



Livelihood Restoration Framework for Sewage Treatment Plants in Bally, Baranagar, and Arupara under the Namami Gange Mission Project in West Bengal

Ganga STP Project Private Limited

Final Report

16 October 2020

Project No.: 0511477

www.erm.com

Document details	Livelihood Restoration Framework for Sewage Treatment Plants in Bally, Baranagar, and Arupara under the Namami Gange Mission Project in West Bengal
Document title	Livelihood Restoration Framework for Sewage Treatment Plants in Bally, Baranagar, and Arupara under the Namami Gange Mission Project in West Bengal
Document subtitle	Final Report
Project No.	0511477
Date	16 October 2020
Version	6
Author	ERM India Private Limited
Client Name	Ganga STP Project Private Limited

Document history

Version	Revision	Author	Reviewed by	ERM approval to issue		Comments
				Name	Date	
Draft	0	Wanda Lamare Mayanka Singh	Soumi Ghosh	Debanjan Bandyopadhyay	11.10.2019	Approved as draft report
Draft	V2	Wanda Lamare Mayanka Singh	Soumi Ghosh	Debanjan Bandyopadhyay	18.02.2020	Approved as Final Draft Report
Draft	V3	Wanda Lamare Mayanka Singh	Soumi Ghosh		11.03.2020	
Draft	V4		Soumi Ghosh	Debanjan Bandyopadhyay	14.03.2020	Revised Final Draft
Final	V5		Soumi Ghosh	Debanjan Bandyopadhyay	25.09.2020	Approved as Final Report
Final	V6		Soumi Ghosh	Debanjan Bandyopadhyay	16.10.2020	Approved as revised Final Report

Signature page

16 October 2020

Livelihood Restoration Framework for Sewage Treatment Plants in Bally, Baranagar and Arupara under the Namami Gange Mission Project in West Bengal

Final Report



Name Debanjan Bandyopadhyay
Job title Partner



Name Soumi Ghosh
Job title Senior Consultant

ERM India Private Limited

Building 10A

4th Floor, DLF Cyber City

Gurgaon, NCR – 122002

Tel +91 11 4170300

© Copyright 2020 by ERM Worldwide Group Ltd and / or its affiliates ("ERM").

All rights reserved. No part of this work may be reproduced or transmitted in any form,
or by any means, without the prior written permission of ERM

CONTENTS

1.	INTRODUCTION	1
1.1	Project Background	1
1.2	Project Description.....	2
1.3	Scope of Land Acquisition and Involuntary Resettlement.....	0
1.4	Objectives of the Livelihood Restoration Framework.....	1
1.5	Justification for a Framework Approach.....	1
1.6	Applicability of the Livelihood Restoration Framework.....	1
1.7	Limitations.....	2
1.8	Use of the report.....	2
2.	APPLICABLE POLICY FRAMEWORK	3
2.1	International Performance Standards	3
2.1.1	Performance Standard (PS) 5- Land Acquisition and Involuntary Resettlement..	3
2.1.2	Performance Standard 2 - Labour and Working Conditions.....	3
2.2	Environmental and Social Management Framework for National Mission for Clean Ganga, (updated in November 2019)	4
2.3	Gap filling measures	7
3.	SOCIO-ECONOMIC BASELINE INFORMATION	10
3.1	Surveys.....	10
3.1.1	Socio-Economic Baseline	10
3.1.2	Baseline Socio-economic survey conducted as part of ESIA.....	10
3.1.3	Sex Ratio	12
3.1.4	Literacy Rate in District and Study Areas.....	12
3.1.5	Livelihood Status of the Study Area	13
3.1.6	Workforce Participation.....	13
3.1.7	Income Distribution Pattern.....	14
3.1.8	Electricity Access	14
3.2	Fishermen Utilizing Kona WSP	14
3.3	Existing Contractual Workforce in the Facilities	17
3.3.1	Existing Workforce at Bally STP location	17
3.3.2	Existing workforce at Baranagar STP location	18
3.3.3	Existing Workforce at Arupara STP location	19
4.	IMPACT ASSESSMENT	21
4.1	Summary of the Impacts	21
4.2	Access Disruption	22
4.3	Loss of Structure.....	27
4.4	Livelihood Based Impacts	27
4.4.1	Loss of Income for roadside vendors and workers engaged by the entity	27
4.4.2	Loss of Fishing Ponds and Income Loss for fishermen.....	28
4.4.3	Income Loss for fish farm workers engaged by fishermen.....	30
4.4.4	Loss of income for existing workers	30
4.5	Impact Avoidance	30
4.5.1	Impact Minimization and Mitigation Measures	30
4.5.2	Avoidance of Impacts to Indigenous Communities	31
5.	POLICY FRAMEWORK AND ENTITLEMENT	32
5.1	Screening of Sub Projects	32
5.2	Core Safeguard Principles for Involuntary Resettlement	33
5.3	Livelihood Restoration Plan (LRP).....	33
5.4	Gender and Vulnerability in the community	33
5.5	Eligibility Criteria	34
5.6	Cut-off date	34

5.7	Entitlement Matrix	34
5.7.1	Assumptions Considered for setting the Entitlement Principles for Loss Assessed	34
5.7.2	Principles Guiding Entitlements	36
5.7.3	Entitlement Matrix	38
5.8	Livelihood Restoration Measures for Fishermen of Bally WSP	51
5.8.1	Proposed Livelihood Options	51
6.	CONSULTATION, PARTICIPATION AND DISCLOSURE.....	55
6.1	Public Consultation	55
6.2	Information Dissemination and Resettlement Plan	55
7.	COMPENSATION, INCOME, RESTORATION AND RELOCATION	58
7.1	Valuation and Method for Calculation of Compensation	58
7.1.1	Structure:	58
7.1.2	Business and Livelihood	58
7.1.3	Loss of income for workers engaged in shops and business:	59
7.1.4	Cost for Leasing Alternate Fish Ponds.....	59
7.1.5	Working Capital for Fishing at Alternate Location (Option 1)	60
7.1.6	Working Capital for Fishing related Alternate Livelihood (Option 2)	60
7.1.7	Compensation for fish farm workers	60
7.2	Compensation procedures.....	60
8.	GRIEVANCE REDRESS MECHANISM	62
9.	INSTITUTIONAL STRUCTURE FOR IMPLEMENTATION	64
9.1	Role of NMCG (Implementing Agency).....	64
9.2	Role of KMDA (Executing Agency)	64
9.3	Role of GSPPL (Concessionaire) and EPC Contractor in Livelihood Restoration Planning and Implementation	65
9.4	Role of LRP Implementing Agency	65
10.	BUDGET AND FINANCING	67
11.	MONITORING AND REPORTING	71
11.1	Internal Monitoring	71
11.2	Monitoring Plan	71
11.3	External Monitoring	74
11.4	Monitoring Indicators	74
APPENDIX A	LIST OF EXISTING CONTRACTUAL WORKS AT THE THREE LOCATIONS	
APPENDIX B	OUTLINE OF THE QUARTERLY MONITORING FORMAT	
APPENDIX C	RESETTLEMENT POLICY AND LAND ACQUISITION FRAMEWORK (RPLAF) SECTION OF THE ESMF FOR NMCG, NOVEMBER, 2019	
APPENDIX D	MINUTES OF MEETING WITH FISHERMEN GROUP MEMBERS, DISTRICT MAGISTRATE, HOWRAH AND OTHER STAKEHOLDERS	

List of Tables

Table 1.1	Municipality Details	2
Table 1.2	Project Component	6
Table 2.1	Gap Filling Measures	7
Table 3.1	Sex Ratio in Study Area in Comparison to District and State	12
Table 3.2	Monthly Income.....	14
Table 3.3	Access to Electricity	14
Table 3.4	Fishermen Cooperatives and Pond Used	15
Table 4.1	Summary of the Project Impacts.....	21
Table 5.1	Entitlement Matrix (EM)	39
Table 6.1	Consultation, Participation and Information Disclosure	56
Table 7.1	Indicative Number of Shops and Business Affecting Temporary Loss of Income	59
Table 7.2	Indicative Average Monthly Income Range of the Affected Shops.....	59
Table 10.1	Indicative LRP Budget	68

List of Figures

Figure 1.1	Project Location	2
Figure 1.2	Bally Project Location	3
Figure 1.3	Arupara Project Location	4
Figure 1.4	Baranagar Project Location	5
Figure 4.1	Diagrammatic Representation of WSP Fishing Pond	28

Acronyms and Abbreviations

AP	Affected Person
BESU	Bengal Engineering and Science University
CLS	Core Labour Standards
CPT	Calcutta Port Trust
CSO	Civil Society Organisation
DPR	Detail Project Report
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EPC	Engineering Procurement Construction
EPF	Employee Provident Fund
ERM	Environmental Resources Management
ESIA	Environment and Social Impact Assessment
ESI	Employee State Insurance
E&S	Environment and Social
ESMF	Environment and Social Management Framework
ESSO	Environment Social Safeguard Officer
FGD	Focus Group Discussion
GAP	Ganga Action Plan
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism

GSPPL	Ganga STP Projects Private Ltd.
HAM	Hybrid-Annuity Model
HSE	Health, Safety and Environment
I&D	Interception and Diversion
IFC	International Finance Corporation
IFC PS	International Finance Corporation Performance Standard
IIST	Indian Institute of Engineering Science And Technology
ILO	International Labour Organisation
IOL	Inventory of Loss
KMDA	Kolkata Metropolitan Development Authority
LRF	Livelihood Restoration Framework
LRP	Livelihood Restoration Plan
MLD	Millions of Litres Per Day
MPS	Main Pumping Station
NH	National Highway
NGP	Namami Gange program
NGO	Non-Government Organisation
NMCG	National Mission for Clean Ganga
NOC	No Objection Certificate
O&M	Operation and Maintenance
PAP	Project Affected Person
PAH	Project Affected Household
PHED	Public health Engineering Department
PPE	Personal Protective Equipment
PWD	Public Works Department
PPP	Public Private Partnership
RFCTLAR&R	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013
ROW	Rights Of Way
SEP	Stakeholder Engagement Plan
SHG	Self Help Group
SIA	Social Impact Assessment
SPMG	State Program Management Groups
SOP	Standard Operating Procedures
SPV	Special Purpose Vehicle
SR	Safeguarding Requirements
STP	Sewage Treatment Plant
ULB	Urban Local Bodies
WSP	Waste Stabilization Pond

1. INTRODUCTION

1.1 Project Background

The river Ganga, which flows from north to east India, has more than 500 million people living along its basin. Over three-quarters of the sewage generated in the towns and cities along the river Ganges in India flows untreated into the 2,525-km long river, which is a water source for 400 million people, or about 40% of India's population. The National Mission for Clean Ganga (NMCG) constituted under Ministry of Water Resources, River Development & Ganga Rejuvenation, Government of India has set an objective to ensure effective abatement of pollution and conservation of the river Ganga and its tributaries by adopting a river basin approach for comprehensive planning and management. An Integrated Ganga Conservation Mission namely "Namami Gange" has been approved as 'Flagship Programme' set up in June 2015 to accomplish effective abatement of pollution, conservation and rejuvenation of the river.

The program is being implemented by the National Mission for Clean Ganga (NMCG), and its state counterpart organizations i.e., State Program Management Groups (SPMGs). The 'Urban Development & Municipal Affairs Development (Urban Development Branch), under State Government is the designated SPMG, which is a registered society of the State Government constituted with the objective of serving as the dedicated institution for effective implementation of the Namami Gange programme activities at the State level. Subsequently in January 2016, GOI has approved Hybrid-Annuity based Public Private Partnership (PPP) model for creation and maintenance of sewage treatment infrastructure under the Namami Gange Programme. The immediate scheme objective is to prevent untreated wastewater of drains from joining the river by intercepting the drains that have outfalls in the Ganga, divert them through sewers to Sewage Treatment Plants for treatment and allow only treated sewage to be discharged into the Ganga.

The overall scheme envisages implementation of a number of wastewater treatment projects along the river to clean municipal wastewater before discharge. Under the flagship program of Namami Gange, Kolkata Metropolitan Development Authority (KMDA), has decided to implement the project titled "Development of Sewage Treatment Plants – Kolkata City Area", which comprises of the following components:

- (i) Construct, operate and maintain one STP at Bally with a proposed capacity of 40 MLD.
- (ii) Renovate, operate and maintain one Existing Bally STP with a capacity of 22 MLD along with Bally STP's Associated Infrastructure.
- (iii) Construct, operate and maintain one STP at Arupara with a proposed capacity of 65 MLD and a septage management facility of 150 cum/d capacity.
- (iv) Renovate, operate and maintain Arupara STP's Associated Infrastructure
- (v) Construct, operate and maintain one STP at Baranagar with a proposed capacity of 60 MLD.
- (vi) Renovate, operate and maintain Baranagar STP's Associated Infrastructure.

The project is being implemented on hybrid annuity based PPP mode and the implementation of the project, M/s VA Tech Wabag Ltd. as the selected bidder has incorporated a Special Purpose Vehicle (SPV) – the "Concessionaire" entity M/s Ganga STP Projects Private Ltd. (GSPPL) under Indian Companies Act, 2013 on 5th April 2019 for development of the project "Development of Sewage Treatment Plants – Kolkata City Area". Subsequently a Concession Agreement has been signed among NMCG, KMDA and M/s GSSPL.

ERM understands that M/s Ganga STP Projects Private Ltd (the "Concessionaire") has been entrusted with the responsibility of designing, financing, rehabilitating, restoring, upgrading, supplying,

constructing, erecting, installing, testing, commissioning and completing the work at all the STP locations. VA Tech Wabag Limited has 100 % equity in GSPPL and also is the EPC Contractor Agency for the project.

International Finance Corporation (hereinafter called as 'IFC' or the 'Investor') is evaluating a potential investment opportunity into the sewerage project being developed by the Concessionaire.

ERM India Private Limited (ERM) has been commissioned by VA Tech Wabag Ltd. (hereinafter referred to as the 'Wabag' or 'Client') to undertake the environmental and social compliance gap assessment, preparation of an Environmental and Social Impact Assessment (ESIA), E&S management plans to align the project as per the safeguard requirements of IFC. This Livelihood Restoration Framework document is part of the social management framework for the project. It should be noted that, as the design for the final alignment of the sewer pipelines, where replacement and rehabilitation work are yet to be finalised for the project, this framework document is being prepared as a guiding document for the preparation of the Livelihood Restoration Plan (LRLRP).

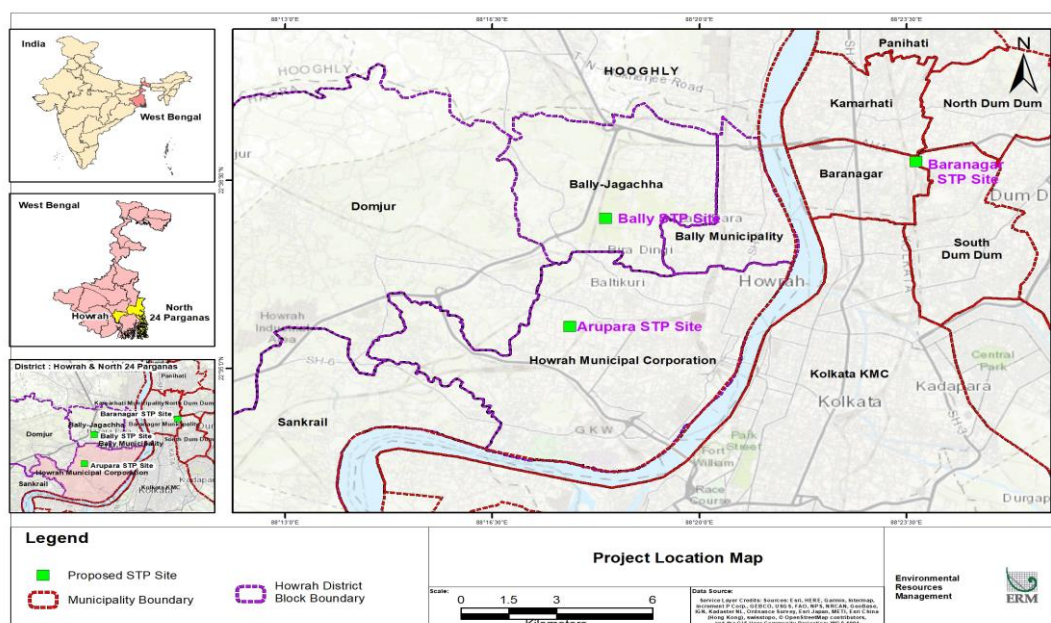
1.2 Project Description

The project will entail construction of STPs in three locations, replacement, renovation and desilting of existing sewer lines, laying of rising sewer mains and new sewer networks at Bally, Baranagar and Arupara in Howrah and North 24 Parganas districts of West Bengal. The footprint of the three project locations falls under four Municipalities. Details is provided in **Table 1.1**

Table 1.1 Municipality Details

Name of the Project Site	Municipality
Arupara STP	Howrah Municipality
Bally	Howrah Municipality
Baranagar	Kamarhati Municipality Baranagar Municipality South Dum Dum Municipality

