The need for an Indigenous Peoples Development Plan (IPDP) will be established on the basis of the following criteria: (i) adverse impacts on customary rights of use and access to land and natural resources; (ii) negative impacts on socio-economic and cultural identity; (iii) impacts on health, education, livelihood and social security status; (iv) any other impacts that may alter or undermine indigenous knowledge and customary institutions.

5.3.2.3 Procedure for Preparing an IPDP

118. In order to prepare an IPDP the following steps will be taken:
- Social screening to establish the presence of tribes in the project area or have collective attachment to the project area
 - based on a detailed social assessments establish baseline data on the tribal people (subsistence, employment, community networks) in the project area;
 - review Acts / policy guidelines applicable in the respective states regarding tribal groups and also the central Acts / Policies;
 - identify the impacts (both positive and negative) and prepare an IPDP;
 - disclose the draft IPDP

Screening

119. During the planning and design phase of the sub project, screening survey will be carried out based on group discussion with the communities in the sub project area in order to identify presence of any tribal group or any such group that have collective attachment to the project area. Apart from the consultation with the community members, consultations / in depth interviews will also be carried out with the NGOs working in the area and representative of local self government. The screening will look into the details of tribal households, assessing the number of such households along the zone of influence of the proposed sub project. If the result shows that there are tribal households, the issues related to the community will be included in the social impact assessment (SIA) survey.

Social Impact Assessment

120. The PEA will be responsible for conducting SIA and the development of an action plan with the help of indigenous community and organizations working for them. The SIA will gather relevant information on demographic, social, cultural; economic and networking aspects of each household and needs of the community as a whole. The information on individual household will be collected through household survey where as community based needs will be assessed through group discussions with the community as a whole as well as in discussion with the community leaders and government and non -governmental officials working in the area on tribal issues. The discussion will focus on both positive and negative impacts of the sub project. The suggestion and feedback of the community on the design and planning of the sub project will also be documented.

Consultation, Disclosure and Institutional Framework

121. The PEA will prepare the IPDP and finance, implement and monitor it. The IPDP will be implemented along with the Resettlement Action Plan (RAP). A local NGO with the relevant experience will be hired to assist the PEA in planning and implementing the IPDP. The NGO will be fully briefed on World Bank's policy on indigenous people. IPDP committees will be formed at State and District level to implement and monitor the plan.
122. The tribal groups will be consulted in preparing the IPDP. They will be informed of the mitigation measures proposed and their views will be taken into account in finalizing the plan. The plan will be translated in the local language and made available to the affected people before implementation.
123. The tribal institutions and organizations in the affected area will also be involved in implementing the IPDP and in resolving any disputes that may arise. PEA will ensure that adequate funds are made available for the plan.

Monitoring and Evaluation

124. PEA will set up an internal monitoring system comprising its own staff, NGOs, tribal people and their institutions to monitor plan implementation. Monitoring indicators will be established. In addition, an external independent monitoring agency will be employed by PEA. Reporting formats will be prepared for both internal and external monitoring.

5.3.2.4 Suggested format for IPDP

125. The suggested format for the IPDP is as follows
 - Description of sub projects and implications for the indigenous community
 - Gender disaggregated data on number of tribal households by impact category
 - Social, cultural and economic profile of affected households
 - Land tenure information
 - Documentation of consultations with the community to ascertain their views about the project design and mitigation measures
 - Findings of need assessment of the community
 - Community development plan based on the results of need assessment
 - Modalities to ensure regular and meaningful consultation with the community
 - Institutional arrangement and linkage with other national or state level programmes
 - Institutional mechanism for monitoring and evaluation of IPDP implementation and grievance redress
 - Implementation Schedule and cost estimate for implementation

5.3.2.5 Key Elements of IPDP and Participatory Approach

126. The **key elements** in an IPDP include:
- All development plans for indigenous people should be based on full consideration of the options and approaches that best meet the interests of the communities.
 - Scope and impact be assessed and appropriate mitigation measures are identified
 - Project should take into account the social and cultural context of affected peoples, and their skills and knowledge relating to local resource management
 - During project preparation, formation and strengthening of indigenous peoples organization; communication to facilitate their participation in project identification, planning, execution and evaluation should be promoted.
 - In case PEA is not capable of preparing and implementing IPDP, experienced community organizations / NGOs can be involved as intermediaries.
127. **Participatory Approach for Preparation of IPDP.** The main thrust of IPDP is to address the developmental issues of the project taking into consideration the marginality status of tribal community. The IPDP will offer developmental options addressing community based needs of indigenous people while respecting their socio-cultural distinctiveness. The IPDP aims at strengthening the existing capacity of the affected tribal community. The strategy of IPDP therefore would be to promote participation of the tribal people, initiating and identifying people's need, priorities and preferences through participatory approaches. Therefore, the action plan for a particular village will be prepared by the community themselves. These plans would be prepared on yearly basis.
128. Participatory Rural Appraisal (PRA) initiates the process of people's participation, facilitating decision-making through mutual discussion and direct consultation. Participatory approach is intended to promote participation of all stakeholders creating development opportunities for the affected community. It is therefore, mandatory that appropriate PRA tools along with Focus Group Discussion (FGD) is employed to initiate participation in IPDP for collection of qualitative data. The areas of enquiry would mainly include:
- Identification of tribal groups
 - Access to natural resources, likely impact on land ownership and land distribution, share cropping and lease holder
 - Participation in the livelihood security component of the project
 - Employment and income generating opportunities in agriculture, trade and business and services
 - Poverty
 - Women and Gender relation
 - Felt needs and community organization
129. With a view to assess the life patterns of the affected indigenous population and to prepare IPDP in consistent with community and region specific background, pertinent baseline information shall be collected, compiled and analyzed. The baseline information on socio-economic characteristics including land tenure, land

holding categories, occupational pattern, usual activity status, income – expenditure pattern, access to natural resources, health status, literacy level, age structure, gender, marital status, etc shall be collected in order to facilitate the planning process. The baseline data shall be collected through pre-tested structured schedules.

130. The most important component of IPDP is to assess the type and magnitude of impacts, both positive and negative on the tribal communities. The assessment of impacts on tribal population in the projects shall focus on the probable consequences of the project according to specific criteria / indicators. The indicators may include:
- Access to natural resources (such as forest, grazing land, weekly markets, etc.)
 - Job opportunities through wage labour within or outside agriculture
 - Employment and income generating opportunities in agriculture, trades, services and business
 - Tribal community rights, institutions, values and way of life
 - Social infrastructure and public services such as sources of water, health facilities, schools, etc
 - Reduction in political power, marginalisation and social disarticulation
 - Changes in farming methods, cropping pattern, crop yield, income, expenditure pattern, etc
131. One major activity during the course of the survey would be to identify, various community specific developmental needs linked to their socio-economic and cultural life. The needs shall be identified for infrastructure development and community service facilities such as weekly markets, drinking water facility, sanitation, health facility, schools, community halls, post office, watershed structure, drainage, etc;

5.3.2.6 Implementation Issues and Strategy

132. It is envisaged that proper implementation of IPDP is possible only through community participation. The participatory approach will ensure:
- Promotion of community concern and involvement
 - Proper organization and management of resources
 - Setting up of criteria and fixing criteria and procedures for project execution are done at the grass root level
 - Identification, selection and strengthening of implementing agency at the grass roots level \
133. Steps will be taken to ensure that (i) tribal community participates in the project, (ii) is fully aware of their rights and responsibilities; and (iii) are able to voice their needs during IPDP preparation. The community would be encouraged to prepare their own plan that caters to the needs of the community.
134. Appropriate people's organization and forum need to be built up and strengthened to ensure effective peoples representation and empowerment in the process of selection of specific community development activities and their execution. The

conventional top down approach to project implementation through prevailing bureaucratic framework, need to be reoriented for the framework of participative administrative structure to respond to bottom up initiatives based on participatory process for informed community participation and empowerment.

135. IPDP as a means of sustainable development is based on the strategy of using culturally appropriate, socially acceptable and economically viable opportunities for livelihood of the tribal community including farmers, agriculture and non-agriculture labour, women and wage earners. The strategy includes:
- Participation of tribal community in plan preparation, formulation and implementation by strengthening their existing tribal social, political and community organizations through required legislative measures, positive administrative responses and people's mobilization.
 - Strengthening women's traditional role in subsistence economy through organization, capacity building for leadership and skills improvement, access to non timber forest produce (NTFP), while bringing about greater sharing of household responsibilities between men and women.
 - Keeping in view the strong bondage of the tribal community with land and forest, subsistence practices, traditional culture and ways of life, the strategy may create space for innovative policy measures through appropriate legislation / executive actions. Such innovative policy responses may cover any aspect of their needs from food security, income generating activities, right over forest produce, community health measures or any such issue as generated by the community in course of their participation in the plan process.
 - Involvement of non-governmental organization (NGO) as an interface between the government and the tribal community to "bind" and strengthen their organizations, develop a mechanism for redress of grievances and facilitate their being a "stakeholder" in the institutional arrangements for IPDP.
 - To ensure the right institutional mechanism for this strategy, IPDP will be integrated with the existing structures of ITDP/DRDA wherever necessary.
136. Non- governmental organizations (NGO) are "secondary stakeholders" who can facilitate the participation of "primary stakeholders"-the tribal community. The NGOs must have a clear understanding of the socio-economic, cultural and environmental context of the project.
137. The social and community organizations of tribal population will be identified to strengthen and involve them in participatory process of IPDP. The IPDP will develop a linkage with the structure and the process of tribal development administration so that the tribal communities can enjoy more benefits. The NGOs will also provide the important interface between tribal administration and the community.

5.3.2.7 Gender Issues

138. The tribal women play an important role in the community and family. Women normally constitute half of the total population in any project area and for survival tied themselves to land and forest. These women work as farm servants and attached labourers. Even in agricultural household, women share with men the burden of

agricultural operations like transplanting, weeding, harvesting, threshing, winnowing, etc. The concentration of women in agricultural and allied activities is due to the decline of rural industries leading to large-scale reduction of labour force within non-agricultural sector.