Figure 1.1 Project Location

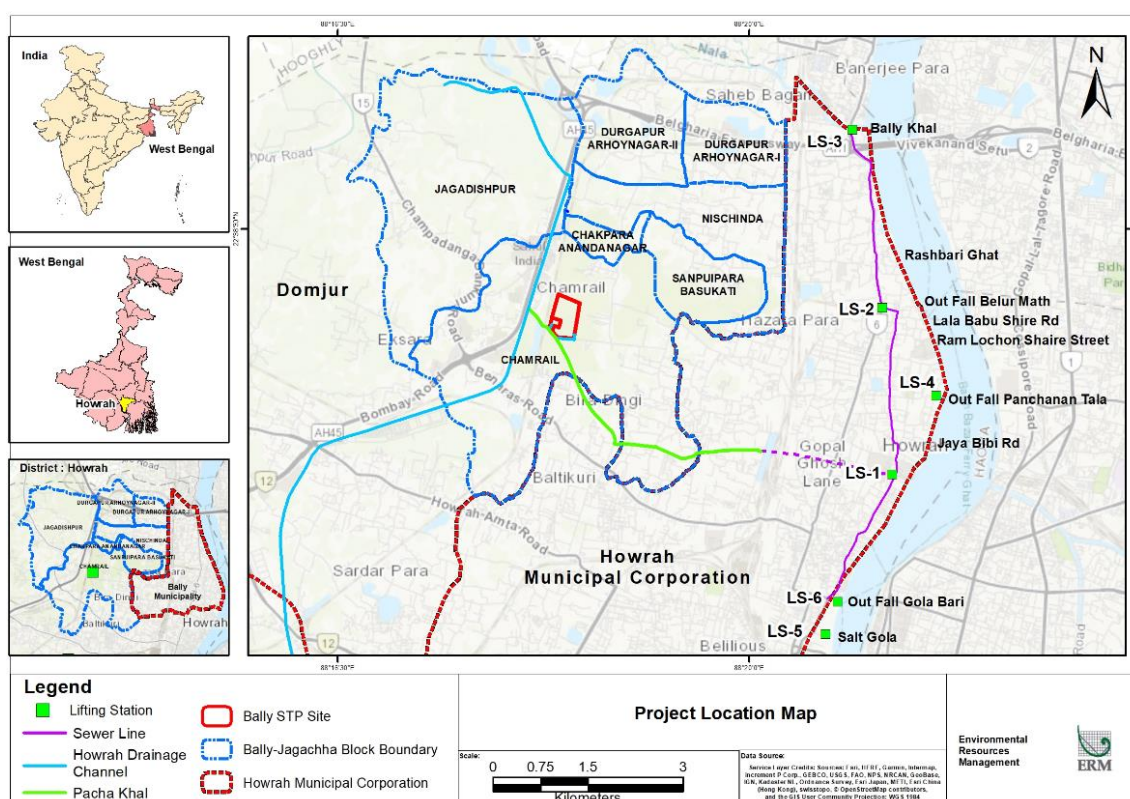


Bally STP Location

In Bally the existing sewage treatment system and associated infrastructures comprises of the waste stabilisation pond (WSP), underground I&D sewer, six Lift Stations (LS), and one Main Pumping Station (MPS). The sewer line starts from near Bally Khal on the north and then runs southerly direction partly along G.T road through rising main and then by gravity along Girish Ghosh road, G.K Bhaduri road and Belur Math road through 3 numbers Lift stations at Bally Khal (LS - 3), Belur Math (LS – 2) and Panchanantala (LS – 4). The entire flow from Bally area then discharges into a manhole located on the opposite side of Hanuman Jute Mill (LS – 1) on Girish Ghosh Road in Ghusuri area, Howrah. Similarly an existing sewer along J.N. Mukherjee from Salt Gola near Howrah Station runs through 2 nos. pumping stations designated as LS – 5 (Saltgola), and LS – 6 (Golabari). The sewer in this stretch had been connected to the same manhole of Bally I&D sewer opposite to Hanuman Jute Mill lifting station (LS-1).The combined flow from this common manhole is discharged through gravity sewer to the Lift station (LS – 1) by the side of Hanuman Jute Mill. The sewage from Lift Station – 1 is then pumped through rising main from LS to the drainage channel known as “Pacha khal” which again flows to channel “BC No. 3”. The DWF of the channel BC No. 2 & 3 is intercepted at their meeting point through a diversion structure and diverted to Kona Main Pumping Station (MPS). The wastewater is then pumped to 30 MLD capacity 3 types pond -Anaerobic-Facultative-Maturation Waste Stabilization Ponds based STP at Kona at a distance of 5 km from Bally located in a Panchayat area.

The existing Bally WSP site is located on the western bank of river Ganga in between Benaras road and Bombay road (NH-6) at a distance of 10 km west of Howrah Station near Dankuni –Santragachi railway line. The WSP area falls under the Chokpara Ananda Nagar Gram Panchayat and the land for the proposed STP is under the jurisdiction of the Kolkata Metropolitan Development Authority (KMDA). The trunk sewer lines, effluent discharge lines are within the ROW of the public roads under the ownership of Public Works Department (PWD Roads), Government of West Bengal and respective Municipal Corporations or Municipalities. The project Location of Bally is provided in **Figure 1.2.**

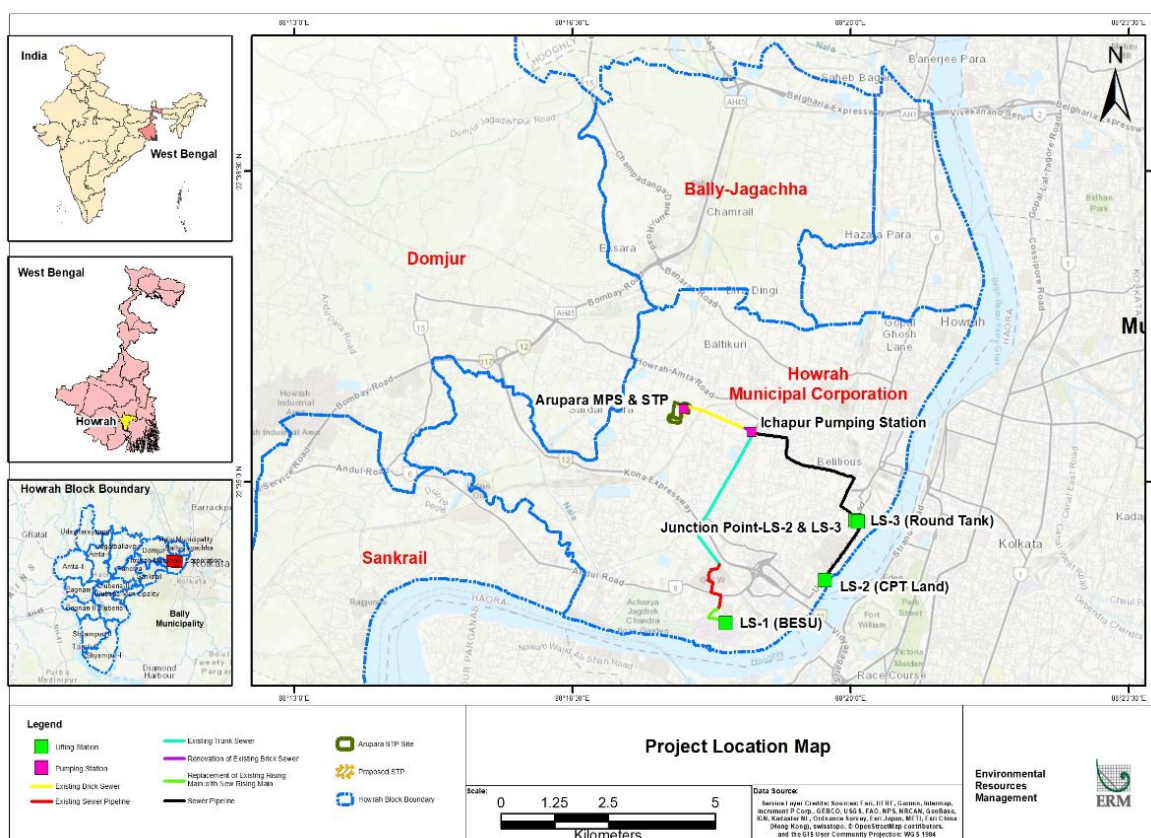
Figure 1.2 Bally Project Location



Arupara STP Location

In Arupara the existing sewage treatment system and associated the infrastructure comprises of the STP, underground sewer network, three Lift Stations (LS) and two Main Pumping Stations (MPS). The outfall flows of Swornamoyee *khal* (canal) to river Ganga intercepted near BESU and diverted to the lifting station (LS-1) just besides BESU presently called IEST. The pumped sewage is then discharged through DI pipeline which passes below Botanical Garden Road along the boundary of IEST and then flows below College Road till it joins Andul Road and flows below the factory premises of Guest Keen William Limited (GKWL) and joins the sewage network below Canal side road flowing to Itchapur MPS. The STP is most likely to be fed by already laid sewers along Panchanantala road connected to major Trunk sewers along HIT's road from LS-2 (CPT land) and LS-3 (Round tank). The network of sewage system finally terminates into two sewerage wells each 1800mm diameter and meter 7.93 m diameter located just outside the pumping station at Itchapur. Sewage from this well, located just outside the pumping station is then pumped into a junction manhole. Thereafter it flows by gravity through 2.75 m diameter Brick Sewer to another 7.93 m diameter well within the campus of STP at Arupara. The raw sewage thus conveyed to central well enters into wet sump of Arupara pumping station and then discharges sewage to STP facility. The Arupara project location is provided in **Figure 1.3** below.

Figure 1.3 Arupara Project Location

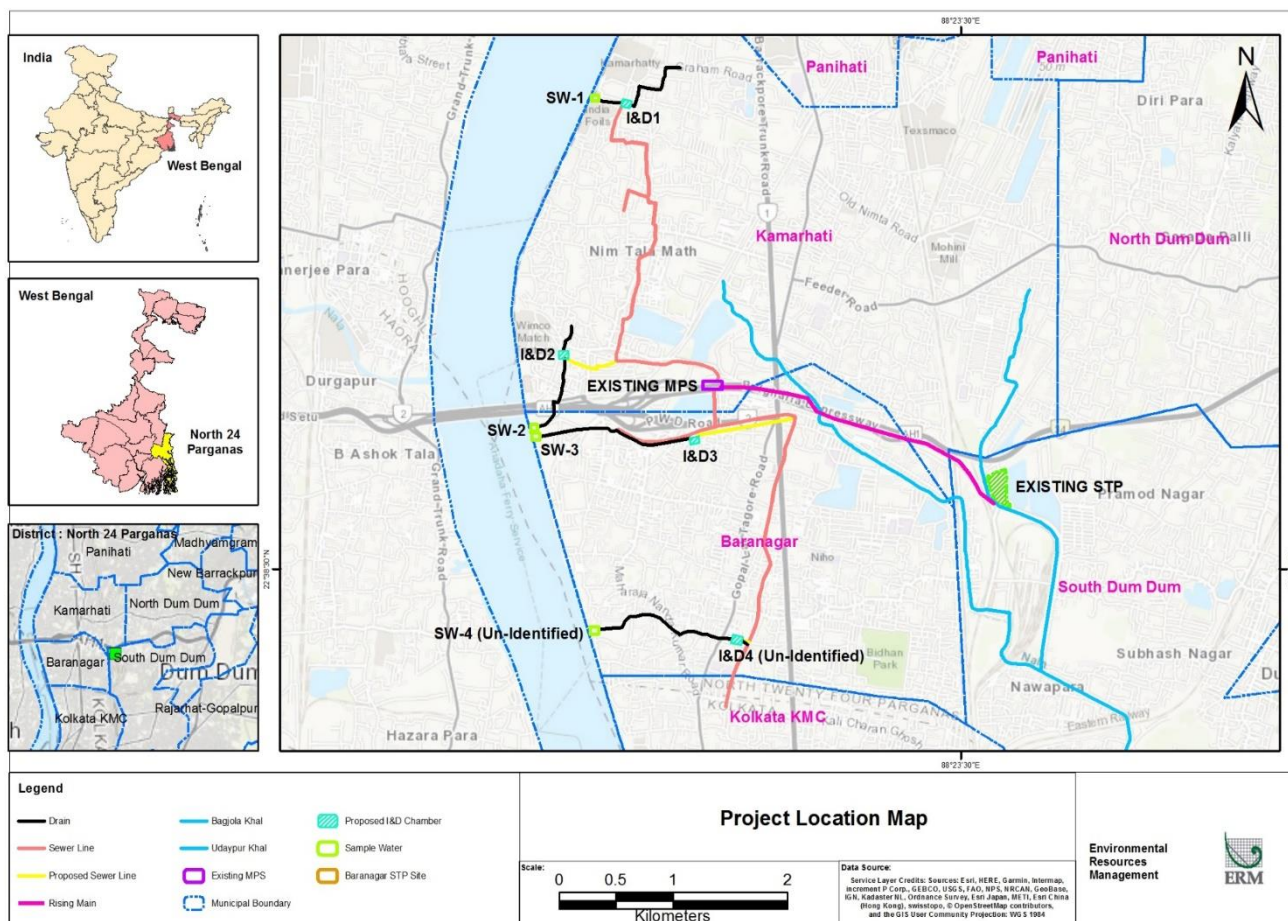


Baranagar STP Location

In Baranagar the sewage treatment system and associated sewage infrastructure comprise of the underground I&D sewer network, four I&D chambers and one Main Pumping Station (MPS). The project area for Baranagar Sewage Treatment Facility comprises of Baranagar Municipality, North Dum Dum Municipality, South Dum Dum Municipality and Kamarhati Municipality located in North 24 Parganas District of West Bengal State. Sewage from these areas are discharged into four drains which directly discharges into River Hooghly. I&D sewers from I&D-1 Goli Ghat Drain, I&D – 2

Dhakshineswar Drain, I&D – 3 Lock Gate Drain and I&D-4 at Old PS drain divert the sewage to Main Pumping Station (MPS) at Deshparan Shasmal Road. Sewage from MPS is then transferred to an existing STP of 40 MLD capacity in Mathkal area under North Dum Dum Municipality. Existing trunk sewer lines are laid along the main urban roads namely Mill Approach Road, Mahadeb Ghosal Road, Sashtitala Road, K.N Singh Road, Jay Krishna Ghosal Road, Kalinath Ghosal Road, Kumud Ghosal Road, R.N Tagore Road and A.C Sarkar Road at Kamarhati municipality area and Gopal Lal Tagore Road and at Baranagar municipality area. Project Location of Baranagar is provided in **Figure 1.4** below.

Figure 1.4 Baranagar Project Location



In all the three sites, the project will involve construction of sewage treatment plants (except for Baranagar, here decommissioning will take place of the existing STP and then reconstructed), renovation of lifting station, replacement and relaying of gravity sewer line, raising mains, installation of I&D structures and desilting of sewer line. **Table 1.2** provides an overview of the proposed project component.

Table 1.2 Project Component

Name of the Project Site	Project Component	Proposed Work to be Undertaken		location of rehabilitation works	Status of detailed design
Arupara	3 Lifting Stations (LS) 2 Main Pumping Station 1 STP Gravity Sewer Line	Design, supply, installation, testing and commissioning of STP.	One 65 MLD capacity STP with biogas based power generation facility in the existing STP location by making necessary preparatory works for converting the part of sludge drying beds into usable land space for establishing new STP to treat the sewage as per applicable disposal norms.	Arupara STP	Proposed lay-out has been shared
		Dismantling of existing raising mains and replacement with new raising main (near Ichapur MPS)	700 mm dia (For Ichapur MPS) - 700 metre	From BESU LS along College Ghat Road	Design not shared
		Replacement of existing sewer line	700 mm dia - 107 meter 800 mm dia - 150 metre 1000 mm dia - 546 metre	Exact locations for desilting not known.	Design not shared
		Desilting of existing sewer lines	700 mm diameter - 161 meter 800 mm diameter - 150 meter 1000 mm diameter - 546 meter	Exact locations for desilting not known.	Design not shared
		Renovation and desilting of existing treated effluent discharge line brick sewer within the boundary of STP.	600 meter	Itchapur Railway line to Arupara STP	Design not shared
Bally	6 Lifting Stations 1 Main Pumping Station 1 STP Trunk Sewer Line	Design, supply, construction / repairs and rehabilitation of buildings and associated civil structures of various sewer pumping / lifting stations including replacement of electro-mechanical items	- Lifting station - 3 numbers - Main pumping station – 2 numbers		

Name of the Project Site	Project Component	Proposed Work to be Undertaken		location of rehabilitation works	Status of detailed design
		Design, supply, installation, testing and commissioning of STP.	■ One 40 MLD capacity STP with biogas based power generation facility in the existing STP location by making necessary preparatory works for converting the part of existing anaerobic pond into usable land space for establishing new STP to treat the sewage as per applicable disposal norms.	■ Kona WSP	■ Proposed lay-out has been shared
		Laying of Rising Main (For LS-2, LS-4, LS-5, LS-6 & MPS)	■ 450 mm dia (For LS-2) - 46 metre ■ 300 mm dia (For LS-4) - 900 metre ■ 250 mm dia (For LS-5) - 160 metre ■ 350 mm dia (For LS-6) - 160 metre ■ 900 mm dia (For MPS) - 30 metre	■ 450 mm dia - 46 metre at Belur Lifting Station 2 ■ 300 mm dia - 900 metre at Panchanantala Lifting Station 4 ■ 250 mm dia- 160 metre at Salt Gola, Lifting Station 5 ■ 350 mm dia- 160 metre at Golabari, Lifting Station 6 900 mm dia- 30 metre at Main Pumping Station	Design not shared
		Laying of sewer line	■ 600 mm diameter R.C.C. (Class NP3) - 657 meter ■ Class SN 8, 250 mm diameter - 260 metre ■ Class SN 8, 300 mm diameter - 2690 metre	■ 600 mm diameter R.C.C. 657 meter at Salkia School Road. ■ 250 mm diameter - 260 metre at at BOC	■ Design not shared

Name of the Project Site	Project Component	Proposed Work to be Undertaken		location of rehabilitation works	Status of detailed design
				Ground near Outfall 3	
		Desilting of existing sewer lines	Exact desilting locations not known but as per discussion with Wabag, desilting will be done as and when required.	Exact desilting locations not known but as per discussion with Wabag, desilting will be done as and when required.	N/A
Baranagar	1 Main Pumping station 4 I&D Structures Trunk Sewer Line	Design, supply, construction / repairs and rehabilitation of buildings and associated civil structures of various sewer pumping / lifting stations including replacement of electro-mechanical items	Main pumping station - 1 No		
		Design, supply, installation, testing, and commissioning of STP.	One 60 MLD capacity new STP with biogas based power generation facility in the existing STP premises to treat the sewage as per applicable disposal norms.	Baranagar STP	Proposed site lay-out of STP structure has been shared.
		Design, supply, construction / repairs and rehabilitation of existing 4 nos of Interception and Diversion (I&D) structures including all civil works, Electro-mechanical works, cleaning of site etc.	- Goli Ghat drain in Kamarhati area - Dhakhineshwar new bus stand in Kamarhati area - Lock gate in Baranagar area - Old pumping station in Baranagar area	- I&D 1 at Hanuman Jute Mill Road - I&D 2 Anna kali Devi Road - I&D 3: Besides Nivedita Setu - I&D 4: Not Clear	Proposed design of I&D structure not shared.

Name of the Project Site	Project Component	Proposed Work to be Undertaken		location of rehabilitation works	Status of detailed design
		Desilting of existing sewer lines (total 2.56 km) including raising of manhole chambers	■ 500 mm diameter – 258.24 running meter (RM) ■ 600 mm diameter – 120.64 RM ■ 700 mm diameter – 714.88 RM ■ 800 mm diameter – 128 RM ■ 900 mm diameter – 1337.6 RM ■ 290 number of manholes to be raised	■ Exact locations for desilting not known but as per discussion with Wabag, desilting will be done as and when required.	■ Design not shared
		Laying of Rising Mains of 900 mm diameter	2.70 km	■ From MPS to Baranagar STP No detailed location is shared	Design not shared
		Replacement of New Sewer network (new sewer line from Dhakhineswar new bus stand up to existing sewer line) including earth work excavation, dewatering, bringing back the surface to original condition including black topping, providing Gully chambers in appropriate places	200 mm diameter HDPE pipe - 430 running meter (RM)	Dakshineshwar Bus Stand	Design not shared

Source: Adopted from NMCG DPR (Schedule 1 – Scope of Work) and “T&D Work Design Basis” (Document Number 10P153-B0015-002) as prepared by Wabag and information on the status and design as reported Wabag

1.3 Scope of Land Acquisition and Involuntary Resettlement

The international safeguards on land acquisition and involuntary resettlement mandates that project proponents should assess and avoid, or where avoidance is not possible, minimize adverse social and economic impacts. The key themes covered under this are: compensation and benefits for displaced persons, consultation and grievance mechanism, resettlement planning and implementation, physical displacement and economic displacement. The scope of the safeguard also prescribes private sector responsibility to supplement government actions and bridge the gap between government-assigned entitlements and procedures and the requirements.

The project is expected to have short term impacts and will not cause any physical displacements to the road side shops, vendors, kiosks where sewer pipeline rehabilitation, replacement or desilting work will be undertaken. However, at Bally STP, there are, 46 fishermen (total affected population is 183) who are primarily dependent on fish farming inside the WSP ponds for livelihoods and will be economically displaced. The proposed project in Bally will also impacts the livelihood of the 18 fish farm workers engaged by the cooperatives society for operating and maintenance work in the WSP fishing ponds. Hence, the total number of affected persons is likely to be more than 200 person considering the average household size is 4.5. Thus based on Bally STP, the most sensitive of the three projects, the project is potentially Category A for Involuntary Resettlement (IR). This will be confirmed during the preparation of the Livelihood Restoration Plan. There is no land acquisition¹ under the proposed project activities. The proposed project at all the three sites comprises of Main Pumping station, Lifting station, and STP will be renovated, replaced and constructed within the existing government land (owned by KMDA). The new I&D structures and laying of trunk sewer pipelines, raising mains will be within the existing right of way (RoW) of the government roads (mostly owned by PWD and respective Municipal roads). As per discussion with GSPPL and KMDA, it has been reported that there are no land issues or dispute, grievance or court case raised against these lands by a private individual or corporation in relation to the land area of the STP and associated infrastructure such as pumping station, lifting station, I&D structures at Bally, Arupara, Baranagar project sites.

No land or RoW acquisition is proposed for the project (the existing RoW will be utilised for the renovation activities), Assessment based on site visit to project locations and transect walk along network alignments further suggest that no physical displacement is anticipated under the project. As per the information on the proposed alignment shared by GSPPL, only temporary income loss has been assessed as a potential impact [based on the Environmental and Social Impact Assessment studies (ESIAs) done for the respective STP locations (this is discussed in detail in Chapter 4 of this document)]; loss of any permanent or temporary structures are not anticipated. However, since the exact alignment of the sewer line along the RoW is not known², at present, there has been no assessment of the Inventory of Loss (IoL), Valuation of Loss of Assets and Census for the Affected Persons within the established RoW. GSPPL as the Concessionaire for the proposed 62 MLD sewage treatment facility (40 MLD STP and 22 MLD WSP) located at Chamrail Gram Panchayat area under Bally-Jagacha Block in district of Howrah, has the strict mandate to ensure the treated discharge water quality from both 40 MLD STP and 22 MLD WSP, complying the standard stipulated under the Concession Agreement with KMDA in place. Therefore, GSPPL has decided on not allowing any fish farming activity in the Bally WSP area from the date of official handover of the Site by KMDA to the Concessionaire. Further assessment will be done during the preparation of Livelihood Restoration Plan (LRP).

¹GSPPL and KMDA (project owner) have taken a decision that no land or ROW acquisition will be carried out under the project. Assessment made based on site visit to the project locations and transect walk along network alignments further suggest that no physical displacement is anticipated under the project.

² The Concessionaire and KMDA shared the route alignment information, but the exact RoW of the pipelines could not be shown in absence of the detail measurement survey (DMS).

As mentioned earlier, the Project will trigger temporary livelihood loss due to renovation activities such as replacement, laying of new pipelines and desilting work undertaken for the sewer pipelines causing temporary income loss of road side vendors, kiosks, carts and shops along the stretch of the project sewer line and partial livelihood loss to the two fishermen groups in Bally due to reduction in the WSP pond size for construction of the STP.

1.4 Objectives of the Livelihood Restoration Framework

The objective of the Livelihood Restoration Framework (LRF) is to appropriately identify, address and mitigate adverse socio-economic impacts that may occur due to the implementation of projects. The LRF aims to develop an entitlement matrix and implementation guidance framework for the entities that may potentially be impacted within the project area for the replacement, renovation and desilting of existing sewer lines, laying of rising sewer mains and new sewer networks at Baranagar, Bally and Arupara. The laying of the pipelines for the STPs across all three sites are expected to cause economic displacement. The Livelihood Restoration Framework thus aims to address the economic displacement impacts faced by these entities through mitigation strategies as outlined in this framework.

The Livelihood Restoration Framework will be a broad level guiding document for the Concessionaire and KMDA to mitigate adverse impacts linked to income and livelihood loss during laying of the sewer pipelines and construction of STPs.

1.5 Justification for a Framework Approach

The ESIA's carried out by ERM between June to August 2019 are based on the initial information along with DPR made available by the Concessionaire and KMDA. Joint visits were undertaken by KMDA, GSPPL and ERM representatives to understand the alignment of the sewer pipelines and tentative stretches where the replacement work will be undertaken. The final project designs are yet to be finalised; therefore, a Livelihood Restoration Framework has been developed as required by IFC to provide an initial estimates of the impacts. This framework provides an estimated information of the projects as identified during the ESIA study based on the initial information received from GSPPL. Hence, a framework approach have been adopted to reduce the risk of apathy to the project and unnecessary expectation management of wrongly identified affected people. A detail assessment will be conducted during the livelihood restoration plan preparation.

1.6 Applicability of the Livelihood Restoration Framework

- To provide a guideline in order to ascertain the number of commercial structures within the project footprint where economic displacement (temporary income loss) will take place. (This will be determined through a census survey during the Livelihood Restoration Plan preparation stage).
- To provide guideline for income restoration in the case of permanent livelihood loss for the affected fishermen.
- To develop an entitlement matrix and eligibility criteria for the impacts assessed above along with an assessment of cost estimates based on the principles of IFC PS 5 and ESMF for NMCG (updated in November, 2019).
- To develop implementation guidance for the client, along with a high level/ indicative budget for the entitlements
- To outline the grievance redress procedure, information disclosure, implementation arrangements and the monitoring, evaluation and reporting mechanism.

1.7 Limitations

This LRF has been developed based on the preliminary information regarding the project components and the proposed work received from the Concessionaire and KMDA. KMDA was responsible to provide a clear idea on the nature and scope of work to be carried out along the stretches. Joint visits were held by the representatives of KMDA, Concessionaire and ERM team to all the three locations – Baranagar, Bally and Arupara, where replacement, desilting (existing alignments) works would be carried out. It was verbally mentioned by the representatives of the Wabag that instead of carrying out research and development (R&D) work for identifying the major replacement work along the raising mains, gravity trunk sewer pipelines, it is proposed that new pipelines will be laid just parallel to the existing lines. The existing trunk sewer lines and the raising mains were identified during the joint visits, however for stretches where the new raising mains pipelines will be laid (especially, at Baranagar STP location), and replacement work would be undertaken; it was conveyed to ERM that these stretches are tentative and exact stretches of the sewer pipeline that require replacement and laying will be known upon finalisation of detail design of the sewer works and research and development work. This will be ascertained during the detail measurement survey (DMS).

1.8 Use of the report

ERM is not engaged in consulting or reporting for the purpose of advertising, sales promotion, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes. Kindly also note that the scope of work did not include any sampling, analysis of environmental media, collection of primary data, engineering design or development of technical specifications or cost estimates among others.

Client acknowledges this report has been prepared for their and their clients' exclusive use and agrees that ERM reports or correspondence will not be used or reproduced in full or in part for such purposes, and may not be used or relied upon in any prospectus or offering circular. Client also agrees that none of its advertising, sales promotion, or other publicity matter containing information obtained from this assessment and report will mention or imply the name of ERM.

Nothing contained in this report shall be construed as a warranty or affirmation by ERM that the site and property described in the report are suitable collateral for any loan or that acquisition of such property by any lender through foreclosure proceedings or otherwise will not expose the lender to potential environmental or social liability.

2. APPLICABLE POLICY FRAMEWORK

The existing project does not require any fresh land acquisition. The proposed STP will be developed within the existing land owned by KMDA at all the three locations. The proposed rehabilitation or laying of sewer pipelines will be carried out within the RoW of existing government roads. The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 will be applicable for the resettlement and structural cost. The Livelihood Restoration Framework has been developed based in aligned with the ESMF (*updated version dated November 2019*), IFC Performance Standard 5 for involuntary resettlement.

2.1 International Performance Standards

2.1.1 Performance Standard (PS) 5- Land Acquisition and Involuntary Resettlement

IFC PS 5 is considered applicable as there will be potential temporary income loss during the laying of raising mains, gravity trunk sewer lines and construction of I&D structures at the STP locations in Baranagar, Bally and Arupara. Involuntary resettlement would potentially get triggered due to rehabilitation and desilting work to be undertaken for the sewer pipelines causing temporary income loss of road side vendors, kiosks, carts and shops along the stretch of the project sewer line. As per IFC PS 5, displaced persons may be classified as persons who have formal legal rights to land or assets they occupy or use, who do not have formal legal rights, but have a claim to land that is recognized or recognizable under national law, or who have no recognizable legal right or claim to the land or assets they occupy or use.

IFC PS 5 states that if displacement cannot be avoided, the affected persons and communities will be offered compensation for loss of assets at full replacement cost and other assistance to help them improve or at least restore their standards of living or livelihoods. The overall objectives of the policy of involuntary resettlement are the following:

- To avoid or at least minimize involuntary resettlement wherever feasible by exploring alternative project designs
- To mitigate adverse social and economic impacts from land acquisition or restrictions on affected persons' use of land by: (i) providing compensation for loss of assets at replacement cost; and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected
- To improve or at least restore the livelihoods and standards of living of displaced persons

This policy also requires that the provision of compensation and the restoration of livelihoods of those affected be ensured prior to any actual resettlement.

The policy further requires particular attention to be given to the needs of vulnerable groups. These includes people living below the poverty line, the landless, the elderly, women and children, indigenous groups, ethnic minorities, orphans, and other disadvantaged persons.

2.1.2 Performance Standard 2 - Labour and Working Conditions

Performance Standard 2 is applicable as it lays down the guidelines related to retrenchment of workers that are potentially expected to take place in the project. The client will have to consider the following with regard to retrenchment in the project:

- *Viable Alternatives to Retrenchment:* As per section 18 of IFC Performance Standard 2, prior to implementing any collective dismissals, the client should carry out analysis for viable alternatives

to retrenchment.

- *Retrenchment Plan:* If viable alternatives to retrenchment are not identified, a retrenchment plan will be developed and implemented to mitigate the adverse impacts of retrenchment on workers.
- *Non-Discrimination and Consultation with Workers:* The retrenchment plan will be based on the principle of non-discrimination and will reflect the client's consultation with workers, their organizations, and, where appropriate, the government. The client will comply with all legal and contractual requirements related to notification of public authorities, and provision of information to, and consultation with workers and their organization.
- *Notice of Dismissal:* As per section 19, the client should ensure that all workers receive notice of dismissal and severance payments mandated by law and collective agreements in a timely manner.
- *Social Security Benefits:* The client should also ensure that all outstanding back pay and social security benefits and pension contributions and benefits will be paid:
 - on or before termination of the working relationship to the workers,
 - where appropriate, for the benefit of the workers, or
 - payment will be made in accordance with a timeline agreed through a collective agreement.
- *Evidence of Payments:* Where payments are made for the benefit of workers, workers will be provided with evidence of such payments.

2.2 Environmental and Social Management Framework for National Mission for Clean Ganga, (updated in November 2019) ¹

An ESMF has been prepared for Namami Gange program (NGP) that proposes infrastructure investments for pollution reduction loads at priority locations on the river. The purpose of developing the Environmental and Social Management Frame Work (ESMF) was to facilitate the management of environmental and social issues of all investment projects proposed by the NGRBA/Namami Gange at the very beginning of project planning and implementation. The ESMF currently addresses the broader portfolio of projects to be implemented under the Namami Gange along with its implementation methods like Hybrid Annuity Mode (HAM), DBOT, and Retroactive Financing etc. The portfolio of investment include Sewerage treatment plants which involves construction of new sewage treatment plants, augmentation of treatment capacity in existing sewage treatment plants and renovation and/or re-modelling of existing sewage treatment plants, resulting in improved effluent quality and disposal as per prescribed standards (*Section: Environmental and Social Analysis (ESA) and Management Framework (ESMF) of Executive Summary of the ESMF for NMCG updated in November 2019, page 3*). The purpose of the ESMF is to facilitate the management of environmental and social issues of the river pollution mitigation investments.

One of the main objectives of the ESMF (*Section: Objectives of ESMF, Executive Summary of the ESMF for NMCG updated in November 2019, second point, page 4*) is to *conduct an environmental and social impact assessment of the 'no regret' investments proposed to be supported by the project, identify potential environmental and social impacts associated with such investments and recommend measures to mitigate impacts;*

The ESMF consider social impacts such as physical displacement (relocation, loss of residential land or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources or means of livelihood). (*Chapter 4, Section 4.2, paragraph 49: Purpose of the ESMF, of the ESMF document for NMCG, updated in November, 2019, page 28, 29*)

¹ The ESMF has been developed for National Mission for Clean Ganga, Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation, Government of India, Volume II (updated version November 2019)

The ESMF also consider that if a project directly or indirectly affects the dignity, human rights, livelihood systems, or culture of SC/ ST/ BPL groups or affects the territories or natural or cultural resources. Social management plan seeks to avoid, minimize or mitigate these adverse impacts. Related to displacement impacts, if these adverse impacts cannot be avoided, then affected people should receive assistance/compensation so that they are at least as well off as they were in the absence of the project. (*Chapter 4, Section 4.2, paragraph 49: Purpose of the ESMF, of the ESMF document for NMCG, updated in November, 2019, page 28, 29*)

The ESMF has developed Resettlement Policy and Land Acquisition Framework (RPLAF) with the aims to resettle and rehabilitate the affected persons on account of its investments in a manner that they do not suffer from adverse effects and shall improve or at the minimum retain their previous standard of living, earning capacity and production levels. It is also the endeavour of the Namami Gange program that the resettlement shall minimize dependency and be sustainable socially, economically and institutionally. (*Section 4.4.2: Resettlement Policy and Land Acquisition Framework (RPLAF), paragraph 63 of the ESMF for NMCG updated in November 2019, page 33*)

The broad principles of the R&R policy as included in the ESMF that are applicable for this project are as follows (*paragraph 65 of the ESMF for NMCG updated in November 2019, page 33, 34*):

- 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.
- 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.
- Appropriate grievance redress mechanism will be 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.
- Cut of Date shall be preliminary notification under RFCTLR&R Act 2013 for titleholders and in case of Non-title holder's end date of socio –economic survey.
- All consultations with PAPs shall be documented. Consultations will continue during the implementation of resettlement and rehabilitation works.

The ESMF mandated that after having identified the potential impacts of the relevant investments, resettlement action plan is to develop action plans to mitigate the impacts¹. The plan will take into account magnitude of impacts and accordingly prepare a resettlement plan that is consistent with this framework before the sub-project is accepted for Namami Gange program financing. Any affected

¹ Preparation of Resettlement Action Plans and sub-project approval (paragraph 67 and 68) of the ESMF for National Mission for Clean Ganga, (November 2019) document.

person will be assisted as provided in the National Policy or State Policy where applicable on resettlement and rehabilitation. (Section 4.4.2 paragraph 67 and 68 of the ESMF for NMCG updated in November 2019, page 34)

In the event the project involves loss of livelihood or shelter, the project shall not be approved by the Implementing Agency (IA) until a satisfactory plan has been prepared and shared with the affected person and the local community. Secondly, the construction work/project work will not be undertaken until the compensation and assistance has been made available in accordance with the ESMF (paragraph 68 of the ESMF for NMCG updated in Nov 2019, page 34).

The ESMF mandates that the Resettlement Action Plan (RAP) prepared shall contain (paragraph 71 of the ESMF for NMCG updated in Nov 2019, page 35) –

- 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;
- Information on vulnerable groups or persons for whom special provisions may have to be made;
- a comprehensive list of benefits and packages which are to be provided to project affected families by impact category;
- The entitlement matrix;
- Grievance redressal mechanism;
- Institutional mechanism for RAP implementation;
- Monitoring and evaluation indicators and mechanism; and
- Budget.

As outlined by the ESMF the onus of LRP implementation will be with Executing Agency. The RPLAF section of the ESMF is provided in **Appendix D**.