139. In IPDP, therefore, efforts will be made to (i) create and institutional framework to make gender sensitive decisions. PEA in consultation with SRCA and Women and Child Welfare Department shall constitute Women Interest Groups (WIGs) within a village and Gender Advisor Committee at district and state level, (ii) women members would be trained for upgradation of skills to initiate viable irrigation related income generation activities for their economic empowerment. In addition women members will be trained in fisheries, animal husbandry, value addition to NTFP, development of kitchen garden, home orchards, production of mushroom, rice-cum-fish culture, etc to generate additional income, (iii) Through training, women members will be provided information to make them an active participant in various activities of WUAs. WIGs would articulate the needs and demands to incorporate in the plans of PEA with assistance from WUAs and NGOs. The activities include (a) provide information on developing a WIG sub plan, (b) linking with other women's development programmes of line department, and (iv) NGO will focus on women's need for social development

5.3.3 Institutional Arrangements for Implementation

Existing Administrative Setup [Under Discussion]

140. Areas with significant tribal population have been covered under Tribal Sub Plan (TSP) approach from the beginning of the Fifth Plan. Scattered but yet significant tribal population has been covered under Modified Areas Development Approach (MADA) pockets and clusters. Where there is a population of 10,000 of whom 50% are tribal, MADA pockets have been created and where there is 5000 living and of whom 50% are tribal, MADA clusters have been created. The TSP/ITDP are administered by the block administration and line departments. TSP approach was adopted primarily for (i) promotion of developmental activities to enhance living standards of scheduled tribes; and (ii) protection of their interest through legal and administrative support.
141. At the state level Tribal Development Department headed by a Secretary and assisted by Commissioner / Special Secretary, Tribal Development will be the nodal agency. The Commissioner / Special Secretary will be further assisted by Director/ Deputy Secretary; Deputy Director / Under Secretary. At the Integrated Tribal Development Project (ITDP) level, there is a full time Project Administrator in the Joint Director cadre. An Assistant Project Administrator assists the Project Administrator. The work of ITDP is multi-disciplinary in nature and it functions as a nodal agency for planning, formulation, implementation and monitoring of tribal development programmes. The Project Administrator is empowered with adequate administrative and financial powers so that they function as watch dog to schemes and programmes implemented by ITDP. The ITDP keeps constant vigil in protecting the tribal against exploitation in addition to various development programmes.

Implementation Committee (District Level)

142. The most crucial level for approval of IPDP programme, its review and implementation would be the district level. At district level a committee will be formed under the Chairmanship of District Collector. The Block Development Officer/Chief Executive Officer will be the member secretary. Project Administrator, ITDP (as member secretary), representative of project authority (as convener), two tribal representatives from the project area, and NGO representative will be the members of the committee. In the participatory structure contemplated in the IPDP framework, NGO will be responsible for the productive group activities and other small community project which are innovative and essentially rest on people's participation. The plan though will be prepared by the village level committee; the implementation committee will be responsible for approval of the plan.

Village Level Committee

143. For a fully participatory framework, it is contemplated that at the village level, with the help of NGO, a village level committee will be formed which will include representation from tribal and also non tribal families, leader of the tribal community (as member secretary), other opinion leaders of the village like school teacher, community worker, panchayat member, doctor, etc. The committee will have at least 15 members with substantial representation of women member (preferably 33%). The representative from the executing agency will be the convener of the committee. The committee will list out the needs of the community and prepare village level action plan for a particular year. The NGO will facilitate plan preparation and interact in group meetings with the tribal community and will also assist in preparing the plan and minutes of every meeting.
144. The village level committee (VLC) will be fully associated in programme supervision and execution. The NGO or BDO/CEO will ensure that the VLC have all requisite information flow on programme contents and funds. Technical support in form of village level orientation will be provided under IPDP with NGOs active intervention. The VLC will ensure full participation of villagers in the labour force in work programmes under IPDP. Equal wages will be paid for equal work under IPDP. Local level inputs and expertise to the extent feasible will be focused on.

NGO Participation

145. The NGO will ensure that the due benefits flow to the tribal in the most effective and transparent manner. The success of the NGO inputs will largely depend on their liaison with the tribal and other concerned government agencies involved in IPDP. Other involved agencies are expected to collaborate with Project, based on instructions from the WRD, in accordance with the policy framework. These arrangements have to be made during the first month of Project implementation in order to set up the various committees and implementation mechanisms required for the project. The role of NGO would be of a facilitator. The NGO will work as an interface between the PEA/IPDP committee and the tribal community. They will train / orient the tribal community on planning, formulation, preparation and execution of annual action plan.

Selection of NGO

146. It is extremely important for successful implementation of IPDP to select a genuine and capable NGO committed to the tasks assigned. Key quality criteria include:
- Experience in direct implementation of programs in local, similar and/or neighboring districts;
 - Availability of trained staff capable of including tribal community into their programs;
 - Competence, transparency and accountability based on neutral evaluations, internal reports, and audited accounts; and
 - Integrity to represent vulnerable groups against abuses; experience in representing vulnerable groups, demonstrable mandate to represent local groups.
 - Should have a clearer understanding to gender and poverty relations within the community of tribal and have the ability to pay particular attention to the social and economic needs of women and tribes.

Consultation and Disclosure

147. The tribal groups will be consulted in preparing the IPDP. They will be informed of the mitigation measures proposed and their views will be taken into account in finalizing the plan. The plan will be translated into the tribal language and made available to the affected people before implementation. The tribal institutions and organizations in the affected area will also be involved in implementing the IPDP and in resolving any disputes that may arise. WRD will ensure that adequate funds are made available for the plan.

Monitoring and Evaluation

Need for Monitoring

148. Monitoring and Evaluation (M&E) are critical activities in developmental activity / programme in order to ameliorate problems faced by the implementers and develop solutions immediately. Monitoring is a periodic assessment of planned activities providing midway inputs facilitates changes and gives necessary feedback of activities and the directions on which they are going, whereas Evaluation is a summing up activity at the end of the project assessing whether the activities have actually achieved their intended goals and purposes. The M&E mechanism will measure project performance and fulfillment of the project objectives.
149. The PEA with the help of the NGO will carry out internal monitoring. NGO will be thoroughly briefed about the Bank's Policy on Indigenous People. An external agency will be engaged to monitor and proactively evaluate the IDP objectives. The external agency will submit monthly progress reports and will also be responsible for midterm and end term evaluation. Broadly, monitoring and evaluation system will involve:

- Administrative monitoring: daily planning, implementation, trouble shooting, feedback and trouble shooting, individual village file maintaining, progress reports
 - Socio-economic monitoring: case studies, using baseline information for comparing the socio-economic conditions, morbidity & mortality, communal harmony, dates for consultations, employment opportunities, etc.
 - Impact evaluation monitoring: living standards improved access to natural resources, better bargaining power in the society, etc.
150. The PMG through the respective SPMUs will monitor all the approved projects under the NGRBP to ensure conformity to the requirements of the ESMF. The monitoring will cover all stages of construction, operation and maintenance. The monitoring will be carried out through the environmental and social safeguard compliance reports that form a part of Quarterly Progress Reports for all projects and regular visits by the environmental and social specialists of PMG and SPPMU. In addition to the above, PMG will undertake an annual ESMF audit of all sub projects in implementation and will review the status of ESMF compliance. The audit will include all category 1 sub projects and 25% of the category 2 projects. A sample Terms of Reference for ESMF audit has been provided in the ESMF.
151. The PMG will review these audit reports and identify technical, managerial, policy or regulatory issues with regards to the compliance of the EA or SA reports. The identified technical issues will be duly incorporated in the subsequent projects. Policy and regulatory issues will be debated internally by the NGRBA's internal review committee and determine the need for appropriate interventions. These interventions could include appropriate revision of ESMF document or suitable analytical studies to influence policy of programs of the state, if found necessary/warranted.
152. An external evaluation of the RAP implementation prepared under NGRBP will also be undertaken twice during the implementation of the project-midterm and at the end of the implementation.

Role of Independent Agency

153. The PEA will requisition the services of an independent agency not associated with the project execution to carry out monitoring and evaluation of the project. The independent agency will also evaluate the performance of the NGO. Monitoring will also include:
- Reactions from the community
 - Information from the community on plan preparation, implementation, time taken at each stage, etc.
 - Visits to sites to observe physical progress of plans
 - Socio-economic status of the community
 - Degree of community participation
 - Usefulness and utilization of training imparted
 - Utilization of funds
 - Behaviour of NGO staff with the community

5.4 Gender Assessment and Development Framework

154. Mainstreaming gender equity and empowerment is already a focus area in the project. In the sub projects, activities related to livelihood restoration will address women's needs. A Gender Development Framework is being designed under the project as part of ESMF which will help analyze gender issues during the preparation stage of sub project and design interventions. At the sub project level, gender analysis will be part of the social assessment and the analysis will be based on findings from gender specific queries during primary data collection process and available secondary data. The quantitative and qualitative analysis will bring out sex disaggregated data and issues related to gender disparity, needs, constraints, and priorities; as well as understanding whether there is a potential for gender based inequitable risks, benefits and opportunities. Based on the specific interventions will be designed and if required gender action plan will be prepared. The overall monitoring framework of the project will include sex disaggregated indicator and gender relevant indicator.
155. The participation of beneficiaries and focus on poverty reduction are two other key determinants of the effectiveness and sustainability of any project. Any project must address the constraints on women's participation in project design, construction, operation and maintenance (O & M), training, and monitoring and evaluation (M & E). The project must also focus on the linkage between gender and poverty, by identifying, for example, households headed by females and those households' special needs. An adaptive, learning, and process-oriented approach works better than a blue print approach; continuous dialogue between the PEA and the beneficiaries is therefore important. Project beneficiaries are likely to have a stronger sense of ownership when the project gives them enough time, design flexibility, and authority to take corrective action. In this way, they find it easier to incorporate their earlier learning and negotiate with project staff and service providers. Therefore, a mechanism must be built into the project to allow such two-way interactions between the beneficiaries and the service providers.
156. Three major tools are used to identify and deal with gender issues in the project cycle: gender analysis, project design, and policy dialogue.
157. *Gender analysis should* be an integral part of the initial social assessment at the screening stage itself. The issues identified can be scaled up during the feasibility and detailed analysis can be carried out during the DPR stage.
158. The *project designs should be gender responsive* based on the gender analysis, and should be included in the DPR. The findings and recommendations from the gender analysis during project planning and feedback from beneficiaries during implementation must be discussed thoroughly to determine the need for further action. Listed below are the key action points:

5.4.1 General Checklist

- ✓ Identify key gender and women's participation issues.
- ✓ Identify the role of gender in the project objectives.