2.3 Gap filling measures

Table 2.1 Gap Filling Measures

	IFC Requirement	Measures
Involuntary Resettlement	Feasible alternative project designs to avoid or minimize physical and / or economic displacement, while balancing environmental, social and financial costs and benefits, will be considered <i>Section 8 IFC PS 5</i>	To ensure that in case of any major economic displacement ¹ , design optimization and alternate route of the sewer line to be considered. New land and right-of-way acquisition will be avoided and there will be no physical displacements. Besides design, feasible technology will be considered to minimise economic or livelihood disruption during replacement and renovation of trunk sewer line.
Forced Eviction	For forced eviction / removal of non-titled persons, and / or communities from land which they occupy, against their will and without the provision of, and access to, appropriate forms of legal and other protection will be avoided.	In the event for removal of commercial non-title holders and road side vendors during pipeline rehabilitation works, efforts should be made to comply with the IFC PS 5 requirement of avoiding forced eviction of non-title holder persons who do not have access to appropriate forms of legal protection. The removal of the non-title holder persons will not involve permanent physical displacement but it may potentially cause temporarily removal of non-title holder road side shops which include vendors and kiosks Prior information to all non-title holder commercial users, minimum 30 days and maximum 60 days before land clearances and prior to construction starts. All non-title holder persons will be allowed to take his or her salvaged materials. Moreover, compensation for loss of structure should be provided at full replacement cost.
Census and Social Impact Assessment of APs/DPs for LRP	A census will be carried out in order to collect appropriate socioeconomic baseline data to identify the persons who will be displaced by the project, determine who will be eligible for compensation and assistance, and prevent ineligible persons, such as opportunistic settlers, from claiming benefits. <i>Section 12 of IFC PS 5</i>	A detailed socio-economic survey of all affected persons within the project footprint. The survey should be conducted along with an inventory of losses. The Livelihood Restoration Plan (LRP) will be based on data obtained for this survey.
Eligibility of APs/DPs	As per displaced persons are those that: (i) who have formal legal rights to the land or assets they occupy or use; (ii) who do not have formal legal rights to land or assets, but have a claim to land that is recognized or recognizable under the national laws; or (iii) who have no recognizable legal right or claim to the	As per the site assessment, it was observed that only commercial structures will be impacted temporarily mainly during construction. However, the impacted structures mostly belong to non-title holder person. t Compensation and resettlement assistance should be provided to all the affected non-titled commercial users.

¹ The involuntary resettlement impacts according to ADB- considers significant, if, 200 or more persons will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating).

	IFC Requirement	Measures
	land or assets they occupy or use. The census will establish the status of the displaced persons. ¹ <i>Section 17 or PS 5</i>	
Valuation of structure	Compensation for structures and other improvements should cover full replacement cost, choice of replacement property of equal or higher value (exclusive of depreciation and inclusive of all fees such as construction permits and title charges and labour costs); security of tenure, and advantages of location or cash compensation For Affected Persons (AP) who have no recognizable legal right or claim to the land or assets they occupy or use, the client will offer them a choice of options for adequate housing with security of tenure so that they can resettle legally without having to face the risk of forced eviction. If the displaced Affected Persons (AP) own and occupy structures, the client will compensate them for the loss of assets other than land, such as dwellings and other improvements to the land, at full replacement cost, provided that these persons have been occupying the project area prior to the cut-off date for eligibility. Relocation assistance sufficient for them to restore their standard of living at an adequate alternative site, should be provided, based on consultation. <i>Section 20, 21,22 of IFC PS 5</i>	As per requirement of IFC and ADB, all potential loss of assets/structures should be assessed and compensated at full replacement cost.
Economic Displacement/ Loss of Business	As per PS 5, in the case of economic displacement only, a Livelihood Restoration Plan to compensate affected persons and / or communities and offer other assistance that meets the objectives of this PS should be developed. <i>Section 25 of IFC PS 5</i>	Both IFC and ADB mandates compensation and resettlement assistance in the case of loss of income permanent or temporary. It should be ensured that the affected businesses/shops, be provided with resettlement assistance for the period of disruption. It should also be ensured that in the case of fish farmers impacted loss of income will be compensated for loss on income and a livelihood restoration programme will be provided and as specified in the entitlement matrix.
Existing Contracted Workers at different	Labour and Working Conditions (PS 2) applies to workers directly engaged by the client (direct workers) as well as	Presently at all the three STP locations there are about 126 contractual workers employed at the STP and the MPS facilities. During the construction phase and

¹ IFC's requirements for preparation of RAP or LRP is subject to nature of impact assessed. In projects where 'only economic impact' is anticipated, a LRP will be prepared.

	IFC Requirement	Measures
STP, MPS and linked facilities	workers engaged through third parties, to perform work related to the core business processes of the project. PS 2 also has provisions on managing the collective dismissals or retrenchment of workers, through either identification of alternatives or, through the development of a Retrenchment Plan that is based on the principle of non-discrimination and consultation with the workers. <i>Para 18 & 19, IFC PS 2</i>	post the construction, the project will be operated and maintained by the new O&M entity engaged by the Concessionaire, therefore, there is a potentiality of retrenchment scenario of the existing contractual workers, which may lead to a loss of livelihood for these workers. Efforts should be made to re-engage the contractual workers deployed through labour contractor agencies.
Cut-off-dates	In the absence of host government procedures, a cut-off date for eligibility should be established. Information regarding the cut-off date will be well documented and disseminated throughout the project area. The client is not required to compensate or assist those who encroach on the project area after the cut-off date for eligibility, provided the cut-off date has been clearly established and made public. <i>Section 12 of IFC PS 5</i>	The date of census survey during the detail measurement survey would be considered as the cut-off-dates for the resettlement plan for the non-titleholders (in this case the non-titled holder shops).
Meaningful Consultations	PS 5 specifies engagement with affected communities through a process of informed consultation and participation ensuring views of affected by the project will be incorporated into decision-making. This consultation will continue throughout the resettlement process. <i>Section 9 of PS 5</i>	Stakeholder consultations should be conducted while preparing the Livelihood Restoration Plan (LRP) and throughout the project life-cycle.
Grievance Redress Mechanism	It is mentioned that a grievance mechanism to receive and address specific concerns about compensation and relocation that are raised by displaced persons or members of host communities, including a recourse mechanism designed to resolve disputes in an impartial manner. <i>Section 9 of IFC PS 5</i>	A grievance mechanism will be established by GSPPL where the local community, including affected persons can report their grievances.
Information Disclosure	The policy outlines a provision of information disclosure of all relevant information to affected communities will take place. This disclosure will continue throughout the resettlement process.	Information related to resettlement planning, and resettlement related information will be disclosed in the local language. The LRF and LRP will be made available on ADB website and, subject to confirmation by the competent authority.
Vulnerable Groups	Particular attention and assistance will be paid to the needs of the poor and the vulnerable (i.e. women headed households / elderly households etc). <i>Section 12 and 16 of IFC PS 5</i>	During the census and socio-economic survey the affected vulnerable APs to be identified. Special assistance measures and Preference for employment under the project during construction for vulnerable households will be provided in the Entitlement Matrix.

3. SOCIO-ECONOMIC BASELINE INFORMATION

3.1 Surveys

A survey method for assessing the impact has been carried out during the Social Impact Assessment (SIA). The survey approach includes both qualitative and quantitative methods. This section establishes the socio economic baseline of the Project area for the Sewage Treatment Plant (STP) and its associated facilities which are situated in all the three project sites in West Bengal. This baseline will thus provide a context for assessing the impacts of the Project on the socio-economic environment of the area where the STP will be established.

3.1.1 Socio-Economic Baseline

For the purpose of the LRP primary socio-economic data will be collected for the PAHs. The primary data comprised of quantitative and qualitative data collected via a range of tools and data gathering techniques. The means of primary data collection are summarized below:

- *Census Survey*: A 100 percent census/enumeration of socio-economic characteristics will be carried out for all the PAHs to be impacted on account of the laying of new sewer line, renovation and replacement of sewer line.
- *Inventory of losses*: An inventory of all structures and immovable assets, livelihood loss to be impacted for each PAH will be conducted during the LRP preparation.

For structure loss, the affected structures will be surveyed to assess the construction type, quality and material used. Post which the rate for determining the compensation will be valued based on the PWD rates of the Government of West Bengal.

For Livelihood Loss: The valuation will be based on the number of days the business is closed down, and the daily income from unit captured during the census survey will be considered for determine the compensation. Similarly compensation for workers engaged in the affected business or shops as per the West Bengal Minimum wage rate ¹multiplied by the amount of time the business will be interrupted.

- *Consultations/Focus Group Discussion*: Focus groups discussion sessions will conducted with the affected stakeholders
- *Key informant interviews* with key stakeholders including Urban Local Bodies, NGOs and CSOs active in the Area.

The survey information helped to generate necessary input for the preparation of LRP. It also provided a baseline assessment of potential impacts on affected households and formed the basis for estimating the entitlement-based resettlement budget.

3.1.2 Baseline Socio-economic survey conducted as part of ESIA

This socio-economic baseline has been conducted for the Environment and Social Impact Assessments (ESIA) for the Sewage Treatment Plants (STP) and its associated facilities at Baranagar, Arupara and Bally. Baranagar STP and its associated facilities are located in Baranagar Municipality and Kamarhati Municipality; Arupara STP and Bally STP, including their associated facilities are located in Howrah Municipal Corporation.

Both secondary and primary data have been considered for developing the socio-economic profile of the project areas. About 25 residing in proximity to the STP and its associated facilities were surveyed. The survey also collected relevant gender-disaggregated data, to address gender issues in

¹ As per West Bengal minimum wage rate dated August 2019 for workers engaged in manufacturing unit classified under the factory act is liable to provide a monthly wage basis for Unskilled workers is INR 8,005 skilled is INR 9,687 and for highly skilled is 10,655. If the applicable wage rates are not updated, indexation for inflation will be made.

resettlement. A brief description and the households' socio-economic details of the project sites are summarised below.

Baranagar STP: The STP project in Baranagar falls under Baranagar and Kamarhati Municipality. Baranagar Municipality has a total area of 7.12 sq km and has 34 wards. As per the 2011 census data, the total population is 2,45,213 whereby the male population is 1,26,187 and female population is 1,19,026. The density of the population is 34,440 per Sq.km.

Kamarhati Municipality which came into its existence in 1899, is a densely populated municipality with 3,36,579 inhabitants (2011 census), with 17,4,840 men and 1,61,739 women. The population density is 28,696 per square kilometre. An analysis of the census data indicates that the average annual population increase for Baranagar municipality from 2001 to 2011 has been -0.22% as the population was 2,50,768 in 2001 and decreased to 2,45,213 in 2011. However, in Kamarhati Municipality, the average annual increase of the population has been 0.5% as the population was 3,14,507 in 2001 and grew to 3,30,211 in 2011.

The area in an around Baranagar and Kamarhati is known for the presence of many industries such as the jute industries in the Barrackpore area. Other industries includes engineering, ceramics, textiles, wagon industries, and other factories.

It is observed that the project area includes some locations that are congested such as Gopal Lal Tagore Road which is situated along the stretch of the proposed gravity sewer line. Gopal Lal Tagore road is also the location for the 34B Bus Terminal and the daily morning market. Other congested areas include the Dakshineswar Bus Stand which is located near the proposed I&D structure 2. This location is congested due to the presence of an electric rickshaw (*toto*) stand along with the Dakshineswar Temple, which is visited by thousands of devotees each year. Another congested area is the Hanuman Jute Mill Road which is the location of the proposed I & D 1 structure. In this location, there are two schools i.e. one high school and one upper primary school, as well as one temple.

Bally STP: The STP project in Bally, falls under Howrah Municipal Corporation (HMC). Prior to 2015, Bally was a separate municipality, therefore secondary baseline data from the 2011 census will consider Bally Municipality data, for a more accurate profile of the socioeconomic conditions of the project area. As per the 2011 census, Bally area has a total population of 2,93,372 with 1,56,911 men and 1,36,462 women, and a population density of 24,841 individuals per square kilometre. Moreover, the average annual increase of the population in the area is 1.24% as the population was 2,60,906 in 2001 and increased to 2,93,372 in 2011. Historically, Howrah Municipal Corporation is known for jute and flour industries and at present, Bally area also has several metal industries and distributors which include iron, steel and aluminium.

It is observed that the project areas include some congested locations where the new pipelines are proposed to be laid such as the Rashbari Ghat and Ramlochan Shaire Street both of which are in the Belur area, as well as at the daily market located in B.K Pal temple road in Panchanantala.

Arupara STP:

The Arupara STP site is located at Dharsh area within Howrah Municipal Corporation and the associated project components are spread across Howrah Municipal Corporation area in Howrah District. As per the 2011 Census of India, Howrah Municipal Corporation has a total population of 10,77,075 individuals and men constitute 5,61,220 while women constitute 5,15,855. Moreover, the average annual growth of the population in the area is 0.69% as the population was 10,07,532 in 2001 and increased to 10,77,075 in 2011. The population density of the municipality is 20,817 individuals per square kilometre. Historically, Howrah had many jute mills and now it is home to many steel and aluminium industries.

It is observed that some of the project area locations are congested particularly in the location of BESU Lifting Station 1 where a rising main is proposed to be laid. This includes areas such as Swarnamoyee road and near BE College, where several kiosks were observed.

3.1.3 Sex Ratio

Gender equality can enhance productivity, improve development outcomes and ensure more representative institutions, and sex ratio is one of the most important indicators defining gender equality. As per **Table 3.1** below, the sex ratio of North Twenty Four Parganas District is 955 while Baranagar Municipality has a sex ratio of 943 and Kamarhati Municipality has a sex ratio of 939, which are both higher than the district value. The sex ratio of Howrah District is 939 while Howrah Municipal Corporation has a sex ratio of 919 and Bally has a sex ratio of 744. Bally Municipality thus has the lowest sex ratio among all project areas.

Table 3.1 Sex Ratio in Study Area in Comparison to District and State

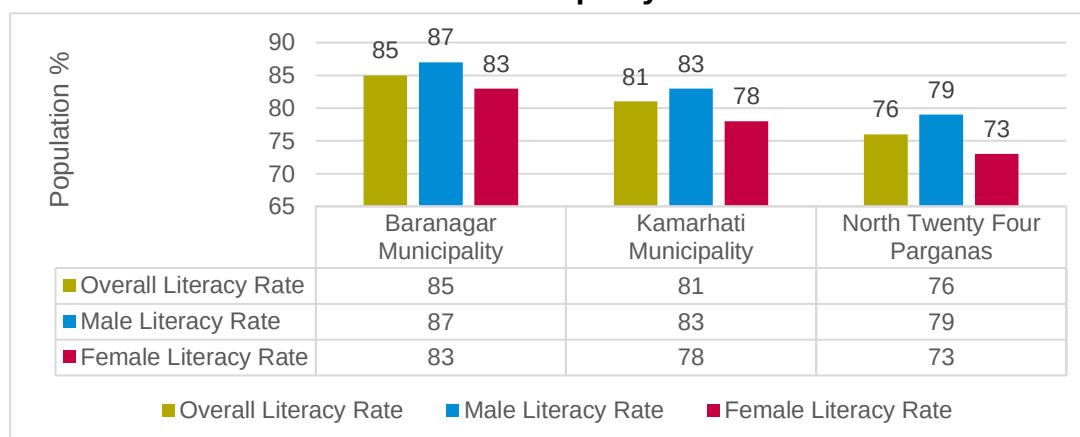
Project Location	Municipality	District Level	Municipal Level
Baranagar STP	Baranagar Municipality, North Twenty Four Parganas District	955	943
	Kamarhati Municipality, North Twenty Parganas District	955	939
	North Dum Dum Municipality	960	973
	South Dum Dum Municipality		995
Arupara STP	Howrah Municipal Corporation, Howrah District	939	919
Bally STP	Bally (Now a part of HMC), Howrah District	939	744

Source: 2011 Census of India

3.1.4 Literacy Rate in District and Study Areas

As depicted in **Figure 3.1** below, North Twenty Four Parganas District has an overall literacy rate of 76% with 79% being male and 73% being female. Baranagar Municipality on the other hand has an overall literary rate of 85% with 87% being male and 83% being female. Kamarhati Municipality has an overall literacy rate of 81%, with 83% being male and 78% being female. The overall literacy rates of Baranagar and Kamarhati Municipalities are higher than district average. However, the female literacy rates at the district and municipal levels are found to be lower than the male literacy rates.

Figure 3.1 Literacy Profile of Population in Baranagar and Kamarhati Municipality

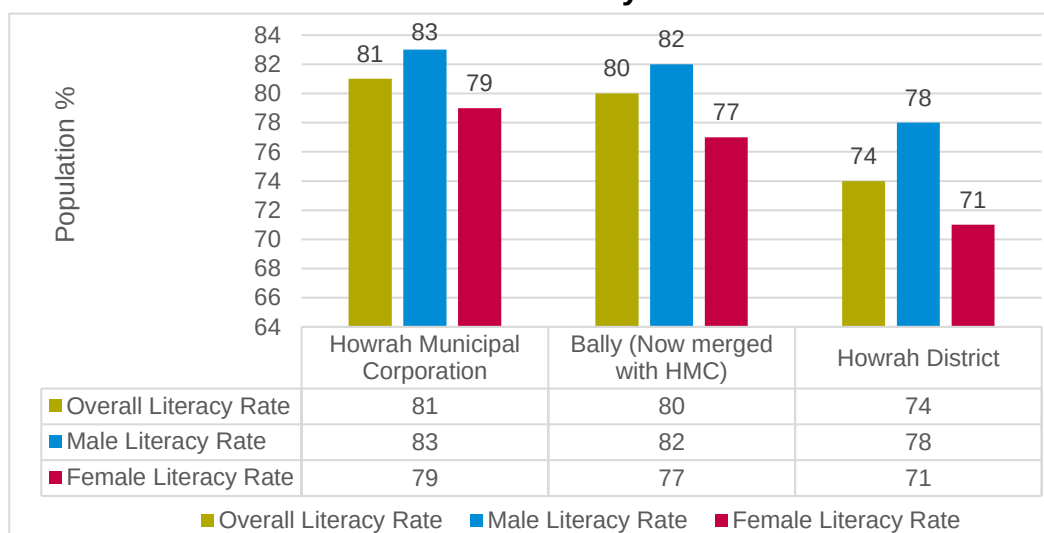


Source: 2011 Census of India

Howrah District has an overall literacy rate of 74% with 78% being male and 71% being female. Howrah Municipal Corporation has an overall literacy rate of 81% with 83% being male and 79% being female. Bally Municipality, which is now merged with Howrah Municipal Corporation has an

overall literacy rate of 80% with 82% percent being male and 77% being female. The overall literacy rates of Howrah Municipal Corporation (HMC) and Bally Municipality are higher than the district average. However, the female literacy rates at the district and municipal levels are lower than the male literacy rates.

Figure 3.2 Literacy Profile of Population in Howrah Municipal Corporation and Bally



Source: 2011 Census of India

As per the socio economic data conducted by ERM, the literacy profile in Bally is reported to be 63% Arupara is 82% and Baranagar is reported to be 83%.

As per the primary socio-economic survey, in Bally, Arupara and Baranagar, the surveyed HHs have access to primary, secondary and college institutions.

3.1.5 Livelihood Status of the Study Area

The occupational patterns of the surveyed population in Baranagar are shop owners (55%) which also include clothing shops, a cosmetics shop and a meat shop. 17% of the surveyed population are engaged in daily labour, 14% are running tea stalls, 3% is engaged in private service and 10% are engaged in other activities which include working as driver and as a domestic worker. In addition, two tea stall owners are also engaged in daily labour as their secondary occupation.

In Bally the over 47% of the surveyed population are working as daily labourers. 16% are shop owners, 6% are tea and food stall owners, 4% are engaged in trading and 10% are engaged in private service. 18% are engaged in other activities which include 2 drivers, 2 domestic workers, 1 rickshaw puller, 3 in small scale household industries and 1 watchman.

In Arupara the over 30% of the surveyed population are working as daily labourers. 27% are shop owners, 10% are tea and food stall owners, 7% are engaged in trading and 17% are engaged in private service. 10% are engaged in other activities which include tailoring and domestic work.

3.1.6 Workforce Participation

The working age is categorised between ages 19 and 60. In Arupara project site, out of 68 surveyed population of the working age group reveal that 41% are a presently engaged in economic activities while 59% are not engaged in any income related activities.

In Bally, the workforce participation of the surveyed population reveal out of 80 individuals who are of working age, 57.5% (46) are a presently working and 42.5% (34) are presently not working.

Consultations with the local community in the areas also revealed that majority of the women are engaged in unpaid domestic work.

In Baranagar out of 68 individuals who are over working age, 34% are a presently working and 66% (45) are presently not working.

The workforce participation across all the three site shows a similar picture whereby majority of women from the surveyed population are not participating in the workforce. The consultations also revealed that majority of the women are engaged unpaid domestic work.

3.1.7 Income Distribution Pattern

As per the primary data collected by ERM, the monthly income pattern of the surveyed population ranges between INR 5000 to INR 8000. Table 4.2 provide an overview of the monthly family income of the study area

Table 3.2 Monthly Income

STP	Rs. 1000 to 5000		Rs. 5001-Rs. 9000		Rs.9001- 13000		Rs.13001- Rs 16000		Rs. 16001- above		Total HHs
	No.	%	No.	%	No.	%	No.	%	No.	%	
Baranagar	2	8%	12	48%	5	20%	3	12%	3	12%	25
Arupara	4	17%	12	52%	2	9%	3	13%	2	9%	23
Bally	4	17%	12	50%	4	17%	3	13%	1	4%	24

Source: ERM socio-economic survey

3.1.8 Electricity Access

Only 72% of the surveyed HHs have access to an electricity connection while the remaining 28% utilise kerosene and a charger light for their lighting source.

Table 3.3 Access to Electricity

STP	Yes		No		Total HHs
	No.	%	No.	%	
Bally	18	72%	7	28%	25
Arupara	22	96%	1	4%	23

Source: ERM socio-economic survey

3.2 Fishermen Utilizing Kona WSP

In Bally the existing sewage treatment system comprises of the waste stabilisation pond (WSP) on 20.13 hectare area and with a capacity to treat 30 MLD of sewage/waste water. The WSP comprises of two (2) anaerobic ponds, two (2) facultative ponds and two (2) maturation ponds. Going forward the plan is to establish 62 MLD sewage treatment facility, part of which will be 40 MLD STP and 22 MLD WSP. The present capacity of the WSP is 30 MLD which will be reduced to 22MLD. Part of one anaerobic pond and one facultative pond will be filled-up to create space for new 40 MLD STP that will be constructed.

As reported during stakeholder consultations there are 4 fishing cooperative groups, who undertake fishing in the WSP ponds through lease agreement floated by the Panchayat Samiti, under Bally-Jagacha Block. A list of the group's details is provided in Table 3.4. Reportedly these cooperative

societies are informal groups and none of the groups have been registered and neither have a bank account in the group's name. These groups are informally formed for the purpose of carrying out collective fishing in the WSP. These four groups had been conducting fishing activities for the last 3-4 years in these WSP ponds based on annual renewable commercial lease agreement (since 2015-16) with the BDO and the Panchayat Samity of Bally Jagacha. KMDA did not have any role in this arrangement, in spite of being the owner of the waste water bodies, or any approval was not taken from them prior to the commercial lease agreement. Reportedly a commercial lease agreement¹ was signed between the Bally-Jagacha Panchayat Samity and the four fishermen group leaders for using the ponds i.e. 2017-2018. This lease agreement is followed by a yearly payment made by the fishermen to the Panchayat Samiti for using the ponds for fish farming. Presently the commercial leases with each of the group have expired in October 2018 and the WSP ponds have been handed over to KMDA in 2019 by Block Development Office, Bally-Jagacha (which was entrusted take care and look after the WSP ponds). However, the fishermen have continued fishing activities without formal rights. Reportedly the fishermen group had paid the lease amount for 2017-2018, 2018-2019. The lease period starts from September of each year and ends in August. Out of the four groups only Maa Ganga Cooperative reported to have paid 40% advance of the lease amount dated 06th September 2019 for the year 2019-20. None of the other groups had paid the lease amount for the financial year 2019-2020. The receipt of the payment of Maa Ganga is provided in **Figure 4.2**. Reportedly, fishing activities were also carried out even earlier, when the pumping station was functional, but by different group of fishermen.

In the WSP the main types of fish cultivated are Rohu (*Labeo rohita*), Catla (*Catla catla*), Kalbose (*Orangefin Labeo*), Briget, Lailantika (*Tilapia*), Silver Carp (*Hypophthalmichthys molitrix*), Black Carp (*Mylopharyngodon piceus*), Pangas (*Pangasius*), Mrigal (*Cirrinus cirrhosis*). Details of the fishing community and the ponds used is provided in **Table 3.4** below.

Table 3.4 Fishermen Cooperatives and Pond Used

Fishing Group	No. of Members	Ponds Used for Fishing
Maa Ganga Fishing	9 Members	Pond 1: Maturation Pond
Jivan Jivika Fishing	13 Members	Pond 6: Anaerobic Pond Pond 2: Facultative Pond
Maa Kali Fishing	14 Members	Pond 4: Maturation Pond Pond 5: Anaerobic Pond
Maa Tara Fishing	10 Members	Pond 3: Facultative Pond
TOTAL	46	

Source: Stakeholder Consultation dated 14th September 2019

¹ The fishing cooperative group members could not provide the copy of the commercial lease agreement for verification.

Figure 3.3 Receipt of the Payment

Form No 2 (Rule 5)
CASHIER'S RECEIPT
Bally Jagachha Zilla Parishad / Panchayat Samiti
Book No. 64 Sl No. 47 Date 06/08/19
Received from Maa Ganga Fisheries
(Name of full)
of Paschim Medinipur, Bhatnagar, Bidhan, How.
40% of 300,000/- (File Address)
Rs. 1,20,000/- (in digit) (Rupees One lakh twenty thousand only)
by Cash / Cheque / Draft bearing No. & Date 015819 dt. 06/08/19
I.C.I.C.I. Bank drawn on R.N. Mukherjee & Co. Branch on account of
For 40% advance against lease rent of Pond No 1 (Maa Ganga Fishing Pond) for the year 2019-20
Signature of Cashier
Counter Signature of E.O./A.E.O./Secretary/Dy. Secretary
Seal of Zilla Parishad or Panchayat Samiti

Income and Yield: Discussion with representative of the four fishing cooperative group members reveal that due to the nature and area of the WSP pond each pond has a variation in terms of production cycle and income earned by the group members. A detail analysis of each ponds for each cycle is provided in **Table 3.5** below. Reportedly, the average monthly income of each group member ranges between INR 25,000-INR 30,000.

Table 3.5 Production Details

Pond Number ¹	Group Undertake fishing	Area of the WSP in hectare	Production rate ²	Approximate income in INR ³
Pond 1: Maturation Pond	Maa Ganga Fishing	3.82 Ha	6 ton (monthly)	3,60,000
Pond 2: Facultative Pond	Jivan Jivika Fishing	4.46 Ha	7 ton (monthly)	3,20,000
Pond 3: Facultative Pond	Maa Tara Fishing	4.56 Ha	12.5 ton (Monthly)	3,00,000
Pond 4: Maturation Pond	Maa Kali Fishing	4.57 Ha	5.5 ton (Monthly)	2,90,000
Pond 5: Anaerobic Pond	Maa Kali Fishing	1.45 Ha	5 ton (Monthly)	2,50,000
Pond 6: Anaerobic Pond	Jivan Jivika Fishing	1.27 Ha	5 ton (Quarterly)	2,35,200

Source: Fishermen Consultation, Dated 18th January 2020

Recurring Expenses: It should be noted that the current fishing activity at the WSP is being conducted on the rain-fed water reportedly, since for the last 5-6 years as the Kona Pumping Station is in a defunct state. It was informed during the consultation with the fishermen that 70% of the gross income is their monthly expenditure amount for fish cultivation. The net amount is shared equally among the group members.

Fish Farm Workers: About 18 workers (approx.) have been engaged by these four groups for carrying out aquaculture activities (breeding, feeding fish, application of medicines, cleaning ponds, harvest fish when ready for sale, assist in loading the harvested fish live-stocks for transporting to market, as security guards, etc.). Income ranges between INR 6,000-10,000 on monthly basis.

¹ The numbering of the pond numbers is done based on the fishermen groups.

² The production rate has been calculated based on information provided by the fishermen. The figure depicted here is for one cycle.

³ The Net income depicted here is the income after deducting of all input cost (recurring cost). The income depict here is for one cycle. This income is shared equally among the group members.

Leasing Nursery Ponds: The groups take small ponds (other than the WSP) on yearly lease to use it as hatchery and nursery ponds for INR 8,000 – 10,000 per year. The annual lease amount for leasing in ponds was reported to be INR 8,000 – 10,000 per year.

Figure 3.4 Consultation with Fishermen Cooperative Group Leaders at Kona MPS



3.3 Existing Contractual Workforce in the Facilities

At present, there are total of 126 contracted workers employed at the Bally, Baranagar, Arupara STP and their associated facilities. These workers have been engaged for approximately 20-25 years. In absence of actual agreement in place between the O&M Agencies and KMDA, the date of expiry of the contract between them could not be ascertained.

3.3.1 Existing Workforce at Bally STP location

Presently, there are two O&M agencies engaged, the Associated Cooperative Labour Contractor and Construction Society Ltd and Ganga Action Plan Contract Workers Co-operative Society Ltd since 2009 and 2006 respectively. The 32 workers at Bally STP and associated facilities are engaged under Associated Cooperative Labour Contractor and Construction Society Ltd and Ganga Action Plan Contract Workers Co-operative Society Ltd.

Associated Cooperative Labour Contractor and Construction Society Ltd has a total of twenty-nine (29) workers engaged at LS 1 Belur Math, LS 3 Bally Khal, LS 4 Liluah, LS 5 Salt Gola, LS 6 Golabari and the MPS at Kona. Ganga Action Plan Contract Workers Co-operative Society Ltd has three (3) workers engaged at LS 2 Belur Math. The details of the O&M agencies engaged are presented in **Table 3.6** below.

Table 3.6 O&M Agencies at Bally & Linked Facilities

O&M Agency	Time Period
Associated Cooperative Labour Contractor and Construction Society Ltd.	2009 to present
Ganga Action Plan Contract Workers Co-operative Society Ltd.	2006 to present

Source: Stakeholder Consultation with Workers on 17th of September 2019

Based on the information shared by KMDA, there are total thirty-two (32) contracted workers are presently deployed, belonging to semi-skilled and un-skilled category workers. The present workforce of total 32 workers falls under age group ranging from 24 to maximum 59 years and there are total

nine (9) worker are falling in the age bracket of 55 – 59 years. The service duration of the total existing workforce are ranging from minimum 3 years to maximum 26 years and with average 20 years.

The workers at all the Bally STP and linked facilities are earning Rs. 11,775 per month, therefore in compliance with the revised minimum wage rate as per government of West Bengal. The workers are also enrolled in the Employee Provident Fund (EPF) and Employee State Insurance (ESI) schemes.

The site assessments and consultations with the workers at the facilities also indicated that they are enrolled in the PF and ESI schemes and are engaged in three shifts i.e. morning, day and night shift, along with the general working hours. Additionally, none of the workers indicated having received any training on Health & Safety and they were not utilizing any Personal Protective Equipment (PPE). The details of the existing workers and contractors are presented in **Table 3.7** below.

Table 3.7: Details of Existing Workers and Contractors at Bally STP & Facilities

STP & Facilities	Project Component s Location	Location	O&M Agency	Manpower Involvement
Bally	LS - 1	Ghusuri, Hanuman Jute Mill	Associated Cooperative Labour Contractor and Construction Society Ltd.	6
	LS - 3	Bally Khal		4
	LS - 4	Liluah, Panchanantala		4
	LS - 5	Salt Gola		4
	LS - 6	Golabari		4
	MPS-Kona	Kona		7
	LS - 2	Belur Math	Ganga Action Plan Contract Workers Co-operative Society Ltd.	3
TOTAL				32

Source: KMDA (List of Existing Manpower) & Stakeholder Consultation with Workers on 16th of September, 2019

3.3.2 Existing workforce at Baranagar STP location

There are two O&M agencies engaged at the Baranagar STP and Baranagar- Kamarhati MPS; M/s Kakinara Engineer's Workers Co-operative Society Ltd is engaged at the Baranagar STP and has a total of twenty (20) workers, while M/s Sunny Enterprise is engaged at the Baranagar-Kamarhati MPS and has a total of eleven (11) workers.

The STP and MPS facilities have been operational since 1996. The contractor M/s. Sunny Enterprise has been engaged as an O&M contractor at the Baranagar- Kamarhati MPS since 1996. However, the O&M agency at Baranagar STP has changed multiple times since 1996. From 1996 to 2011, the O&M contractor engaged was M/s. Neo Parisrutan Pvt. Ltd. and from 2011 to 2012, the O&M contractor engaged was M/s Roy Enterprise. M/s Kakinara Engineer's Workers Co-operative Society Ltd. has been engaged at the STP since 2012 and its contract was renewed again in 2016. The details of the O&M agencies engaged since 1996 are presented in **Table 3.8** below.

Table 3.8 O&M Agencies at Baranagar & Linked Facilities

O&M Agency	Time Period
Baranagar STP	

O&M Agency	Time Period
M/s Neo Parisutan Pvt. Ltd.	1996 to 2011
M/s Roy Enterprise	2011 to 2012
M/s Kakinara Engineers Co.	2012 to 2016
Baranagar – Kamarhati MPS	
M/s Sunny Enterprise	1996 to present

Source: Stakeholder Consultation with Workers on 16th of September 2019

KMDA had shared a list of the workers of the contracted workers at its different facilities under the three STPs and its linked facilities. It was reported that one (1) worker Ms. Jiban Rudra who has been engaged at Baranagar-Kamarhati MPS was not included in the list, as he had recently joined the workforce. Another individual, Mr. Bishu Dholui had passed away during the month of August 2019, following which a new worker Mr. Babun Mondal had joined the MPS in his place. Additionally, one (1) individual Mr. Alok Adhikary, who is the Secretary of the Kakinara Engineers Co-operative Society, was incorrectly listed as a worker. Therefore there are a total of thirty-one (31) workers presently engaged at the Baranagar STP and Baranagar-Kamarhati MPS. The details of the existing workers and contractors are presented in **Table 3.9**.

Table 3.9 Details of Existing Workers and Contractors at Baranagar STP & Facilities

STP & Facilities	Project Components Location	Location	O&M Agency	Manpower Involvement
Baranagar	STP	Mathkol, Baranagar	M/s Kakinara Engineer's Workers Co-operative Society Ltd.	20
	Baranagar-Kamarhati MPS	Deshpran Shasmal road of Kamarhathi Municipality	M/s Sunny Enterprise	11
TOTAL				31

Source: KMDA (List of Existing Manpower) & Stakeholder Consultation with Workers on 16th of September, 2019

3.3.3 Existing Workforce at Arupara STP location

The existing manpower deployed at the Arupara STP and its linked facilities which include the three Lifting Stations and two Main Pumping Station. Presently, there are two O&M agencies engaged, the Associated Cooperative Labour Contractor and Construction Society Ltd and M.C.E Construction since 2009 and 2008 respectively. Associated Cooperative Labour Contractor and Construction Society Ltd has a total of fifty-two workers engaged at the Arupara STP and linked facilities, while M.C.E Construction has five workers engaged at LS 1, BESU. Consultations revealed that there is one female employee engaged at LS 2 at Foreshore Road.

Table 3.10 O&M Agencies at Arupara & Linked Facilities

O&M Agency	Time Period
Associated Cooperative Labour Contractor and Construction Society Ltd.	2009 to present
M.C. E Construction	2008 to present

Source: Stakeholder Consultation with Workers on 16th of September 2019

There are a total of sixty-three (63) workers at the Arupara STP and associated facilities, however, as per the new list shared by Wabag on the 31st of October, 2019, there are a total of sixty-one (61) workers. Reportedly, there is also one female worker employed at LS 2 Foreshore Road. The details of the existing workers and contractors are presented in **Table 3.11** below.

Table 3.11 Details of Existing Workers and Contractors at Baranagar STP & Facilities

STP & Facilities	Project Components Location	Location	O&M Agency	Manpower Involvement
Arupara	STP - Arupara	Arupara Sewage Treatment Plant, South Howrah Zone	Associated Cooperative Labour Contractor and Construction Society Ltd	24
	MPS - Arupara	Arupara Main Pumping Station		9
	MPS - Itchapur	Itchapur Main Pumping Station		8
	LS - 3	Round Tank Road		6
	LS - 2	CPT Land, Foreshore Road		5
	LS - 1	BESU, B. E College	M.C.E Construction	5
	STP	Security Personnel	Reportedly, they are directly engaged by KMDA	6
TOTAL				63

Source: KMDA (List of Existing Manpower) & Stakeholder Consultation with Workers on 16th of September

Figure 3.5 Consultation with Workers and Contractors



4. IMPACT ASSESSMENT

This section establishes the potential impacts that will be caused on account of the proposed project for Upgradation of the Sewage Treatment Plants at Mathkal that falls under Baranagar, Kamarhati and Baranagar Municipality, Bally and Arupara under Howrah Municipal Corporation. The impacts have been identified based on the multiple site assessment, joint visits and discussion with the project owner (KMDA) and Project Concessionaire.