- ✓ Prepare terms of reference (TOR) for the gender specialist or social development specialist of the client
- ✓ Conduct gender analysis as part of overall Social Assessment.
- ✓ Draw up a socioeconomic profile of key stakeholder groups in the target population and disaggregate data by gender.
- ✓ Examine gender differences in knowledge, attitudes, practices, roles, status, wellbeing, constraints, needs, and priorities, and the factors that affect those differences.
- ✓ Assess men's and women's capacity to participate and the factors affecting that capacity.
- ✓ Assess the potential gender-differentiated impact of the project and options to maximize benefits and minimize adverse effects.
- ✓ Identify government agencies and nongovernmental organizations (NGOs), community-based organizations (CBOs), and women's groups that can be used during project implementation. Assess their capacity.
- ✓ Review the gender related policies and laws, as necessary.
- ✓ Identify information gaps related to the above issues.
- ✓ Involve men and women in project design.
- ✓ Incorporate gender findings in the project design.
- ✓ Ensure that gender concerns are addressed in the relevant sections (including project objectives, scope, poverty and social measures, cost estimates, institutional arrangements, social appendix, and consultant's TOR for implementation and M & E support).
- ✓ List out major gender actions.
- ✓ Develop gender-disaggregated indicators and monitoring plan.

5.4.2 Specific Checklists to be covered during various stages of project cycle

Methodology

Desk review

- ✓ Review available information (e.g., statistics, gender analysis, documents of previous projects) in the project area and the socioeconomic profile of the target population.
- ✓ Review the relevant legal (e.g., inheritance law), policy (e.g., R&R policy), and institutional framework (e.g., current administrative system for land acquisition, compensation disbursement) and their gender implications.

Household surveys

- ✓ Draw up gender-disaggregated socioeconomic and cultural profiles and identify the constraints, and needs of the target population.
- ✓ Collect quantitative information.

Participatory methodologies (e.g., participatory rapid appraisal, focus group discussions, random interviews, walking tours)

- ✓ Collect qualitative information which cannot be collected through surveys.

- ✓ Define ways in which men and women beneficiaries and other stakeholders, especially poor women can participate in the project.
- ✓ Map out the target areas. Which are the most disadvantaged areas in terms of access to services and poverty level?
- ✓ Identify major stakeholder groups and their stake.

Staffing

- ✓ Ensure adequate gender balance in field teams.
- ✓ Select field team members with gender awareness, local knowledge, cultural understanding, and willingness to listen.

Data to Be Collected

Macro institutional framework

- ✓ Gender impact of sector policy; legal and institutional framework.
- ✓ Executing agency's capacity and commitment to participatory approaches and gender focus.

Socioeconomic profile

Demographic

- ✓ Composition by gender, ethnicity/caste, age, etc.
- ✓ In and out migration trend (male and female)
- ✓ Percentage of households headed by females
- ✓ Household size
- ✓ Age at marriage, by gender

Economic

- ✓ Income level and sources, by gender
- ✓ Expenditure patterns and decision making, by gender
- ✓ Land tenure and use, by gender

Health

- ✓ Population growth rate
- ✓ Infant and maternal mortality rates
- ✓ Service availability
- ✓ Fertility level and decision making
- ✓ Food allocation and nutrition level within households, by gender
- ✓ Incidence of domestic violence

Education

- ✓ Literacy and school enrollment ratios, by gender
- ✓ School dropout ratio, by gender
- ✓ Child labor, by gender

Status of women

- ✓ Political representation and awareness

- ✓ Socio - cultural perceptions and practices of men and women
- ✓ Gender-discriminatory policies and laws
- ✓ Gender roles and responsibilities
- ✓ Broad gender division of labor in productive (e.g., agriculture, income-generating activities) and reproductive (e.g., household chores, child care) responsibilities, and time allocation for each responsibility

Fuel, Fodder and Sanitation

- ✓ Availability, quantity, and quality of fuel and fodder
- ✓ Time spent on collection of these resources
- ✓ Are there seasonal differences in availability, quantity, or quality?
- ✓ Is there sanitation service available
- ✓ Are the services available 24 hours a day?
- ✓ Is there a fee for water or sanitation services?
- ✓ Who pays to whom (e.g., user committee, local government, private company)?
- ✓ How much is the fee?

Water

Drinking water

- ✓ What sources (e.g., public streams, rivers, tanks, lakes, communal wells or tanks, ponds, privately owned wells or tanks, water pipes) are used?
- ✓ How far away are the water sources?
- ✓ Water collection and storage
- ✓ Who collects and stores water? How?
- ✓ How much time is spent in water collection and storage?
- ✓ Who carries water and how?
- ✓ How much time is spent transporting water?
- ✓ Are there any health hazards resulting from the transport of water?
- ✓ How is the collected water used differently by men and women (e.g., for cooking, sanitation, home gardens, livestock)?
- ✓ Who decides the allocation?
- ✓ Is water available in the dry season?
- ✓ How is water use managed during the water-scarce season? By whom?

Roles in agricultural water:

- ✓ Who collects, transports, and manages water for agricultural use and how?
- ✓ Is there any conflict between agricultural and domestic water allocation? How can these needs be prioritized?
- ✓ Are there conflicts in water distribution in general, based on gender, income level, ethnicity/castes, etc.? How can these be solved?
- ✓ Who is responsible for the upkeep of the community water infrastructure?
- ✓ Who could be key informants?
- ✓ Are there significant differences in responsibilities based on gender, income level, or ethnicity/caste?

Access, control, constraints

- ✓ How do men and women differ in their access to and control of land, agricultural inputs, extension, markets, employment opportunities, and credit?
- ✓ Is external assistance provided to improve access/control? By whom?

Participation

- ✓ What factors affect the level of men's and women's participation?
- ✓ What are the incentives and constraints?
- ✓ During which season is the demand for labor highest?
- ✓ Which modes of participation do men and women favor (e.g., decision making in planning, cash contribution, labor contribution for construction, training, financial management, organizational management)?

Project impact

- ✓ Do men and women perceive positive and negative impacts of the project differently?
- ✓ Are the benefits likely to be distributed equitably?
- ✓ How can negative effects be mitigated?
- ✓ Are there any disadvantaged or vulnerable groups?
- ✓ Who are they? Where do they live? What are their socioeconomic characteristics?
- ✓ How will the project affect these groups?
- ✓ Land acquisition/Resettlement: Extent of land to be acquired
- ✓ What are the gender-specific implications?

Organization

- ✓ What is the current level of women's representation in other community decision-making bodies?
- ✓ Are there local organizations (e.g., local governments, national NGOs, CBOs, mass organizations) that address women's constraints and needs? How can the project link up with them?
- ✓ What mechanisms can be used to ensure women's active participation in project activities?
- ✓ What organizations can be used to mobilize and train women in the project activities and livelihood options?
- ✓ Incorporate the preferences of community men and women on issues such as: number and location of assets and sharing vs. individual arrangement of assets;
- ✓ Highlight women's strengths in mobilizing savings and resources.
- ✓ Incorporate the preferences of men and women in the community on:
 - financing arrangement
 - possible preferential treatment for very poor, female-headed and other disadvantaged families
 - credit or community-based revolving funds for women SHGs

Community participation mechanism

- Develop a *participation strategy* for men and women during project implementation and M & E.
- Avoid overly high expectation of women's participation and develop a practical schedule, as women often have time and financial constraints. The strategy should incorporate the following:
 - *Planning*: Conduct women specific consultation to take their views and suggestions on the design. Any mechanism established during the project design such as grievance mechanisms should have adequate representation from women.
 - *Construction*: Ensure work conditions that are conducive to women's participation (e.g., gender-equal wage rates, construction season, toilet and child-care facilities).

Monitoring and evaluation (M & E): Develop a feedback mechanism in which both male and female have a voice. Identify organizations that could facilitate women's participation during implementation and M & E.

Training options

- ✓ Identify ways to link up with income-generation, literacy, and other activities to support an integrated approach to poverty reduction and women empowerment
- ✓ Support a decentralized structure to allow linkages between the village and local government.
- ✓ Include financial and technical capacity building for relevant local government bodies to enable them to effectively support women SHGs.

Staffing, scheduling, procurement, and budgeting

- ✓ Hire female project staff.
- ✓ Consider seasonal labor demand in scheduling civil works.
- ✓ If appropriate, set a minimum percentage of female laborers and prohibit the use of child laborers in the civil works contract.
- ✓ Ensure adequate and flexible budgeting to allow a "learning" approach (e.g., training budget, consulting service budget for women's organizations).

Monitoring and evaluation

- ✓ Develop M & E arrangements: (i) internal M & E by project staff; (ii) external M & E by NGOs or consultants, as necessary; and (iii) participatory monitoring by beneficiary men and women.
- ✓ Disaggregate all relevant indicators by gender such as number of women gaining access to credit, increase in women's income, and career prospects for project trained women.

Documentation

Document the gender-responsive design features in the DPR and include covenants in the loan agreement to ensure gender-sensitive project design mechanisms to be complied by the executing agency

5.5 Poverty and Social Impact Assessment

159. As part of the project preparation, a basin wide poverty and social impact assessment (PSIA) will be carried out. One of the outputs of the consultant hired for the preparation of ESMF and RAP for specific sub projects is the terms of reference (TOR) for conducting PSIA. The objectives of the PSIA are to optimize the project design through social considerations in order to produce maximum social benefits, particularly to the poor, women, and other socially disadvantaged groups, and to ensure the social dimensions are fully incorporated into the project design. The scope of the assessment will cover the entire basin, including the poor and migrant workers (floating populations) residing in the Ganga basin. The poverty and social impact assessment will pay particular attention to the poverty alleviation and identify other ways in which the project can improve the quality of life and health conditions of the local residents in the project areas over both the short- and long-term. The assessment aims to: 1) predict the contribution of the project to poverty reduction effort; 2) estimate the household benefits of the project interventions; 3) estimate public support for the project interventions in relation to other public investments; 4) conduct an affordability analysis; 5) recommend a participatory process; 6) incorporate gender issues; and 7) incorporate social safeguard issues, such as involuntary resettlement, ethnic minorities, labor, and other risks/vulnerability.
160. To carry out the poverty and social impact assessment, apart from quantitative survey for primary data, various approaches and methodologies will be used throughout the whole process, including: 1) stakeholder consultation workshops; 2) key informant interviews; 3) field observations; 4) discussion with other project preparatory technical assistance team members, executing agency and implementing agencies; and 5) collection of secondary data/information, such as statistical data and existing reports. The output of PSIA apart from the assessment findings will include (a) a detailed socio-economic profile of the basin states and critical districts; (b) issues on social safeguards; (c) recommendations for maximizing gender inclusion; (d) participation strategy; and (e) monitoring and evaluation plan for PSIA.

5.6 Consultation framework and Information Disclosure

5.6.1 Consultation Framework

161. The Consultation Framework envisages involvement of all the stakeholders' at each stage of project planning and implementation. The PEA /SCRA will be responsible for ensuring participation of the community at sub-project level. Involvement of the community is not limited to interactions with the community but also disclosing relevant information pertaining to the project tasks. Community participation shall be undertaken at the following stages:
- Sub Project identification stage - to sensitize the community about the project and their role;
 - Planning Stage - for disseminating information pertaining to the project, work schedule and the procedures involved; finalisation of project components with identification of impacts, entitled persons, mitigation measures; and Grievance

Redressal; and

- Implementation Stage - for addressing temporary impacts during construction and monitoring for transparency in the project implementation

Identification Stage

162. Dissemination of project information to the community and relevant stakeholders is to be carried out by the PEA at this stage of the project initiative. The community at large shall be made aware of the project alternatives and necessary feedback is to be obtained. This should include the process being followed for prioritisation of the identified sub-projects. Community and other stakeholders should be involved in the decision making to the extent possible. Information generated at this stage should be documented for addressal of queries arising out of the Right to Information Act, 2005.

Project Planning Stage

163. Sub-project information is to be distributed amongst the community towards increasing their awareness and their roles and responsibilities. Planning stage is intended to be an interactive process with the community at least in two stages. Initially while finalizing the best fit alternative to a sub-project and second at the finalisation of the detailed designs. This would be joint responsibility of the consultants undertaking the design if not carried out by the PEA in house and the PEA itself.
164. Consultations with Project Affected Persons and their profiling are mandatory as per the requirements of SIA and preparation of RAP. This needs to be done as socio-economic and census surveys as part of the detailed designs. Consultations with respect to and cultural aspects are to be carried out as part of the Social Impact Assessments for all alternatives and the selected alternative sub-project option.

Implementation Stage

165. Consultations as part of the implementation stage would be direct interactions of the implementation agency with the Project Affected Persons. These would comprise of consultations towards relocation of the PAPs, relocation of cultural properties, and towards addressal of impacts on common property resources (CPRs) such as water bodies, places of religious importance, community buildings, trees etc.
166. With the implementation of the R&R provisions in progress, consultations and information dissemination is to be undertaken to let the affected persons informed of the progress. Implementation stage also involves redressal of grievances in case of R&R aspects as well as relocation of common property resources through the grievance redressal mechanisms. These would usually be one to one meeting of PAP or community representatives with the grievance redressal committees established for the project.

5.6.2 Information Disclosure

167. The mechanism of information dissemination should be simple and be accessible to all. Two of the important means that have been followed until now include briefing material and organization of community consultation sessions. The briefing material (all to be prepared in local language) can be in the form of (a) brochures (including project information, land requirements and details of entitlements including compensation and assistance to be given to the PAPs) that can be kept in the offices of local self government (municipal office in case of urban area and gram panchayat office in case of rural area) and PEA;(b) posters to be displayed at prominent locations and (c) leaflets that can be distributed in the impacted zone of the sub project. Consultation meetings should also be organized at regular intervals by the PEA to acquaint the PAPs of the following:

- Timeline and progress of the project;
- Information on compensation and entitlements;
- Information on land acquisition and market valuations of property;
- Time line for acquisition.

168. Also, opinion and consensus of the community needs to be sought for common and cultural property relocation. Information disclosure procedures are mandated to provide citizen centric information as well as all documentation necessary for addressing any queries under Right to Information Act that came into effect from October 2005. A computer based information management systems shall be employed to disseminate information pertaining to the project on the NGRBA / MoEF and various PEA's website. Disclosure of information will enhance governance and accountability specifically with respect to strengthening of monitoring indicators to help NGRBA PMG and the World Bank monitor compliance with the agreements and assess impact on outcomes.

169. This Information Disclosure Policy is intended to ensure that information concerning the NGRBP activities will be made available to the public in the absence of a compelling reason for confidentiality. Information shall be provided in a timely and regular manner to all stakeholders, affected parties, and the general public. Access by the public to information and documentation held or generated by NGRBA and PEAs will facilitate the transparency, accountability, and legitimacy as well as operations overseen by it. As a part of its disclosure policy, all documents shall be made available to the public in accordance with relevant provisions of the RTI Act, except when otherwise warranted by legal requirements. A designated Information Officer shall be responsible for ensuring timely and complete dissemination in accordance with this policy.

Information to be disclosed

170. Table 5.2 below specifies the type of additional information and frequency of dissemination for projects which are financed either from domestic or donors' funds. In addition to the information specified in the table, the following information shall also be displayed / disseminated, wherever applicable.

- Project specific information need to be made available at each contract site through public information kiosk
- Project Information brochures shall be made available at all the construction sites as well as the office of implementation agency and the office of Engineer in charge.
- Reports and publications, as deemed fit, shall be expressly prepared for public dissemination e.g., English versions of the SIA and RAP and Executive Summary of SIA and RAP in local language.

Table 5.2: Information to be disclosed

Topic	Documents to be disclosed	Frequency	Where
Resettlement, Rehabilitation and Land Acquisition	Resettlement Action Plan (RAP)	Once in the entire project cycle. But to remain on the website and other disclosure locations throughout the project period.	World Bank's Infoshop On the website of MoEF / NGRBA, SRCA and PEAs Hard copies of full document in English and executive summary in local language in the following offices: DM's Office State and District Libraries Local municipal and <i>gram panchayat</i> office Office of the contractor Office of the PEA
	Resettlement & Rehabilitation Policy translated in Hindi / local language	Once in the entire project cycle.	Distributed among Project Affected Persons (PAP)
	Information regarding impacts and their entitlements	Once at the start of the project and as and when demanded by the PAP.	Through one-to-one contact with PAPs. Community consultation List of PAPs with impacts and entitlements to be pasted in the PEA office and website of MoEF/NGRBA, SRCA and PEAs
	R&R and LA monthly progress report.	10th day of every month	Website of MoEF/ NGRBA, SRCA, PEA. Hard copy in the office of PEA and contractor
	RAP Impact Assessment Report	At midterm and end of the RAP implementation	MoEF/ NGRBA, SRCA and PEA's website.
	Land Acquisition notifications	As required under the LA Act	MoEF/ NGRBA, SRCA and PEA's website. Hard copy in the office of PEA and contractor

Topic	Documents to be disclosed	Frequency	Where
	Grievance redressal process.	Continuous process throughout the project cycle.	World Bank's Info shop. On the web sites of MoEF/ NGRBA, SRCA, PEAs Hard copies in local language in the following offices: DM's Office Local municipal and <i>gram panchayat</i> office Office of the contractor Office of the PEA; ALSO PAPs to be informed on one to one contact by PEAs
Public Consultation	Minutes of Formal Public Consultation Meetings	Within two weeks of meeting	On the web sites of MoEF/ NGRBA, SRCA, PEAs Hard copies in local language in the following offices: DM's Office Local municipal and <i>gram panchayat</i> office Office of the contractor Office of the PEA

SECTION 6

IMPLEMENTATION, MONITORING AND REPORTING ARRANGEMENTS

6.1 General

171. In order to achieve the objective of 'Clean Ganga by 2020', NGRBA provides financial assistance for implementation of river pollution abatement/mitigation projects in Ganga basin states. The first phase of such initiative is supported by The World Bank, in the states of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal. In addition to complying with various technical and performance standards, the projects to be supported under this program shall comply with the Environmental and Social Management Framework, as detailed out in the earlier sections. The implementation, monitoring and reporting arrangements for the ESMF have been worked out within the overall institutional structure for implementation of the NGRBA program, as described in the sections below.