The nature of the proposed project in all the three sites involve construction of new STP , laying of rising mains, replacement of gravity sewer line, renovation and desilting of gravity sewer lines. Demolition of the existing structure will take place only in Baranagar project site.

This section screens and assesses the impact significance (indicative at this stage) linked to the construction of new STP, laying of rising main, replacement of gravity sewer line and renovation of existing sewer line. Impacts are identified and predicted based on the analysis of the information collected from the following:

- Project information (as outlined in **Section 1**);
- Socio-economic profile of the affected community (as outlined in **Section 3**);
- Site assessment and stakeholder consultation along the project's footprint.

In all the three sites the major impacts identified are provided in Section 4. The section also discusses the impact avoidance measures proposed to be adopted in order to minimise potential impacts. The impact assessment however has limitation in terms of getting information due to absence of a detailed design and details measurement survey (DMS) from the project concessionaire.

4.1 Summary of the Impacts

A brief summary of the different categories of impacts is provided in Table 4.2 below

Table 4.1 Summary of the Project Impacts

Type of Project Impacts	Project Location	No of Project Impacted Person	Remark
Physical Displacement	Arupara	Nil	Physical displacement will not take place, based on preliminary site assessment (due to absence of detail design and DMS, the exact nature of the impact could not be ascertained).
	Bally		
	Baranagar		
Temporary Income Loss (The exact nature of impact can be ascertained during the detail design and DMS stage.)	Arupara	Approximately 12 PAPs (surveyed) and 10 shops were found closed	These are basically shops operating near the RoW of the project footprint
	Bally	Approximately 24 PAPs (surveyed) and 10 shops were found closed	These comprises of Kiosk, roadside vendors and any other non-title holder person shops
	Baranagar	Approximately 33 PAPs	These comprises of commercial structure, non-title holder shops and cycle stand.

Type of Project Impacts	Project Location	No of Project Impacted Person	Remark
Permanent loss of income to the fishing groups	Bally	46 members and approximately 18 workers	Fishing activities will not be allowed in the waste stabilisation ponds to meet the standards of treated discharge water quality specified in the Concession Agreement with GSPPL. This will trigger livelihood loss for all 46 fishermen from 4 groups and the 18 workers (approximately).
Access Disruption	Arupara	Shops and residential structures at Swarnamoi Road and College Ghat Road	The laying of new rising mains and gravity sewer line, the replacement of sewer lines, and desilting work will cause access disruption to shops and residential structures in congested locations. The access disruption will be temporary in nature, mainly during the construction phase.
	Bally	Shops and residential structures at BOC Ground Road, Temple Road (mahendra Bagchi Road), Lalababu Sahar Road, Ramlochan Shaire Street, Panchanantala, Jaya Bibi Road, Golabari , Salt Gola	
	Baranagar	Shops and residential structures at Gopal Lal Tagore Road, RN Tagore Road, B.N Mukherjee Road, Northern Park Road	

4.2 Access Disruption

The proposed project will entail access disruption during the laying of new rising main, gravity sewer lines, desilting work and replacement of sewer lines. Reportedly the alignment of the gravity sewer lines are located in the middle of the road, however, there will be access disruption for shops and residential structures located near the RoW of the existing sewer alignment during replacement work. The impact will trigger disruption along the congested residential places, market area and heavy-traffic area. The access disruption in all the three sites will be temporary in nature, mainly during the construction stage. **Table 4.2** provides an overview of the locations that will potentially cause access disruption during the replacement of sewer line. **Table 4.3** summaries the different works related to replacement, new laying and desilting of sewer pipelines to be undertaken at Arupara, Bally and Baranagar locations and the potential impacts anticipated due to the excavation of the trenches for replacement of pipelines and the existing road widths.

Table 4.2 Potential Areas that will be facing Access Disruption

Project Facility	Location of the Impacts	Road Width (in Feet /meter)
Arupara	Swarnamoi Road	8-10 ft. (2.44 – 3.04 m)
	College Ghat Road	14 ft. (4.27 m)
Bally	BOC Ground Road	12-14 ft. (3.66 – 4.27 m)
	Temple Road (Mahendra Bagchi Road)	15 ft. (4.57 m)
	Lalababu Sahar Road	8-10 ft. (2.44 – 3.04 m)
	Ramlochan Shaire Street	8-10 ft. (2.44 – 3.04 m)
	Panchanantala	12-15 ft. (3.66 – 4.57 m)
	Jaya Bibi Road	15-18 ft. (4.57 – 5.49 m)
	Golabari	15-16 ft. (4.57 – 4.88 m)
	Salt Gola	20-22 ft. (6.09 – 6.70 m)
Baranagar	Gopal Lal Tagore Road	18-20 ft. (5.49 – 6.09 m)
	RN Tagore Road	12-16 ft. (3.66 – 4.88 m)
	B.N Mukherjee Road	6-8 ft. (1.83 – 2.44 m)
	Northern Park Road	10 ft. (3.04 m)

Source: Observation during Joint Site Visit between VA Tech Wabag and ERM

Table 4.3 Sewer Line Replacement, Renovation, & Desilting

Location	Type of Sewer	Route Location/Name of Location	Width Of Road in Feet	Ownership of Road	Dia Pipe to be laid (In mm)	Length of pipe to be Laid (in Mtr)	Work to be carried out	ROW (Width) for Trench (in mm)	Remarks
Arupara	Rising Main- BESU	Botanical Garden Road	14 ft.	PWD/ MNC	700	700	Replacement	1200	The proposed work will impact the roadside vendors and kiosk operating their units
	Gravity Main	Laxmi Narayan Tola Road		PWD/ MNC	700	107	Replacement	1200	
	Gravity Main	Laxmi Narayan Tola Road		PWD/ MNC	800	150	Replacement	1200	
	Gravity Main	GKWL Premises		PWD/ MNC	1000	546	Replacement	1500	No major impact anticipated. The work will be undertaken inside the existing sewer pipelines.
	Gravity Main	Stretches not identified yet			700	161	Desilting		
	Gravity Main				800	225	Desilting		
	Gravity Main				1000	818	Desilting		
	Gravity Main	Kamardanga Road		PWD/ MNC	2750	600	Renovation		
Bally	Gravity Main	Salkia School Road		PWD/ MNC	600	657	Replacement	1000	No Major Impact
	Gravity Main	BOC Ground (Outfall)	12-14 ft.	PWD/ MNC	250	260	Replacement	800	
	Gravity Main	DAWS Temple Road (Rashbari Ghat Outfall)	15 ft.	PWD/ MNC	300	430	Replacement	800	
	Gravity Main	Lalbabu Saire Road (Outfall)	8-10 ft.	PWD/ MNC	300	600	Replacement	800	The proposed work will impact the roadside vendors and kiosk operating their units along these road stretches
	Gravity Main	Ramlochan Saire Street (Outfall)	8-10 ft.	PWD/ MNC	300	750	Replacement	800	
	Rising Main- LS-4	B K Paul Temple Road (Panchanantala LS 4)	12-15 ft.	PWD/ MNC	300	900	Replacement	800	
	Gravity Main	Jaya Bibi Road (Outfall)	15-18 ft.	PWD/ MNC	300	820	Replacement	800	
	Rising Main- LS-6	Golabari Ghat Road (Golabari LS6)	15-16 ft.	PWD/ MNC	350	160	Replacement	800	
	Rising Main- LS-5	Kings Road (Salt Gola LS5)	20-22 ft.	PWD/ MNC	250	160	Replacement	600	No major impact anticipated. The
	Gravity Main	Stretches not identified yet			300	210	Desilting		
	Gravity Main				375	690	Desilting		

Location	Type of Sewer	Route Location/Name of Location	Width Of Road in Feet	Ownership of Road	Dia Pipe to be laid (In mm)	Length of pipe to be Laid (in Mtr)	Work to be carried out	ROW (Width) for Trench (in mm)	Remarks
	Gravity Main				450	1860	Desilting		work will be undertaken inside the existing sewer pipelines.
	Gravity Main				525	501	Desilting		
	Gravity Main				600	1591	Desilting		
	Gravity Main				675	2110	Desilting		
	Gravity Main				750	899	Desilting		
	Rising Main- LS-2	Belur Math LS2 (Pal Ghat Lane)		PWD/ MNC	450	46	Replacement	900	
	Rising Main- MPS	Bhat para (Kona MPS) Only Road Crossing		Local Panchayat	1000	30	Replacement	1500	The proposed work will impact the roadside vendors and kiosk operating their units along these road stretches
Baranagar	Gravity Main	Dunlop more to NP Dutta Road (Gopal Tagore Road)	18-20 ft.	PWD/ MNC	500	550	Replacement	1000	
	Gravity Main	Dunlop more to NP Dutta Road (Gopal Tagore Road)	18-20 ft.	PWD/ MNC	600	260	Replacement	1000	
	Gravity Main	Dunlop more to NP Dutta Road (Gopal Tagore Road)	18-20 ft.	PWD/ MNC	700	760	Replacement	1200	
	Gravity Main	Dunlop more to NP Dutta Road (Gopal Tagore Road)	18-20 ft.	PWD/ MNC	800	1035	Replacement	1200	
	Gravity Main	Dunlop more to MPS (BT Road)		PWD/ MNC	900	1000	Replacement	1500	
	Gravity Main	Military Barrack to MPS		PWD/ MNC	900	1845	Replacement	1500	
	Rising Main-MPS	MPS to STP (Narendra Das Nagar)		PWD/ MNC	900	2700	Replacement	1500	
	Gravity Main	Dakhineswar bus stand to military barrack		PWD/ MNC	200	430	New Line	600	
	Gravity Main	Loot Bagan to Military Barrack			500	258.24	Desilting		
	Gravity Main	Loot Bagan to Military Barrack			600	120.64	Desilting		

Location	Type of Sewer	Route Location/Name of Location	Width Of Road in Feet	Ownership of Road	Dia Pipe to be laid (In mm)	Length of pipe to be Laid (in Mtr)	Work to be carried out	ROW (Width) for Trench (in mm)	Remarks
	Gravity Main	Loot Bagan to Military Barrack			700	714.88	Desilting		
	Gravity Main	Loot Bagan to Military Barrack			800	128	Desilting		
	Gravity Main	Dunlop more to MPS (BT Road)			900	1337.6	Desilting		

Source: Data received from GSPPL, Dated 29th January 2020

4.3 Loss of Structure

The proposed project may potentially affect few structures partially. These structures are basically those located within the project footprint, they have encroached on the public roads RoW. During excavation work these structure may potentially be affected. However, the project concessionaire reported that appropriate mitigation measures will be taken to ensure that no damage to structure occur during the construction work. As per the census and socio-economic survey one cattle shed rented by two individuals is located in Jayabibi road (Bimal Ghat). Consultations with the cattle shed owner revealed that the land where the shed is located belongs to the Port Authority of India. The shed is being utilised by two members, who are earning approximately Rs. 400 to 500 per day and they operate from 5 am to 7 pm. During the joint visit with GSPPL team, it was reported that the proposed upgradation works will not cause any impact to the existing cattle shed structure, however, since the exact nature of the impact could not be ascertain since the design is yet to finalised.

Figure 4.1 Structural Impact on Cattle Shed in Bally



4.4 Livelihood Based Impacts

4.4.1 Loss of Income for roadside vendors and workers engaged by the entity

Road side vendors and shops who are operating their businesses near the RoW of the existing trunk sewer line will trigger temporary income loss due to laying of gravity sewer line. During the construction period street vendors, road side vendors and kiosk for titleholders and non-titleholders operating their business near the project footprint will face temporary closure of shops and establishments during the construction period. As reported by the concessionaire during site assessment dated 22nd January 2020, the replacement work for sewer pipeline for each 25 m stretch will take a maximum of 3 days. This includes excavation of trenches, laying of pipeline and backfilling with earth and sand. GSPPL will be responsible for restoration of the excavated roads to its original state. These affected units are mainly petty shops such as fruit and vegetable seller, Tea stall, local food vendors, fish and meat vendors etc. As per the socio-economic survey, the average monthly income of the affected shops ranges between INR 6000 to INR 20000. Only 7 out of 67 affected shops (surveyed during socio-economic study) have their monthly income above INR 20,000 (2 PAPs are earning INR 28,000 per month, 4 PAPs are earning INR 30,000 per month and one fish monger earns INR 60,000 per month). Twenty (20) shops - 10 shops in Arupara and 10 shops in Baranagar have been found to be closed.

In addition to the roadside vendors, as per the SIA carried out by ERM, few shops such as tea stall and local food stall have employed workers/helper for running the business. As a result, of the

disruption of the business which may lead to temporary shutdown during the construction period resulting to income loss for these workers as well.

As per the design shared by the concessionaire the diameter of sewer ranges from 200 mm to 1000 mm, of which nearly 51% of the sewers are of size between 200 mm and 700 mm. The sewers line will be laid based on the depth of existing sewer line which is approximately 1.5-2 mtr depth. Though excavation work will partially affect the road, however as observed during site assessment these road stretches as highly congested, therefore the vendors operating their business in these areas are likely to cause inconvenience and disruption. **Table 4.3** provide an overview of the proposed work for replacement and renovation of sewer line. The impacts identified are mainly due to replacement and renovation of sewer pipeline. No impacts is perceived due to desilting work.

4.4.2 Loss of Fishing Ponds and Income Loss for fishermen

The proposed Bally Sewage Treatment Plant is to be constructed in the reclaimed area from the existing WSP at Kona utilising part of the Facultative and Anaerobic ponds. During screening and scoping visit it has been found that the WSP where STP is proposed to be constructed and the remaining part of the WSP is being used by fishermen cooperative groups. GSPPL as the Concessionaire for the proposed 62 MLD sewage treatment facility (40 MLD STP and 22 MLD WSP) located at Chamrail Gram Panchayat area under Bally-Jagacha Block in district of Howrah, has the strict mandate to ensure the treated discharge water quality from both 40 MLD STP and 22 MLD WSP, complying the standard stipulated under the Concession Agreement with KMDA in place.

The treated discharge quality per Concession Agreement has to meet the presently enforced effluent discharge standards for Sewage Treatment Plants as outlined under Environment (Protection) Amendment Rules, 2017. GSPPL is of the opinion that continuing fish farming activity in the WSP ponds will increase and impact the organic loading in the WSP through application of fish feed and other chemicals in form of disinfectant or growth medicines which will ultimately impact the mandate of the treated discharge quality from the WSP against the stipulated standard. Therefore, GSPPL has decided on not allowing any fish farming activity in the Bally WSP area from the date of official handover of the Site by KMDA to the Concessionaire. This will trigger livelihood loss for all 46 fishermen from 4 fishing cooperative groups and the 18 workers (approximately).

Figure 4.1 Diagrammatic Representation of WSP Fishing Pond



Source: Stakeholder Consultation with Fishermen Cooperative, dated 18th January 2020

Reportedly, before fish farming in the WSP ponds the fishermen were engaged into other occupation (some of them were into the business of supply of construction materials while for some fishing was the primary occupation and a minuscule number of cooperative members have alternate livelihood such as daily labour, fish monger and truck helper etc.). They are dependent on aquaculture for income throughout the year presently.

Consultation with Fisheries group representatives reveal that the fishermen groups have been undertaking fishing in the WSP for the last 3 to 4 years. It was reported by the fishermen that the fishing activity at the WSP was being conducted on rain-fed water since last 3-4 years as the Kona Pumping Station is in a defunct state.

Two meetings were held under Chairmanship of the District Magistrate, Howrah involving representation from WBSPMG, KMDA, VA Tech WABAG and NMCG on 28th July 2020 and 4th August 2020 respectively. Representatives of the fishermen groups engaged in fish farming activities with temporary lease in the waste stabilization ponds were also invited.

During the meeting held on 28th July, 2020, District Magistrate Howrah intimated the representatives of the fishermen groups about the upcoming project, which was welcomed by the fishermen group members with assurance to cooperate with the government agencies in execution of the project. The fishermen group members admitted that they have no legal claim on the WSP ponds.

Thereafter, a second meeting was held on 4th August, 2020 through video conferencing under the Chairmanship of District Magistrate that was attended by Joint Secretary (Works) and other representatives from KMDA representatives of fishermen group members, District Land and Land Reforms Officer, Howrah, BDO, Bally-Jagacha, representatives from NMCG and VA Tech Wabag. The government wanted to clarify the status of the commercial lease agreement – the fishermen group heads/members present confirmed that the last formal agreement for undertaking fishing at the STP site was valid for the tenure of 2017 – 18. Thereafter, though one of the fishing groups showed interest in renewing the lease in September, 2019 by making a part submission of the lease money, the agreement was not mutually formalized by the concerned parties (Maa Ganga Fishery and Jagacha Panchayat Samity). Fishing group members pointed out that they have continued with the fishing practice till January, 2020 in spite of there being no lease agreement – the reason, being that they had not received any formal communication to discontinue the activity till then. However, on being informed of the proposed development by the Panchayat Samity in the beginning of 2020, they have made a final fish catch and no further fishing has been done since that time.

On being asked about their present livelihood status, several of the members stated that they are pursuing alternative livelihood options at present and fishing from the ponds was a supporting livelihood for most of them. The fact that there would be a livelihood loss was not brought forward by any of the group head or members. The group head/ members pointed out that they would currently not claim any stake in the ponds for continuing fishing activities – they understand that the land would be used for the government's STP project and they would be keen to support the project from their side(s). The minutes of the two meeting are appended in **Appendix D**.

Given the above scenario, fishing activities will not be allowed in the waste stabilization ponds to meet the standards of treated discharge water quality specified in the Concession Agreement with GSPPL. This will trigger livelihood loss for all 46 fishermen from 4 groups and the 18 workers (approximately) engaged by the fishing groups.

As per the consultation meetings held under Chairmanship of the District Magistrate, Howrah on 28th July and 4th August 2020, the fishing cooperatives have no tenable legal claim on the WSP ponds or to create any legal encumbrance of any nature on the government. Nevertheless, GSPPL on its own account will implement the Livelihood Restoration Plan (LRP) in alignment with the LRF to meet the safeguard requirements of IFC Performance Standard 5 on Involuntary Resettlement and the ESMF

of NMCG (guided by World Bank Operational Policy 4.12 on Involuntary Resettlement) as also to create a positive environment and community goodwill in the project area.