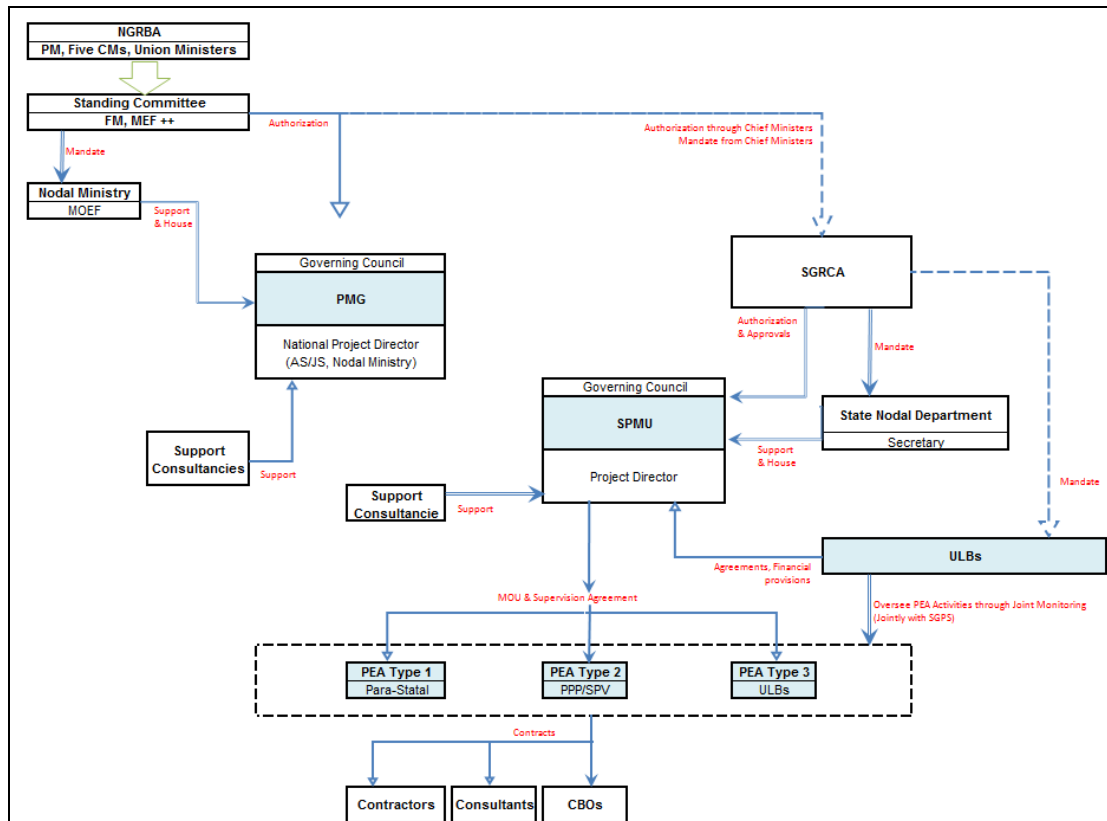
6.2 NGRBA Institutional Arrangements

172. As nodal Ministry for the NGRBA program, the MoEF is the primary implementing agency for the project at the national level. It is in the process of establishing the NGRBA Program Management Group (PMG), which will be a dedicated entity charged with effective implementation of the overall NGRBA program. The implementing agencies at the state level are the SGRCA Program Management Units (SPMUs). At the local level, specific Project Executing Agencies (PEAs) will be selected for implementation of various activities, including infrastructure investments under the project/NGRBA program. PEAs may include para-statal organizations, Special Purpose Vehicles and Joint Ventures (SPVs/JVs), Urban Local Bodies (ULBs), appropriate state-level departments, NGOs, or public institutions.
173. The main functions of the various agencies with regard to the NGRBP include the following:
- The PMG will responsible for overall project planning and management at the national level; direct implementation of the national level activities; ensuring satisfactory implementation of the state-level investments and activities; providing guidance, support and approvals to the SPMUs where needed; and monitoring implementation performance;
 - The SPMUs will be responsible for project planning and management at state level, ensuring satisfactory implementation of the state-level investments and activities; direct implementation of some of the state-level activities; providing guidance, support and approvals to the state PEAs where needed; and monitoring implementation performance of the PEAs;
 - The PEAs will plan and implement the activities/investments and put in place arrangements for satisfactory and sustainable operation and maintenance of

the assets created. The PEAs will be responsible for all contract management, including preparation of feasibility reports and DPRs, and seeking the necessary approvals.

174. The implementation arrangements for the NGRBA program are summarized in Figure 6.1.

Figure 6.1: Implementation Arrangements for the NGRBA Program



6.3 Implementation, Monitoring and Reporting Arrangements for the ESMF

175. Within the above overall implementation framework of the NGRBA, environmental and social due diligence will be carried out by the relevant agencies at each stage of the project cycle in accordance with the guidance provided in the ESMF.
176. A Social Development Officer and an Environmental Officer will be appointed for managing social and environmental issues (including safeguards issues) at both central level (PMG) as well as in each of the project states (SPMUs). These officers will assist and advise the Mission Director and interact with the PEA in implementation of ESMF provisions.

177. In the PEA, an officer will be designated as social and environment officer who will be responsible for the implementation of ESMF tasks at the field level with the assistance and participation of the local self government. These officers will also have the responsibility of implementing resettlement along with other project components, and for co-ordination among different agencies, such as the local self government, Revenue Department etc. During implementation, meetings will be organized by the SPMUs inviting all PEAs in the state for providing information on the progress of the project work.
178. Environment and Social Audit / Compliance Monitoring Consultants will be appointed in each of the project states to regularly monitor the planning, design and construction and will confirm that actions taken at each stage of the sub project cycle are in compliance with agreed procedures and standards.
179. The project cycle for an investment under the NGRBP and the interface with the ESMF requirements are summarized hereunder.

6.3.1 Project Screening

180. Upon receipt of request for funding, SPMU will assess the eligibility of the sub-project in line with the agreed framework of the respective sector of the sub-project and the proposed safeguard categorization of the sub-project. Based on the above screening, the PEA would be advised on the appropriate DPR preparation toolkit that needs to be followed for the sub-project and the scope of ESA (for Category I sub-projects) to be carried out. In case of Category II projects, the generic environmental management measures and the requirements of abbreviated resettlement plan, will be agreed at the screening stage.
181. The PEA will prepare a Detailed Project Report (DPR) including GEMP tailored to the specific sub-project (for category II projects). For category I projects, the PEA will undertake preparation of ESA / EMP / RAP as relevant for category I projects in line with the requirements of ESMF. While initiating the ESA studies, the PEA shall interact with the Environmental and Social Specialists in the SPMU and seek guidance in the finalization of scope of work and the conduct of respective studies.
182. On receipt of the ESA reports, the respective specialists will evaluate the completeness of the studies and their compliance with the ESMF. Further actions, if any required, will have to be carried out by the PEA prior to the appraisal of the project.

6.3.2 Project Appraisal

183. During project Appraisal, the SPMU and PMG will appraise the project preparation leading to the approval of the DPR. The safeguard aspects that will be appraised during the project appraisal will include the following aspects:

- Environmental and social suitability of site
- Adequacy of the ESA as per the ESMF including analysis of alternatives, if relevant
- Compliance with regulatory requirements and clearances
- Comprehensiveness of the EMP/SMP in light of the project specific environmental and social issues
- Integration of environmental and social mitigation measures in to the design, wherever relevant/required
- Arrangements for implementation of EMP/SMP/RAP, including institutional capacity and contractual provisions
- Inclusion of EMP/SMP budgets in the project cost and contract documents
- EMP/SMP monitoring and reporting arrangements
- Need for any legal covenant to address specific environmental risks including regulatory risks, if any
- Risk analysis /allocation
- environment and social enhancements (if any / applicable)

184. The Environment Management Plan (EMP) prepared for the project will form part of the bidding documents, in addition to the references to various acts relating to environment and labor, and the implementation of the same will be monitored by SPMU and PMG.

6.3.3 Project Approval and Disbursement

185. Prior to the approval of the sub-project, all Category I projects will be forwarded to the World Bank for clearance after the EMP and SMP has been cleared by the SPMUs and PMG. The PMG will further ensure that all the comments/suggestions of the World Bank for all category I projects are adequately addressed, prior to approval of the DPR. The implementing agencies will also comply with the World Bank's policy on public disclosure.

186. After requisite approvals and concurrence are obtained, SPMU will discuss implementation of environmental and social management measures of the project with the PEA to ensure that these are suitably incorporated into the respective legal /contractual documents, for implementation by the PEA.

187. As far as resettlement issues are concerned, disbursement of entitlements shall be through the NGOs hired for the purpose of implementation of resettlement action

plan (RAP). The civil works will be initiated only after the required land has been acquired and declared free from encroachments and other encumbrances and the PIU has the physical possession of the land. Before the start of civil works the compensation has to be disbursed to the land owners. During implementation, consultations with the communities shall be undertaken by the PEA / NGOs for providing information on the progress of the project work. The roles and responsibility of each of the Agency/Official involved are further detailed in Annex 3.

6.3.4 Monitoring and Reporting Arrangements

188. The PMG, through the respective SPMUs will monitor all the approved projects under the NGRBP to ensure conformity to the requirements of the ESMF. The monitoring will cover all stages of construction, operation and maintenance. The monitoring will be carried out through the environmental and social safeguard compliance reports that form a part of Quarterly Progress Reports for all projects and regular visits by the environmental and social specialists of the PMG and SPMUs. In addition to the above, the PMG will undertake an annual ESMF audit of all sub-projects in implementation and will review the status of ESMF compliance. The audit will include all category I projects and 25% of the category II projects.
189. The PMG will review these audit reports and identify technical, managerial, policy or regulatory issues with regards to the compliance of the ESA reports. The identified technical issues will be duly incorporated in the subsequent projects. Policy and regulatory issues will be debated internally by the NGRBA's internal review committee and the need for appropriate interventions will be determined. These interventions could include appropriate revision of ESMF document or suitable analytical studies to influence policy or programs of the state, if found necessary / warranted.
190. An external evaluation of the RAP implementation prepared under NGRBP will also be undertaken twice during the implementation of the project – midterm and at the end of the implementation. Table 6.1 below details out the mitigation measures for each impact type, monitoring measures, responsibility and timeline.
191. The overall ESMF implementation and monitoring arrangements are summarized in Table 6.2.