4.4.3 Income Loss for fish farm workers engaged by fishermen

A total of 14 fish farm workers has been engaged by the two fishing groups for carrying out aquaculture activities (breeding, feeding fish, application of medicines, cleaning ponds, harvest fish when ready for sale, assist in loading the harvested fish stocks for transporting to market etc.) in the WSP; out of the total, 10 are workers and 4 are security guards. The income received by the fish farm workers for such work ranges from INR 6000 to INR 10000 per month. These workers are engaged on a monthly basis.

4.4.4 Loss of income for existing workers

At present, there are total of 126 contractual workers employed at the Baranagar, Bally, Arupara STP and their associated facilities, who are engaged under different contracting agencies. Reportedly these workers have been engaged for approximately 20-25 years. In absence of actual agreement in place between the O&M Agencies and KMDA, the date of expiry of the contract between them could not be ascertained.

The concern related to the contractual workers had been in discussion between the NMCG, KMDA and the Concessionaire. In the second Review Meeting of the progress of achievement of conditions precedent by the stakeholders of Howrah, Bally and Baranagar and Kamarhati STP Projects under HAM held on 22nd October 2019 under the chairmanship of Director General, NMCG, the employability of the workers deployed by KMDA for the operating facilities were discussed. It was decided that a consultative meeting would be conducted by KMDA and the Concessionaire with the existing workers and a necessary action plan would be submitted to the lenders (IFC and ADB).

Based on the second review meeting held on 22nd October, 2019, the Concessionaire held a meeting with the Chief Executive Officer, KMDA on 27th November, 2019, following which the Concessionaire (VA Tech Wabag) submitted a letter number KMDA-NMCG/Proj/016/19-20 dated 27th November, 2019. Issues related to the existing workers were discussed and the letter mentions that, Wabag shall facilitate re-engagement of around 25 numbers of existing workers and that KMDA to identify alternate sites for rest of them from the list of workers provided by KMDA. KMDA was requested to kindly advise the concerned workers to provide age/ identify proof for the chosen ones.

In the meetings held on 10th February, 2020 between KMDA and GSPPL and subsequently on 14th February, 2020, regarding the discussion held on re-engagement of the existing contracted workers. As a mitigation measure it was decided by KMDA that GSPPL will be responsible to re-engage 32 existing contracted workers from Bally MPS and the other linked facilities and KMDA will re-deploy the rest of the existing contracted workers from Arupara and Baranagar facilities in other facilities of KMDA.

4.5 Impact Avoidance

Both IFC PS 5, emphasises on avoidance or to minimise involuntary resettlement impacts to the extent possible. The following sub-section discusses the different avoidance and mitigation measures to reduce the impacts.

4.5.1 Impact Minimization and Mitigation Measures

The Concessionaire is currently in the process of finalising the design for the proposed project. The project footprint and RoW for the proposed project have considered the following impact avoidance and minimization measures:

For Replacement and Renovation of Sewer Pipeline:

- Earth excavation work will be undertaken by machine (backhoe excavator) and will include danger lighting and using sight rails and barricades, Signage of retro-reflective sheet of high intensity grade. The work will also be supplemented manually where there is no proper working area (e.g., very narrow streets, crowded market place) for the backhoe excavators. Necessary precautions such as bracing / shoring in the trench will be provided for excavated trenches.
- To minimise/reduce the social impact, the concessionaire will carry out construction during off-hours of business that is, from 1:00 pm to next day morning 6:00am, on an average 16 hours of daily work. This is in particular for the morning market stretch.
- The replacement and trench excavation work at one location will be carried out at a maximum stretch of 20-25 Mtr and the total time taken is 10-12 hr. This includes (Excavation, Laying & Back filling). This approach will ensure that within a day the entire 20-25 Mtr trenches can be dug, pipe laid and backfilled.
- The concessionaire will also reuse the excavated soil for refilling the trench after re-placing the sewer and therefore residual soil after pipe laying and refilling is not significant.
- For minimizing disruption and congestion for roadside vendors and pedestrian, the concessionaire has put in place measure that the contractor shall at all times carry out work on the road in a manner creating least interference to the flow traffic while consistent with the satisfactory execution. The arrangement for traffic during construction shall be in accordance with the "Traffic Safety Management Plan". The traffic arrangement during construction shall be so as to ensure that. i) Road users are accommodated through and around the construction zones safely with minimum of delays; ii) Where construction activities are taking place at multiple sites along the same or on parallel routes, construction activity and the movement of road users is co-ordinated to ensure that the total delay along the route or on signed alternative routes is within acceptable limits; iii) In the urban environment, works requiring partial road closures on alternative routes should be phased, where possible, so that they are not undertaken at the same time.
- KMDA and the Concessionaire (GSPPL) has adopted measures that in case of any major economic displacement¹, design optimization to be considered. No new land and right-of-way acquisition will be avoided and there will be no physical displacements.
- The concessionaire will consider feasible technology to minimise economic or livelihood disruption during replacement and renovation of trunk sewer line. Moreover in the case of any potential displacement, KMDA and Concessionaire will reassess the scope of work ² to avoid large scale disruption and displacement.
- The design for the sewers line will be laid based on the depth of existing sewer line which is approximately 1.5-2mtr depth and the diameter of sewer line ranges from 200 mm to 1000 mm, of which nearly 51% of the sewers are of size between 200 mm and 700 mm. Therefore the width of the trench excavation along the roads will vary from 0.8 m to 1.5 m and the depth varies from a minimum of 1.5 m to 2 m or as per the existing laid pipe line. This will minimise disruption and

4.5.2 Avoidance of Impacts to Indigenous Communities

The project's area of influence does not have any vulnerable social groups that may be considered as ethnic minorities or indigenous. Based on a secondary review of census data, ethnicity profile of the households surveyed and consultations; no specific indigenous community are within the project footprint.

¹ The involuntary resettlement impacts according to ADB- considers significant, if, 200 or more persons will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating).

² In an event where the initial scope of work is replacement of sewer line, will involve large scale displacement/disruption, the scope of work will be re-assessed an instead a feasible technology will be adopted or possibility changing the scope of work for e.g. scope of work to be revised to desilting instead of replacement depending on the nature of the existing sewerage system to avoid any potential loss,

5. POLICY FRAMEWORK AND ENTITLEMENT

The Livelihood Restoration Framework has been developed based on the international safeguards principles (IFC) for resettlement and rehabilitation and in alignment with the Environmental and Social Management Framework for National Mission for Clean Ganga, (updated in November 2019). The proposed resettlement assistance in the entitlement matrix has been considered based on the information gathered onsite during multiple site visits. The livelihood restoration plan (LRP) will be prepared based on the policy framework laid down in the LRF. The LRP will be prepared and implemented by the Concessionaire (GSPPL).

5.1 Screening of Sub Projects

To avoid the extent of involuntary land acquisition and resettlement impacts, GSPPL will be responsible for preparing involuntary resettlement planning. The resettlement plan will then be approved by IFC for implementation. A screening checklist to identify the resettlement impacts is given below:

1. Will the project require land? If yes, what is the quantity of land required?
2. Who owned the land of the existing facility, If state land, are there any informal settlers or non-titleholders and what will be the estimated number of non-title holders?
3. What is the potential displacement to take place; physical or economic displacement?
4. What will be the estimated total number of persons economically displaced and what percent of product assets (income generating) will people lose?
5. Will the impact be permanent or temporary (during construction)?
6. Are there any houses, structures, trees and crops that will be affected (whether state or private land)?
7. Is there any public or community infrastructure?
8. Are there any indigenous community likely to be affected by the project?

A project's involuntary resettlement category is determined by the category of its most sensitive component in terms of involuntary resettlement impacts. The involuntary resettlement impacts for a project are considered significant if 200 or more persons will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating).

1. Category A – A proposed project is classified as Category A if it is likely to have significant involuntary resettlement impacts. A resettlement plan, including an assessment of social impacts, is required.
2. Category B – A proposed project is classified as category B if it includes involuntary resettlement impacts that are not deemed significant. A resettlement plan, including assessment of social impacts, is required.
3. Category C – A proposed project is classified as Category C if it has no involuntary resettlement impacts. No further action is required.

The project is expected to have short term impacts and will not cause any physical displacements to the road side shops, vendors, kiosks where sewer pipeline rehabilitation, replacement or desilting work will be undertaken in all the three sites. However, at Bally STP, there are, 46 fishermen (total affected population is 183) who are primarily dependent on fish farming inside the WSP ponds for livelihoods and will be economically displaced. The proposed project in Bally will also impacts the livelihood of the 14 fish farm workers engaged by the cooperatives society for operating and maintenance work in the WSP fishing ponds. Hence, the total number of affected persons is likely to be more than 200 person considering the average household size is 4.5. Thus based on Bally STP, the most sensitive of the 3 projects, the project is potentially Category A on Involuntary Resettlement (IR). This will be confirmed during the preparation of the Livelihood Restoration Plan.

5.2 Core Safeguard Principles for Involuntary Resettlement

The core safeguard principles that would govern the involuntary resettlement impacts of the project are as follows:

- Use of Government land: where ever possible the project will try as much as possible to use government land, for avoidance of new land acquisition and physical displacement (including non-title holders occupying government land) to avoid involuntary land acquisition. (The existing facilities pumping stations, STPs to be constructed, I&Ds are all on KMDA owned land and the sewer pipelines will be laid within RoWs of government owned lands.)
- Maintaining the social and economic status of families: the LRF is based on the principle that there should be minimal possible negative impacts on the livelihoods of the affected families. Where impact is unavoidable, the livelihood restoration plan should attempt to ensure that affected families are able to maintain the same social and economic status as they did before displacement. Affected families will be provided appropriate compensation.
- Vulnerable groups: Vulnerable groups, including households headed by women, the elderly, the differentially able, and indigenous groups, those without legal title to land and property, and those living below poverty line (BPL) will be given special assistance to improve the standards of living of the displaced poor to at least national minimum standards and also ensure their participation in the consultation process.
- Eligibility of Non-title Holders: Ensure that affected persons (income loss) without titles or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets. Absence of formal title to land should not be a bar to policy entitlements.
- Preparation and Disclosure of LRP: The livelihood restoration plan (LRP) for the project detailing the entitlements of PAPs the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule will be prepared and disclosed with the PAPs and other stakeholders .
- Unanticipated Impacts: During implementation, each location should be screened prior to commencement of physical works and impacts identified. If there are unanticipated impacts in sections of the pipeline works or locations not previously assessed or new impacts arising, the livelihood restoration plan should be updated, and submitted to IFC prior to any impacts caused for approval.
- No ground clearance or civil works should take place in any sections where there are involuntary resettlement impacts unless the LRP or updated LRP is cleared by IFC, disclosed to affected people and on IFC websites and compensation is paid.

5.3 Livelihood Restoration Plan (LRP)

Based on the data and information gathered during the household baseline and socio-economic survey, a livelihood restoration plan will be prepared. The plan will comprise the database of all the affected persons. The resettlement plan will comprise the types of loss, entitlement to restore the losses, implementation mechanism, grievances mechanism, schedule for implementation and budget. The approved LRP will be disclosed to the concerned stakeholders.

5.4 Gender and Vulnerability in the community

The socio-economic baseline will identify the Project Affected Persons (PAPs) through a perspective on gender and vulnerability, highlighting vulnerable groups such as poor, disabled, elderly, or children without means of support, and female-headed households. The socio-economic status of the vulnerable groups will be analysed and the project impacts will be assessed. The LRP will also formulate mitigation measures to ensure that socioeconomic conditions, needs, and priorities of these groups are considered. The LRP will also ensure that gender impacts are adequately addressed and

mitigated. An inclusive stakeholder consultation involving women as part of the discussion will be carried out to address any specific women's issues.

5.5 Eligibility Criteria

The LRF recognises both the titleholders and non-titleholders, eligible for receiving compensation and resettlement assistance under the proposed project, will cover all affected persons losing business or income entirely or partly; this will include:

- All affected persons who lost assets/income in their entirety or in part, and have a formal legal rights/titles;
- All affected persons who lost assets/income in their entirety or in part, without any formal legal rights/titles;
- vulnerable households, defined as poor households including women-headed households and households below the poverty line as determined by the state¹
- Temporary impacts or disruptions due to project construction work

Persons who will be identified in the project-impacted areas before the cut-off date will be entitled for compensation and rehabilitation measures. Those who encroach into the impacted area after the cut-off date will not be entitled to any compensation or any assistance, unless there is a change in the project design.

5.6 Cut-off date

For titleholders and non-titleholders the start date of project census survey during the detail measurement survey will be considered as the cut-off date.

5.7 Entitlement Matrix

An Entitlement Matrix has been developed, that summarizes the types of losses and the corresponding nature and scope of entitlements; in compliance with international safeguards as per IFC PS 5. The matrix describes the units of entitlements for compensating lost assets, income losses and different resettlement benefits.

The entitlements for the fishermen are based on assumptions in particular for the fishing activities. Two options have been considered that will guide the entitlement principles. Similarly, assumptions governing the entitlements for loss of structures and loss of income for the roadside shops, vendors, kiosks are discussed in the following section.

5.7.1 Assumptions Considered for setting the Entitlement Principles for Loss Assessed

5.7.1.1 Assumption considered for setting the entitlement principles for Structure Loss

- The screening and scoping assessment of the affected structure has been carried out based on the information shared by the project concessionaire and KMDA regarding the project components and the proposed work during joint visits. In the absence of the detailed pipeline design where the pipeline replacement, relaying and desilting work will be undertaken and the

¹ Vulnerable Groups comprise below poverty lines households, including poor female-headed, poor disabled-headed, poor, elderly-headed households, and poor households without tenure security on land. As per a report published by the Planning Commission, Government of India, the state-specific poverty line for West Bengal in 2012 was INR 981 per capita per month (Press Note on Poverty Estimates 2011-12, GoI, Planning Commission, July 2013). On adjusting the Planning Commission, Government of India estimates of the state-specific urban poverty line for West Bengal in 2012 (by taking 5.5% average rate in inflation per year), the estimated urban poverty line in 2019 is INR 1718.51 per capita per month, Government of India, Planning Commission. 2013. Press Note on Poverty Estimates 2011-12. New Delhi.

RoW required for the work, the assumption of the impact is based on the visible manholes located a metre away from the affected structure in the locations (for the gravity sewer lines) and discharge points. For the sewer transmission mains from MPS to STP, it is assessed that the pipeline will traverse through middle of the road, as per the understanding given by the Concessionaire. As per the alignment of the manhole and the discharge point in Bally, it is assessed that the cattle shed needs to be shifted during laying of the pipeline.

- Consultation with the cattle shed owners and the temple authority located near the impacted structure reported that the existing alignment passes through the cattle shed. However, this is not fully confirmed due to absence of pipeline layout. Based on the above assumption, it has been considered that the structure (cattle shed) is likely to be impacted based on the proposed work.

5.7.1.2 Assumption considered for setting the entitlement principles for Income Loss

- Roadside shops/vendors along the stretches of the sewer alignment identified during site assessment with the project concessionaire were identified as the affected entity facing income loss due to access disruption during the construction work. The identified shops are those that are located just 2-4 m from the pipeline alignment (identified by locating the manholes or considering the middle of the road) and are assessed to get impacted during replacement and rehabilitation work due to piling of the excavated materials and other construction materials.
- As per the design team of the GSPPL, the replacement work for sewer pipeline for each 25 m stretch will take a maximum of 3 days (as per the standard procedure). This includes excavation of trenches, laying of pipeline and backfilling with earth and sand. Post the backfilling activity the trenches will be left as it is, for natural settling of the earth. It is thus assuming that the impact will be temporary in nature and not more than 3 days, the compensation has been planned for this period. The per day income (daily sales) earned by the owner of the affected entity has been considered for calculating the income loss.

5.7.1.3 Assumptions Considered for setting the Entitlement Principles for Fishing Activity

- The commercial lease agreement between the BDO, Panchayat Samity and the fishermen cooperative groups were a one-year arrangement that has been renewed every year. The arrangement however does not qualify as a permanent arrangement with no pre-defined assurance for continuance, about which the fishermen has been fully aware of.
- Although the commercial lease agreement had ended on 31st October, 2018¹, the fishermen have continued to undertake fishing activity (even one group made payment to Bally-Jagacha Panchayat Samity), and this was assessed during the ESIA and LRF study. It may be presumed that the fishing activities may have continued in case no development activity had been planned around the WSP location in Bally.
- A development on the proposed STP project at the WSP location lead to non-renewal of the commercial lease agreement for the current year, ie. FY 2019-20. Subsequently the Jagacha Block Office handed the water bodies (WSP area) back to KMDA.
- Hence, it is assumed that the fishermen groups may have continued to undertake fishing activities for their livelihood purpose, if no development was planned.

¹ Based on letter from BDO, Bally-Jagacha Block Development Office to Block Development Officer, Bally-Jagacha Development Block, Khalia, Chamrah, Howrah to District Magistrate, Howrah

5.7.2 Principles Guiding Entitlements

5.7.2.1 Principles for entitlements for structural loss

- The compensation amount for the impacted structure will be determined based on two principles:
(a) Use and/or utility of the structure; and (b) Cost of construction which includes
 - Materials - Cement, wood, thatch, mud, stone, concrete galvanized iron sheet etc. as construction materials;
 - Labour cost- daily wage labour rates for unskilled, semi-skilled and skilled workers in construction sector;
 - Transportation costs for transportation of materials;
 - Cost of basic immovable amenities such as flooring etc.
 - Area of the impacted structure.
- With regard to structural costs, the provisions outlined in number 6 and 7 of the Schedule II of the RFCTLARR Act, 2013 would be considered. As per the RFCTLARR Act, 2013, for loss of commercial structures/petty shops (which would be the case for some of the PAPs for this project) provision of minimum of INR 25,000 (item 7 of the Schedule II) is considered. Similarly, if any of the PAPs which is operating from semi-permanent or permanent establishment/shop and is required to be relocated (temporary or permanent) the shifting cost should be INR 50,000 (item 6 of the Schedule II).
- In case the impacted structure is under tenancy, or where user is different from owner, the owner of the structure (irrespective of whether they are the user or owner of the land) shall be paid 100% compensation for the structural loss as determined during the valuation.