Table 6.1: Mitigation, Monitoring, Responsibility and Timeline for RAP Implementation

SL. No.	Impact	Monitoring Measures	Responsible Agency	Timeline
1	Loss of land (agriculture)	Regular internal monitoring by the SDO of PEA and SGRBA; third party ESMF audit; and periodic evaluation	PEA, ESMF Auditors; Evaluation consultants	12 months from the start date. Compensation to be paid before the start of civil works.
2	Loss of structure and land (residential and commercial)	Regular internal monitoring by the SDO of PEA and SPMG; third party ESMF audit; and periodic evaluation	PEA, ESMF Auditors; Evaluation consultants	
3	Loss of land value near landfill sites and /or STPs		PEA and supervision consultants	
4	Loss of access to private and / or common property	Regular internal monitoring by the PEA; third party ESMF Audit; midterm and end term evaluation	PEA, ESMF Auditors; Evaluation consultants	12 months from the start date of the activities of the priority investment. Assistance to be paid before the start of civil works.
5	Loss of livelihood or source of livelihood	Regular internal monitoring by PEA; third party ESMF Audit; midterm and end term evaluation	PEA, ESMF Auditors; Evaluation consultants	
6	Displacement of squatters and encroachers	Regular internal monitoring by the PEA; third party ESMF auditor; midterm and end term evaluation	PEA, ESMF Auditors; Evaluation consultants	

Table 6.2 ESMF Implementation and Monitoring Arrangements

Mile Stones	Objectives	Process	Responsibility	Decision/Target/ Deliverable
1. Sub- Project Screening	To appraise the PEA about NGRBA's policies, plan and priorities	a. Discussions with PEA to - assess eligibility of project based on NGRBA's priorities in consonance with Mission Ganga - identify scope of project report b. Issue DPR preparation toolkit c. Appraise the PEA about ESMF requirements	NGRBA • PMG • SPMU • PEA	• Decision to proceed or not • Issue appropriate Information Package for Preparation of DPR
2. Sub- Project Appraisal	Appraise ESA	a. Detailed appraisal of the ESA including site visit/investigation if necessary to assess - suitability of site - environmental and social assessment and adequacy of EMP/SMPs - risk analysis /allocation - regulatory clearances for the project	• SPMU followed by PMG	• Review report with decision to - accept ESA - accept with modifications - reject and instruct to resubmit as per requirements
3. Approval	Approvals from authorities	a. Send ESA Report for approval	• SPMU and PMG - to WB for category I Projects	• Approval of the project
	Concurrence from WB	a. Obtain concurrence from WB for all category I projects	• WB • SPMU • State Govt. • ULB • PEA	• WB's concurrence on EA / SAR reports
4. Project Implementation on Monitoring and Review	Ensure Implementation of agreed EMP/RAP	a. Prepare quarterly progress reports b. Schedule field visits as required	• NPMU • SPMU • State Govt. • ULB • PEA • Contractors • Supervision Consultants	• Quarterly Progress Report
	ESMF Audit project, if sampled	a. All E1 and S1 project will undergo ESMF audit b. Only 25% of the projects categorized as E2 and S2 will undergo ESMF audit	• NGRBA • SGBRA	• Audit report for all E1 and S1 category projects and sampled E2 and S2 projects

6.3.5 Social Accountability and Grievance Redressal Mechanism

192. The social accountability mechanisms will be established for all sub projects. The key approaches that would be adopted for ensuring social accountability would be any or a combination of participatory processes guiding social audit, citizen score card and report card to acquire feedback on performance of the sub projects and record citizens' recommendations for improvement. The social accountability mandate will be further strengthened through a strong grievance redress mechanism.
193. An Integrated Grievance Redress Mechanism (IGRM) will be established both at the PEA and SPMU level that will register user complaints using various mediums (e.g. a dedicated, toll free phone line, web based complaints, written complaints and open public days) and address them in a time bound system. The project will abide by the RTI Act of 2005 and under provisions of Section 4 of the Act, it will commit itself for proactive disclosure and sharing of information with the key stakeholders, including the communities/beneficiaries. The project will have a communication strategy focusing on efficient and effective usage of print and electronic media, bill boards, posters, wall writing, and adoption of any other method suiting local context, logistics, human and financial resources.
194. As part of IGRM, a Grievance Redress Cell (GRC) will be set up at the district level wherever sub-projects have been or will be planned. The head of the cell will be a person of repute but not continuing in the government service. Such a person can be retired CEO of Zilla Parishad; or a college Principal or district judge; chief engineer of PWD or Jal Nigam, etc. retired from government service. The other members of the cell are representatives of PAPs, Social Development Officer of PEA, and representative of NGO. The GRC will have its own bye laws. The functions of the GRC will include: (i) to redress grievances of project affected persons (PAPs) in all respects; (ii) rehabilitation and resettlement assistance and related activities; (iii) GRC will only deal/hear the issues related to R&R and individual grievances; (iv) GRC will give its decision/verdict within 15 days after hearing the aggrieved PAPs; (v) final verdict of the GRC will be given by the Chairman/Head of GRC in consultation with other members of the GRC and will be binding to all other members.

ANNEXURES

Annex I

Guidance on EIA of Category I Sub-Project

Introduction

Category I sub-projects require a full EA to be done by environmental consultants, separate from any evaluation performed by the design consultants. The environmental consultants have to closely interact with the design consultants in order to obtain the necessary data, information, reports and support as required. The EA process has to be carried out, and the EA & EMP reports have to be prepared. This guidance includes a typical terms of reference and also suggests the structure & content of the EA & EMP report. The terms of reference are general in content. As it is likely that there are some specific environmental issues that require to be addressed and these are known in advance, these need to be informed to the environmental consultants.

Examples of category I sub-projects include: Extension of existing network / creation of new sewage pumping stations / sewage treatment facility involving fresh land acquisition; New common effluent treatment plant, new hazardous waste receiving, treatment storage and disposal facility; Pilot projects on IPC technologies; Sanitary landfill sites with leachate collection and disposal arrangements, irrespective of fresh land acquisition; Solid waste segregation and composting facilities, irrespective of fresh land acquisition; River front management projects with land acquisition and / or with potential to interfere with water hydrology. The above list is not exhaustive, and serves only as some guidance as to the kinds of activities to which the World Bank would typically assign a category I rating.

Terms of reference

The following terms of reference should be used:

Description of Project

- To provide a full description of the project, with details on specific sites, populations impacted, project design, implementation schedule, number / types of connected industries, details of any pre-implementation activities (i.e. public education and/or involvement, pilot studies, etc.), operation and maintenance activities, required off-site investments, project life span, etc. Project description should also include any and all required information as stipulated below.

Policy and legal framework

- To collect information on the prevailing national, state and local laws, pertinent to environmental quality, health and safety, waste management guidelines, air and water quality regulations, protection of sensitive areas, land uses control and others. Manner of complying with relevant laws, such as the appropriate avenue for submission of required materials, should be described in detail.
- To convey to the contractor / relevant implementing actor the manner in which the enforcing body will conduct its monitoring / enforcement activities, as well as information as

to what government assistance (e.g. technical assistance) government bodies can provide to the actor so as to facilitate the actor's compliance.

- To determine its applicability of all laws to the proposed sub-project and to include the specific clearances / approvals that have to be obtained by the SGRBA / contractor / relevant implementing actor.
- To assist the SGRBA / contractor / relevant implementing actor in any clearances / approvals that may be required to implement the sub-project in terms of completing forms / applications, and defending the sub-project before Government committees.

Baseline Study of Proposed Project Area

- To assemble, evaluate and present baseline data on the relevant environmental characteristics of the sub-project area, including changes anticipated before the commencement of the project. The description of the baseline environmental setting shall be worked out from the secondary data sources supplemented by the primary data collected as part of the various surveys carried out as part of the EA preparation.
- To describe the physical environment: geology; topography; soils; climate and meteorology; ambient air quality; noise quality; surface and ground- water hydrology; existing sources of air emissions; existing water pollution discharges; and receiving water quality, etc. Description should include both a general overview of overall study area, as well as more detailed information for specific implementation sites.
- To describe the biological environment: flora; fauna; rare or endangered species; sensitive habitats, including reserved forests, wildlife reserves and sanctuaries etc. Description should include both a general overview of overall study area, as well as more detailed information for specific implementation sites.
- To describe the socio-cultural environment: population; land use; planned development activities; community structure; employment; distribution of income, goods and services; recreation; public health; cultural properties; and tribal people and their usufruct rights, common property resources, etc. Description should include both a general overview of overall study area, as well as more detailed information for specific implementation sites.

Public consultation

- To carry out public consultation and participation as an integral part of the EA. Consultation sessions shall be carried out with different stakeholder groups at the local, regional and district levels, so as to incorporate the various environmental concerns and needs of the community and the relevant stakeholders. Specific attention should be paid to Project Affected Persons (PAPs), namely, those whose habitations or livelihoods will be directly impacted by the proposed sub-project.
- To ensure the effectiveness of the consultations and the full participation of all stakeholders in the project, all relevant information shall be shared with the likely PAPs and local NGOs in a timely manner prior to the consultation and in a form and language that are understandable and accessible to the groups being consulted.
- To ensure that consultations with these groups are carried out at least at the following two occasions: (a) shortly after environmental screening and before the terms of reference for the EA are finalized; and (b) once a draft EA report is prepared. Such groups should also be consulted throughout project implementation as necessary to address EA-related issues relevant to them, allowing relevant stakeholders the opportunity to share their concerns during both the design and implementation phases of the project.

- To make available both the initial draft EA and the report's conclusions at all relevant public locations accessible to PAPs and relevant stake holders. The EA report shall also be disclosed in website of the SGRBA, NGRBA and the World Bank's Infoshop.

Impact analysis

- To identify, analyse and evaluate the different kind of impacts, and to distinguish between significant positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts.
- To determine the impacts on sensitive receptors identified during the baseline environmental analysis.
- To determine the impacts on sensitive areas: critical natural habitats (such as conservation areas, sanctuaries, sacred groves, etc.) and migration routes; "induced development"; historic, cultural and religious buildings and sites; archaeological sites and tourism areas, etc.

Analysis of alternatives

- To describe alternatives that were examined in the course of developing the proposed project and identify other alternatives, which would achieve the same objectives. The concept of alternatives extends to siting, design, technology selection, construction techniques and phasing, and operating and maintenance procedures.
- To compare alternatives in terms of potential environmental impacts and suitability under local conditions. A "no project," or Business as Usual, scenario should also be considered, wherein the environmental impacts of taking no action will be estimated.

Mitigation

- To identify feasible and cost-effective mitigation measures that may reduce potentially significant adverse environmental impacts to acceptable levels, capital and recurrent costs of the measures. These measures should be identified prior to construction of any projects or sub-projects.
- To specify in a table the description of the measure along with who is responsible and when it has to be implemented.
- To include relevant drawings and technical specifications that would be required to implement the mitigation measure effectively during the design phase of any project or sub-project.

Monitoring

- To prepare detailed arrangements in a plan for monitoring implementation of mitigating measures and the impacts of the sub-project during construction and operation
- To include in the initial plan an estimate of capital and operating costs, and a description of other inputs (such as training and institutional strengthening) needed to carry it out. These estimates should occur during the initial design/planning phase of the sub-project.
- To document in the initial plan what will be monitored, who would do it, who would receive its outputs, how much it would cost, how it would be financed and what other inputs (e.g. training) are necessary.

- To include in the initial plan a list of environmental monitoring parameters, and detailed specifications (methods, schedule, etc) for performance/compliance monitoring during construction, and operation stage of the sub-project.

Management

- To identify institutional needs to implement the recommendations of the EA. This would include manpower requirements, skill requirements & training, organisational mechanisms and information dissemination requirements.
- To recommend any further studies of environmental issues which should be undertaken during project implementation.

Others

- To document the important contributors to the EA and to record interagency/forum/consultation meetings; including list of both invitees and attendees.

Suggested structure and content of an EIA report

The EIA report should have the following structure and content:

- Executive Summary - project details, policy framework, baseline conditions, significant environmental impacts, salient points of the analysis of alternatives, salient mitigation & monitoring measures, and budget.
- Project Description - Concise description of the proposed project and its geographic, ecological, social and temporal context.
- Policy, Legal and Administrative Framework - Government policies, environmental legislations and regulations currently under force.
- Baseline Data - Assessment of the physical, biological and socioeconomic conditions of the project locations.
- Environmental impacts - Prediction and assessment of the project's likely positive and negative impacts, in quantitative terms to the extent possible. The more significant environmental impacts and those that are considered critical by the public are to be further focused in this chapter.
- Analysis of Alternatives - Comparison of feasible alternatives to the project site / right-of-way, technology, design and operation – including the 'without project' situation – in terms of their potential environmental impacts
- Mitigation and monitoring measures - Enlisting and description of environmental impacts and the remedial measures to be taken. Preferably, this contains a comprehensive table containing a brief description of the impact, the type of remedial measure (prevention or mitigation or enhancement), the description of the measures, phase wherein applicable - pre-construction, construction and operational phases, and implementation responsibility.
- Budgets

Structure & content of an EMP

The EMP report should have the following structure and content:

- Introduction - Objective, scope, proponent's background, brief description of the sub-project and the purpose of the EMP

- Remedial Measures - Description and enlisting of the environmental impacts and remedial measures to be taken. Preferably, this contains a comprehensive table containing a brief description of the impact, the type of remedial measure (prevention or mitigation or enhancement), the description of the measures, phase wherein applicable - pre-construction, construction and operational phases, and implementation responsibility.
- Organizational arrangements for implementation - Institutional framework being established to ensure the implementation of the EMP.
- Environmental performance indicators are to be chosen and the basis for their selection. A linkage between these indicators and the important environmental impacts & the associated remedial measures needs also to be established.
- Monitoring mechanisms to be adopted that include reporting progress, frequency of monitoring, enhanced monitoring during specific seasons such as the monsoons if required.
- Mechanisms to ensure an ongoing dialogue with the public during the construction and operational phases.

The budget for the EMP implementation should be included in the overall sub-project. This should cover costs – mitigation, monitoring, training and public / stakeholder consultation & participation - due to be incurred during the construction and operational phases.

ANNEX II

GENERIC ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR CATEGORY II PROJECTS

Activity	Potential Impact / Concerns	Mitigation Measures	Applicable Project Phase	Responsible Agencies for Mitigation and Monitoring
I - SEWERAGE & SANITATION PROJECTS (includes new schemes and / or extension to existing schemes)				
Provision of House Connections to Sewer Network and providing gravity based interception in storm drains for diversion of Sanitary Sullage / Dry Weather flow	<ul style="list-style-type: none"> • Renders sewer network infrastructure underutilized and can lead to clog / silt • Sewage will continue to flow into storm drains posing health hazards, odor and aesthetic nuisance 	<ul style="list-style-type: none"> • Make provision for connecting all individual house-holds to the sewer network mandatory through house connection chambers, which in-turn connects to sewer network • In some instances, provision of house connections might warrant to raise the level of toilets to establish connectivity to the sewer network • All storm drains (width 300mm and above) are to be intercepted at every 1000m and connected / diverted to the nearest sewer network through a manhole • The intercepting point shall have overflow weir to ease excess run-off during monsoon seasons / months • The interception and diversion of smaller drains will enable / maximize sewage collection efficiency as well as sewage / sullage free storm drains throughout the year, reducing the health hazards, odor nuisance and improve hygiene • The interception and diversion of smaller drains can be phased out / dismantled after the achieving more than 95% of house connections to sewer network 	Project Preparation Phase	Project Implementing Agency / Project Preparation Consultants
Alignment of Lateral and Trunk Sewers	<ul style="list-style-type: none"> • Can impact trees, forest land, environmentally sensitive areas and religious / cultural properties 	<p>Sewer alignment shall be finalized to avoid</p> <ul style="list-style-type: none"> • Felling of trees, sewers through forest land, environmentally sensitive areas and proximity to cultural / religious properties • Sewer alignment through low lying areas and / or high water table areas to the extent possible. In case of unavoidable circumstances, sewers 	Project Preparation Phase	Project Implementing Agency / ULB / Project Preparation Consultants

Activity	Potential Impact / Concerns	Mitigation Measures	Applicable Project Phase	Responsible Agencies for Mitigation and Monitoring
		<p>shall be provided with cement concrete casing (minimum M-20 grade) to prevent up-lifting of sewers. If the hydraulic grade line of the sewer is to be maintained above ground level, adequate RCC pipe supports are to be provided</p> <ul style="list-style-type: none"> • In case of sewer alignment through forest land / environmental sensitive areas, necessary prior clearances from the appropriate authorities shall be obtained 	<p>&</p> <p>Project Implementation Phase</p>	
Septic Tanks and Soak Pits	<ul style="list-style-type: none"> • Disused / Disconnected septic tanks pose health hazard and malarial risks 	<ul style="list-style-type: none"> • Septic tanks and soak pits serving individual house-holds at present are to be disconnected, emptied through deployment of cesspool emptier / septic tank sucker vehicles • The sewage / sludge collected to cesspool emptier vehicles are to be disposed off in the nearest sewage treatment plant and / or solid waste disposal site • Individual household owners shall be encouraged to dismantle septic tank and soak pit and vacate the area for some better use 	Project Implementation Phase	Project Implementing Agency / Project Management Consultants
Excavation of Sewer Trenches	<ul style="list-style-type: none"> • Can impact utilities, affect traffic movement, cause accidents and safety concerns 	<ul style="list-style-type: none"> • Undertake transact walk and prepare strip charts to record the existing features and prepare excavation plan for the specific sewer stretch. Preparation of strip charts will help <ul style="list-style-type: none"> – to inform local residents about the scheduled time, duration and likely target dates for excavation, sewer laying and restoration works – to identify obstacles, need for relocation of utilities, if any along the alignment and initiate advance actions to negate them including establishing coordination procedures among various utility agencies – to identify the households to be connected, storm drains to be intercepted and prepare diversions / alternate pathways for local residents, if any among others – to identify the proximity of the sewer alignment to any protected archaeological monument. In case of proximity (less than 100m), prior 	Project Implementation Phase	Project Implementing Agency / Project Management Consultants

Activity	Potential Impact / Concerns	Mitigation Measures	Applicable Project Phase	Responsible Agencies for Mitigation and Monitoring
		<p>permissions from the archaeological department will be required for laying of sewers</p> <p>– to evolve alternate traffic routing and diversion plans in consultation with the traffic police</p> <ul style="list-style-type: none"> • Width of the trenches shall be kept minimum, depending upon soil conditions and depth of sewers • Use of mechanized excavation shall be encouraged in order to accelerate the pace of work and early completion • Care shall be taken not to damage the utilities and hamper the associated services. In case of utilities, which are likely to be hampered, inform the concerned agencies for actions as may be required • All sewer trenches more than 1.5m deep are to be provided with close / open timbering, as appropriate depending upon soil conditions • In case of high ground water table conditions, suitable de-watering system should be adopted and more importantly de-water discharge shall be disposed off in a proper way with no leakages or flooding on the roads • Caution boards shall be prominently displayed in at least two places, along a specific sewer stretch, indicating the about the project and likely date of completion of work in the specific stretch • All excavated material, not fit for backfilling, shall be disposed off in an approved disposal / landfill area. Unwarranted pileup of excavated material along the sewer trenches shall be avoided to extent possible • During excavation, if any archaeological or historical evidences or chance finds are noticed, the same may be immediately brought to the notice of the concerned authority / department 		
Barricading of Trenches	<ul style="list-style-type: none"> • Inadequate barricading can cause accidents and pose safety risks for local residents and vehicular traffic 	<ul style="list-style-type: none"> • All sewer trenches are to be barricaded as a safety precaution and prevent accidents • Safety messages can be displayed on the barricades along with the brief project information to enable greater visibility of the project / scheme • Barricading of trenches will provide earmarked / secluded space for workforce to carryout all activities associated with sewer laying works 	Project Implementation Phase	Project Implementing Agency / Project Management Consultants

Activity	Potential Impact / Concerns	Mitigation Measures	Applicable Project Phase	Responsible Agencies for Mitigation and Monitoring
Laying, Jointing, Testing and Commissioning of Sewers	<ul style="list-style-type: none"> Improperly laid sewers or blockages within sewers can affect smooth flow and cause backflow / overflow problems leading to spillage of sewage on to roads through manholes Improper and inadequate jointing can lead to leakage of sewage and infiltration into ground water or vice-versa. The leakage of sewage into ground water can cause ground water pollution, whereas ingress of ground water into sewers will increase the hydraulic load on the sewer network as well sewage pumping stations and sewage treatment plants 	<ul style="list-style-type: none"> All sewers shall be laid to gradient / level as per design to ensure self cleaning velocity even during lean flow The sewer shall be laid on a properly prepared sewer bed (as per design) with minimum cover of 900mm from the crown of the pipe. Cement concrete encasement (with grade not leaner than M-20) shall be provided for all sewers, in case of depth of cover is less than 900mm The jointing of sewers shall be done by a rich cement mortar mix [not leaner than 1:3 (1 cement : 3 sand)] and properly cured for at least 48 hours All sewers shall be hydraulically tested for leakages. Air testing may be carried out for larger dia pipes (greater than 600mm dia), if required quantity of water is not available for filling-up the pipes. The procedure for leakage testing and permissible leakages allowances shall be adopted as per CPHEEO Manual and CPWD specifications. Any sewer section or part thereof, which fails the leakage test, shall be dismantled, re-laid and tested again, until satisfactory After leakage test and prior to commissioning, the sewers in segments shall be tested for blockages through running a double disc of solid cylinder (75mm less than internal diameter of the sewer) to ensure the sewer segment is free from any obstacles for smooth hydraulic flow Laying of sewers in congested areas itself should not lead to rush job of sewer laying, with dis-regard to hydraulic gradient line, proper jointing and curing, leakage and blockage testing Limit the sewer laying work to daylight hours to the extent possible and deploy less noise generating and well maintained equipments to minimize noise and vibration disturbances to the nearby residents Use water sprinkling arrangements for reducing dust levels due to sewer laying works and traffic movement 	Project Implementation Phase	Project Implementing Agency / Project Management Consultants
Provision of Sewer Appurtenants like	<ul style="list-style-type: none"> Inadequate provision of sewer appurtenants will affect the ease of 	<ul style="list-style-type: none"> House connection chambers with multiple inlets, shall be constructed in-order to facilitate additional house connections a later date Manholes and drop manholes shall be provided at regular intervals (30m 	Project Implementation	Project Implementing Agency / Project

Activity	Potential Impact / Concerns	Mitigation Measures	Applicable Project Phase	Responsible Agencies for Mitigation and Monitoring
House Connection Chambers, Drop Manholes, Ventilating Shafts, etc.	<p>routine and emergency sewer maintenance works</p> <ul style="list-style-type: none"> The inadequate provision of sewer appurtenants also increase the response time required for attending complaints like overflowing of sewage on to roads due to clogged / blocked sewers 	<p>max.) or wherever there is change of sewer direction as per CPHEEO Manual</p> <ul style="list-style-type: none"> Ventilating shafts shall be provided at all upstream stretches of the sewers to relieve the build-up of gases All manholes (greater than 0.9m deep) shall be provided with step irons for facilitating quick entry and exit to O&M personnel In locations of high ground water table conditions, manholes shall be constructed in RCC instead of conventional brick masonry All manholes, laid along roads, shall be provided with heavy duty (HD)/ extra heavy duty (EHD) manhole covers and with frames made of SFRC (steel fibre reinforced concrete) and / or cast iron, which can be withstand appropriate anticipated traffic load along the stretch 	Phase	Management Consultants
Backfilling and Road Restoration	<ul style="list-style-type: none"> Inconvenience and irritable feeling to the local residents, cause for traffic congestions leading to air and noise pollution 	<ul style="list-style-type: none"> All sewer trenches shall be backfilled with excavated material (to extent possible) in layers not exceeding 30cm, each layer shall be compacted to achieve maximum density The road surface including the bitumen, base and sub-base layers shall be restored to its previous state and ensure the smooth ride quality to road users 	Project Implementation Phase	Project Implementing Agency / Project Management Consultants
Camps for Workforce	<ul style="list-style-type: none"> Environmental, health and sanitation facilities for workforce deployed for laying of sewer network 	<ul style="list-style-type: none"> The contractor shall ensure adequate housing with water, sanitation and healthcare facilities to the construction workforce 	Project Implementation Phase	Project Implementing Agency / Project Management Consultants
Flushing of Sewers	<ul style="list-style-type: none"> Inadequate sewage flow, particularly in the initial years of sewer network (more specifically upstream stretches) can cause siltation leading to 	<ul style="list-style-type: none"> Periodic flushing of sewers in upstream stretches, shall be made to avoid clogging and / or silting-up of the sewers, particularly in the initial years of sewer commissioning Mobile vans, fitted with water tankers (with capacity of 8000-10000 litres), shall be deployed for period flushing of the sewers with non potable water 	Operation & Maintenance Phase	Project Implementing Agency / Urban Local Body

Activity	Potential Impact / Concerns	Mitigation Measures	Applicable Project Phase	Responsible Agencies for Mitigation and Monitoring
	eventual blockage of sewers			
Sewer O&M Plan and PPEs for Personnel	<ul style="list-style-type: none"> • To ensure trouble free sewage conveyance from households to treatment plant • To prevent overflow of sewage on to roads, an environmental and health concern • Environmental, health and safety including prevention of occupational hazards for personnel deployed for O&M of sewer network 	<ul style="list-style-type: none"> • A O&M plan for attending to periodic routine and emergency maintenance of sewer network shall be formed • The maintenance gang shall be made responsible for removal of blockages, easing of backflow / overflow in sewers, identification of sewer stretches, which chronically clog, check for missing or broken manhole covers among others • Each of the maintenance gang shall be provided with adequate training and PPEs (like safety belts, portable air blowers, portable submersible sewage pump sets, pick axes, manhole guards, lanterns, torches, safety lamps, lead acetate paper, silt drums, ropes iron hooks, hand carts, plunger rods, observation rods, split bamboo rods, gumboots, hand gloves, gas masks, breathing apparatus, portable lighting equipment, diver suits, hand rakes etc. • The sewer maintenance gang shall be subjected to routine health check-ups once in every quarter and comprehensive health checkups once in a year as a preventive measure for occupational hazards 	Operation & Maintenance Phase	Project Implementing Agency / Urban Local Body

ANNEX III

Roles and Responsibilities to Implement SMF at Various Levels

LEVELS	ROLES and RESPONSIBILITIES
<p style="text-align: center;">PMG Social Development Officer</p>	<ul style="list-style-type: none"> • Develop ESMF and provide policy guidance to the state level counterparts • Ensure dissemination of R&R Policy at national level • Monitoring R&R and Land acquisition activities. Make budgetary provisions for R&R activities • Liaison with state administration for land acquisition and implementation of RAP • Participate in state level meetings • Finalize TOR of Contracting NGO for implementation and external agency for monitoring and evaluation • Prepare training schedule for state and project level social development officials for capacity building to implement the RAP • Prepare TOR for any studies required and qualitative dimensions to the implementation of RAP • Facilitate appointment of consultants to carry out the studies and co-ordinate them. • Monitor physical and financial progress on RAP implementation
<p style="text-align: center;">SPMU – Social Development Officer</p>	<ul style="list-style-type: none"> • Co-ordinate with district administration and NGO responsible for ESMF implementation • Translation of R&R policy in local language and ensure dissemination at state; district and community level - prepare pamphlets on policy for information dissemination • Coordinate with the state and district level officials for acquisition of private land and implementation of ESMF • Liaison with district administration for dovetailing of government schemes for Income Restoration Schemes • Monitor physical and financial progress of RAP implementation • Participate in the project level meetings <ul style="list-style-type: none"> ▪ Report progress, highlighting social issues not addressed, to provide for mid course correction, ▪ Coordinate training of project level staff with agencies involved. ▪ Organise by-monthly meetings with NGO to review the progress of R&R
<p style="text-align: center;">Project Level – Program Executing Agency (PEA)</p>	<ul style="list-style-type: none"> • Disclosure of RAP and entitlements and also ensure that copies of RAP is made available to the PAPs; • Oversee land availability and coordinate with local revenue official for land acquisition • Dissemination of Project Information at various stages of project as envisaged in the ESMF • Ensure community involvement in every stage of the sub project • Documentation and disclosure of consultations • Shall be first level of grievance redressal and will guide PAPs further to redress their grievances • Ensure disbarment of compensation and / or entitlements as per schedule • Responsible for addressal of additional unforeseen impacts during construction • Ensuring incorporation of social issues in DPRs • Supervising the ESMF tasks during implementation & its progress • Collect data pertaining to the evaluation and monitoring indicators

LEVELS	ROLES and RESPONSIBILITIES
	<ul style="list-style-type: none"> • Will prepare monthly progress report and quarterly process documentation report
Social Specialist of Supervision Consultants	<ul style="list-style-type: none"> ▪ Ensure environmental and social screening of sub-projects; ▪ Implement the agreed environmental and social mitigation measures; ▪ Ensure compliance of national and other applicable laws and Acts pertaining to environment and social, and ▪ Sensitize and help build capacity of the PEA officials towards the implementation of the ESMF provisions. ▪ Assist Environment and Social Development Officer of PEA in preparing monthly progress and quarterly process documentation reports
NGO	<ul style="list-style-type: none"> ▪ Conduct the verification for the affected families and update the census and socio-economic data ▪ Develop rapport with PAFs and between PAFs and PEA ▪ Design and carry out information campaign and consultations with the local community during the implementation of the RAP ▪ Provide information to PAFs and local community and conduct awareness on R&R Policy and distribute the policy to the affected families ▪ Prepare and submit the micro plans for the PAFs ▪ Assist the PAFs in receiving the compensation and rehabilitation assistance ▪ Motivate and guide PAP for productive utilization of the compensation and assistance amount ▪ Assess the level of skills and efficiency in pursuing economic activities, identify needs for training and organize training program ▪ Assist PAFs in approaching the grievance redressal mechanism ▪ Assist the PAFs in getting benefits from the appropriate local development schemes ▪ Prepare monthly progress reports and participate in monthly review meetings ▪ Participate in the training program for capacity building ▪ Carry out other responsibilities as required from time to time