5.7.2.2 Principles guiding entitlement for income loss

- The impacted shops/vendors are micro and small scale enterprise majorly non-titleholder and roadside vendors operating with no records of returns and income tax declaration records, hence for determining the income loss, the daily sales reported during the census survey is considered for determining the compensation.
- For impacted workers who are paid on a daily basis who are working in the affected shops will be compensated based on the income stated during the socio-economic survey or the wage rates, as specified for the unskilled workers in the Minimum Rates of Wages in Schedules Employments in West Bengal, Labour Commissionerate, Labour Department, Government of West Bengal whichever is higher for the period of business disruption.

5.7.2.3 Principles guiding entitlements for fishermen

Option 1 – Fishing at Alternate Location

Principles guiding the entitlements for *Option 1* is based on identifying alternate fishing ground/water bodies such that current income levels can be restored for the fishermen.

- The fishermen will be provided with support in finding alternate fishing ponds for carrying out the fishing activities and will be supported with the leasing cost of the ponds, equivalent to individual amount of one-time resettlement allowance of Rupees Fifty thousand (for each of the members). Any additional cost for leasing the alternate pond to be borne by the fishermen themselves. It is expected that, this one-time resettlement allowance would also cover the initial investment made by the fishermen for developing the WSP ponds.
- It is assumed that implementation of the LRP as per *Option 1* will be completed prior the start of the STP construction work at the Bally WSP for the fishermen. Till such time the restoration activities are ongoing, fishermen will be allowed to carry out fishing in the WSP ponds until the

alternative fishing sites is ready for generating income for restoration of the income loss. However, in the situation the fishermen are required to stop undertaking fishing inside the WSP with immediate effect of handing over of the site to the Concessionaire by KMDA, the fishermen will be entitled to receive transitional allowance for income loss for 6 months. It is expected that the fishermen will be able to restore their livelihood within 6 months' time period as they will continue to be in the same livelihood option.

- Even though, the fishermen cooperative groups will be able to get back the input cost from the last fish-catch sale from the stabilisation ponds, the groups will be entitled to receive, for starting the fishing activities at the new location, each fishing cooperative will be entitled to receive a working capital (this will include the cost of fish seedlings, fish feed, medicines, etc.). The entitlement matrix in the ESMF document for NMCG (*Table 4.3 of ESMF, bullet # 3, page 37*) specifies subsistence allowance to each affected family which is displaced. The amount is equivalent to rupees three thousand per month for a period of one year. Subsistence allowance taken together with last sale of fish from the existing crop in the WSP meets the working capital needs for restarting fishing at the alternate location.
- Given the geographic location of Bally WSP site and its proximity to the congested settlements under erstwhile Bally Municipality and currently under Howrah Municipal Corporation, it is unlikely that the fishing cooperatives groups will be able to find ponds of same size as like the WSP ponds. It is possible that there may be a need for intensified fishing activity in smaller sized ponds or fish culture of other higher value species with higher yield to achieve full livelihood restoration. The Fishermen may require training and capacity building in this regard. Hence, the fishermen will be entitled for receiving skill training and capacity building for effective implementation of the livelihood restoration at an alternate location.
- One of the fishing cooperative group (*Maa Ganga Fisheries Group*) have made an advance of 40% lease rent payment for Pond 1 for the current year 2019-20. The lease period is starting from September 2019 year to August 2020. As the group is currently undertaking fishing activities in the WSP pond and will continue to do so till the LRP is implemented and their income is restored, it is expected that the lease rent paid by the concerned group to the Bally- Jagacha Panchayat Samity will be utilised therein. Hence, the provision of reimbursement will not be applicable.

Option 2 – Alternate Fishing Related Livelihood Option

In case the fishing groups fail to identify alternate site for undertaking fishing activity, or based on the preference of the group members they will be entitled to receive livelihood restoration support for alternate livelihoods.

- From the discussion with the fishermen, it is evident that they would prefer to remain associated with fishing activities or any such associated activity related to the commercial supply chain.
- To be able to establish alternate livelihood, the fishermen will be entitled to receive skill and capacity building trainings.
- It is assumed that implementation of the LRP as per *Option 2* will be completed and their smooth transition to alternate fishing related activities, prior the start of the STP construction works at Bally WSP and that during this phase the fishermen will be allowed to carry out fishing in the WSP ponds. In such an event the fishermen will not be entitled for transitional allowance. However in the case the fishermen are required to stop undertaking fishing activity inside the WSP with immediate effect of handing over of the site to the Concessionaire by KMDA, the fishermen will be entitled to receive transitional allowance for income loss for 6 months.
- The livelihood restoration programme may be carried out as group activities. The existing cooperative groups have to get themselves registered as a formal legal entity or may choose to operate in the form of self-help groups (SHGs), with proper bank accounts.
- A working capital will be provided to every registered fishermen cooperative/ group to establish alternate livelihood activity. The fishermen will be entitled to working capital to start the alternate

livelihood option. This working capital support would be equivalent to individual amount of one-time resettlement allowance of Rupees Fifty thousand only (INR 50,000) for each affected fishermen and additionally individual amount of Rupees Three Thousand only (INR 3,000) for a period of one year equivalent to the subsistence allowance as specified in the entitlement matrix of the ESMF (as per the RFCTLARR Act, 2013 – Second schedule ; clause 10 – specified in the entitlement matrix of ESMF for NMCG updated in Nov. 2019). Any additional cost to be borne by the fishermen themselves. It is expected that, this one-time resettlement allowance and the subsistence allowance (collectively) should meet the cost of working capital and also cover the initial investment made by the fishermen for developing the WSP ponds.

- An independent LRP implementing agency or any competent local NGO may be hired by the Concessionaire for a year for facilitating the LRP implementation, capacity building training and to ensure the smooth transition of the fishermen into new livelihood.

5.7.3 Entitlement Matrix

Table 5.1 provides information on the Entitlement Matrix.

Table 5.1 Entitlement Matrix (EM)

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
A. Loss of Structures¹					
1	Loss of Commercial Structure created by the non-titled holders	Structures and other assets	Non-Titleholders (Squatters and encroacher)	- Non-titleholders will be given three months advance notice; [Table 4.3: entitlement matrix of the ESMF for NMCG (updated in Nov 2019) section 2 (1) under acquisition of house type of loss, page 38] - Right to salvage materials from structure and other assets at replacement cost; - The compensation for loss of structure constructed by the non-titleholders will be compensated at replacement cost calculated as per the latest prevailing Schedule of Rates without depreciation. - In the case of loss of structure (petty shop/cattle shed) one-time financial assistance of INR 25000 will be provided for construction of the affected shops/ establishment. (if applicable); [Table 4.3: entitlement matrix of the ESMF for NMCG (updated in Nov 2019) section 2 (i) under acquisition of house type of loss, page number 38] - One-time financial assistance of such amount as the appropriate Government may decide but not less than fifty thousand rupees, for shifting of the family, building materials, belongings and cattle. [Table 4.3: entitlement matrix of the ESMF for NMCG, (updated in Nov 2019), section 2 (i) under	- The LRP implementing agency will be responsible to identify the affected structures during the detail measurement survey. The affected entity will be documented and updated in the LRP. - GSPPL to validate and verify the affected structures for determining compensation through the LRP Implementing Agency based on detail design and detail measurement survey (DMS) - KMDA to provide advance notice to the affected person to vacate the affected structures.

¹ Structural loss, impact category has been included to ensure that such losses, if caused by the project (identified during the detail measurement survey, which is not finalised yet), are covered for.

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				<i>acquisition of house type of loss, page number 38]</i>	
2	Loss of Commercial Structure	Structures and other assets	Titleholders (owners), Tenant, Leaseholder	- Titleholders will be given 3 months advance notice to vacate structures (if applicable); [Table 4.3: entitlement matrix of the ESMF for NMCG, (updated in Nov 2019) section 2 (i) under acquisition of house type of loss, page number 38] - In case of loss of structure, the affected person will be compensated at replacement cost calculated as per the latest prevailing Basic Schedule of Rates (BSR) without depreciation. - In addition the affected person will also be compensated for the loss of land (if applicable) on which the structure stand in case of permanent loss. The compensation for land loss will be Compensation at replacement/ market value as specified in the RFCTLARRA 2013. - In the case of loss of structures/assets either semi-permanent or permanent (and are required to relocate) one time assistance of INR 50,000 will be provided. [Table 4.3: entitlement matrix of the ESMF for NMCG (updated in Nov 2019) section 2 (i) under acquisition of house type of loss, page number 38] - Right to salvage material from the demolished structure at no cost; [Table 4.3: entitlement matrix of the ESMF for NMCG (updated in Nov 2019) section 2 (i) under acquisition of house type of loss, page number 38]	- The LRP implementing agency will be responsible to identify the affected structures during the detail measurement survey. The affected entity will be documented and updated in the LRP. - GSPPL to validate and verify the affected structures for determining compensation through the LRP Implementing Agency based on detail design and detail measurement survey (DMS) - KMDA to provide advance notice to the affected person to vacate the affected structures.

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				- Rental assistance for 3 months, equivalent to the space/location lost at prevalent market rate (if applicable); and - All fees, taxes and other registration charges incurred for the replacement structure shall be borne by the executing agency.	
B. Loss of Income roadside shops, vendors, kiosks					
3	Temporary Loss of income	Established Business	Owners, tenants, leaseholders, employees of the business entities	60 days' notice period prior to start of construction work. - Cash assistance based on the net income from the affected business or daily minimum wage rate¹ as specified by the government (for semi-skilled or unskilled workers), whichever is higher, for the loss of income/livelihood for 3 days. (Assuming that the income loss will be for 3 days; as specified by the Concessionaire, the laying of pipeline will be completed within the period). - In case the construction could not be completed within the stipulated timeframe and the work is carried out for more number of days, then the affected persons would be entitled to receive compensation (as per daily income specified during socio-economic survey) for the additional period of income disruption on actual basis. - Compensation for workers engaged in the affected business or shops as per their daily income rates mentioned during the socio-economic survey or as per the West Bengal	- The LRP implementing agency during the detail measurement survey will be responsible to map the affected entity that will faced temporary livelihood disruption. The affected entity will be documented and updated in the LRP. - For each stretch, the work that will be undertaken, GSPPL will be responsible to provide the precise number of days the work to be undertaken (in case the proposed work will take place more than 3 days) and it should be duly communicated to the local authorities and the affected persons/entities. - GSPPL to validate and verify the affected structures for determining compensation through the LRP Implementing Agency based on detail design and detail measurement survey (DMS) - GSPPL with the support of the concern ULB will ensure provision of advance notice to the affected person

¹ If the applicable wage rates are not updated for the year of project impact, indexation for inflation will be made.

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				Minimum wage rate for the unskilled workers, whichever is higher for the period of business disruption, (approximately assessed to be 3 days). In case the construction could not be completed within the stipulated timeframe and the work is carried out for more number of days, then the affected workers would be entitled to receive compensation for the additional period of income disruption on actual basis.	
4	Temporary loss of income for roadside vendors, shops and kiosk operators	Roadside business and vendors	Non-Titleholders: hawkers, vendors, employees or workers	60 days' notice period prior to start of construction work; - Any loss of livelihood due to laying of pipeline, replacement of pipeline and desilting work for the shops. Cash assistance based on the net income from the affected business or daily minimum wage rate as specified by the government (for semi-skilled or unskilled workers), whichever is higher, for the loss of income/livelihood for 3 days. (Assuming that the income loss will be for 3 days; as specified by the Concessionaire, the laying of pipeline will be completed within the period). - In case the construction could not be completed within the stipulated timeframe and the work is carried out for more number of days, then the affected persons would be entitled to receive compensation (as per daily income specified during socio-economic survey) for the additional period of income disruption on actual basis. - Compensation for workers engaged in the affected business or shops as per their daily income rates mentioned during the socio-	- The LRP implementing agency during the detail measurement survey will be detail measurement survey will be responsible to map the affected entity that will faced temporary livelihood disruption. The affected entity will be documented and updated in the LRP. - For each stretch the work will be undertaken, GSPPL will be responsible to provide the precise number of days the work to be undertaken (in case the proposed work will take place more than 3 days) - GSPPL to validate and verify the affected structures for determining compensation through the LRP Implementing Agency based on detail design and detail measurement survey (DMS) - KMDA will ensure provision of advance notice to the affected person

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				economic survey or as per the West Bengal Minimum wage rate for the unskilled workers, whichever is higher for the period of business disruption, (approximately assessed to be 3 days). In case the construction could not be completed within the stipulated timeframe and the work is carried out for more number of days, then the affected workers would be entitled to receive compensation for the additional period of income disruption on actual basis.	
C. Loss of Livelihood for Fishermen					
5	Loss of income due to loss of livelihood	Fishermen carrying out fishing in the WSP ponds	Fishing Group Members (non-titleholders: present status encroachers, as the lease agreement has expired in Aug. 2019 and it has not been renewed)	Compensation to Affected Fishermen as per Option 1 – Fishing at Alternate Site ■ The fishermen to be allowed to catch the remaining fish livestock from the stabilisation ponds before start of construction work. ■ The fishermen will be entitled to receive three months prior notice before actual displacement for harvesting the remaining fish livestock. ■ Preference should be given to find an alternate site/ water body, where the fishermen can continue to undertake their livelihood in a sustainable manner and restore their income levels. ■ The fishermen group members will be allowed to undertake fishing inside the WSP ponds till such time the alternative fishing ponds is ready for production and the existing income is	■ GSPPL to assess the extent of impact and review of all documentary evidence for determining and provision of compensation. ■ GSPPL to ensure compensation and implementation of the LRP is completed prior to start of the STP construction in Bally. ■ GSPPL with the help of the LRP implementing agency to assist the affected fishermen groups in identifying alternate fishing ground. (The fishing grounds may not be equivalent to the existing pond size). ■ The LRP implementing agency will be responsible to assist the fishermen in developing new fishing pond and their smooth transition and income restoration through fishing at the new location. ■ GSPPL will ensure provision of advance notice of three months to the affected fishermen.

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				restored. In the case, fishing activity has to be stopped immediately at the WSP ponds, the affected fishermen will be entitled to receive transition allowance for the gestation period proposed to be 6 months. The transition cost will be calculated based on the net income (from the current fishing activities) for all the four fishermen group members on producing relevant income document; in absence of proper income documents the income will be calculated based on the average fishing income determined in the area. ■ The four fishermen groups will be entitled to receive cost for leasing the alternate ponds and also the initial capital investment for developing the WSP ponds. This leasing cost support and initial capital investment for developing the WSP ponds would be equivalent to individual amount of one-time resettlement allowance of Rupees Fifty thousand only (INR 50,000) for each affected fishermen <i>[as per the RFCTLARR Act, 2013 – Second schedule ; clause 10 – specified in the entitlement matrix of ESMF for NMCG updated in Nov. 2019, under section 1 acquisition of agricultural land (page number 38)].</i> Any additional cost for leasing the alternate pond to be borne by the fishermen themselves. It is expected that, this one-time resettlement allowance would also cover the initial investment made by the fishermen for developing the	

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				WSP ponds. - For starting the fishing activities at the new location, each fishing cooperative groups (four groups) will be entitled to receive a working capital (this will include the cost of any earth work required to make the pond suitable for fishing, treatment of the water quality, cost of fish seedlings, fish feed, medicines, etc.). Working capital to start aquaculture activities in the new water bodies will be equivalent to individual amount Rupees Three thousand only (INR 3,000) per month for a period of one year. <i>[as per the RFCTLARR Act, 2013 – Second schedule ; clause 10 – specified in the entitlement matrix of ESMF for NMCG updated in Nov. 2019, under section 1 acquisition of agricultural land (page number 38)].</i> Subsistence allowance taken together with last sale of fish from the existing crop in the WSP meets the working capital needs for restarting fishing at the alternate location. - The fishermen group members will be entitled to receive skill training and capacity building for effective implementation of the livelihood restoration at an alternate location for the need of intensifying fishing activity in smaller sized ponds or fish culture of other higher value species with higher yield to achieve full livelihood restoration.	

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				The affected fishermen of the 4 cooperatives shall give preference in the allotment of outsourced contracts, shops or other economic opportunities coming up in or around the project site (if this is found to be suitable and appropriate for the work to be undertaken by the Concessionaire and the EPC Contractor.) [Table 4.3: entitlement matrix of the ESMF for NMCG updated in Nov. 2019, section 3 (ii) of livelihood loss (page number 39.)]	
6	Loss of income due to loss of livelihood	Fishermen carrying out fishing in the WSP ponds	Fishing Group Members (non-titleholders: present status encroachers, as the lease agreement has expired in Aug. 2019 and it has not been renewed)	Compensation for Affected Fishermen as per Option 2 – Alternate Fishing Related Livelihood Option - The fishermen will be entitled to receive three months prior notice before actual displacement (start of construction work) for harvesting the remaining fish livestock. - The fishermen group members will be allowed to undertake fishing inside the WSP ponds till such time the alternative livelihoods option by the fishermen starts generating income. In the case, fishing has to be stopped immediately, the affected fishermen will be entitled to receive transition allowance for six months. The transition cost will be calculated based on the net income (from the current fishing activities) for all the four fishermen group members on producing relevant income document, in absence of proper income documents the income will be calculated based on the average fishing income determined in the	- GSPPL to prepare an inventory of all the affected person facing income loss and prepare a restoration plan - GSPPL to assess the extent of impact through LRP implementing NGO and review of all documentary evidence for entitlement of compensation. - The LRP implementing agency will be responsible for implementation of livelihood restorations for the affected fishermen workers - GSPPL to ensure compensation and implementation of the LRP is completed prior to start of the construction - GSPPL will ensure provision of advance notice to the affected person

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				area. ■ The fishermen cooperative group members will be entitled to receive livelihood restoration support as per the following: ■ Mapping of existing skill sets for the fishermen ■ Training and capacity building support for alternate livelihood to all the members of the 4 fishermen groups. ■ The fishermen will be entitled to working capital to start the alternate livelihood option. ■ This working capital support would be equivalent to individual amount of one-time resettlement allowance of Rupees Fifty thousand only (INR 50,000) for each affected fishermen and additionally individual amount of Rupees Three Thousand only (INR 3,000) for a period of one year equivalent to the subsistence allowance as specified in the entitlement matrix of the ESMF (<i>as per the RFCTLARR Act, 2013 – Second schedule ; clause 10 – specified in the entitlement matrix of ESMF for NMCG updated in Nov. 2019</i>). Any additional cost to be borne by the fishermen themselves. It is expected that, this one-time	

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				resettlement allowance and the subsistence allowance (collectively) should meet the cost of working capital and also cover the initial capital investment for developing the WSP ponds made by the fishermen. The affected fishermen of the 4 cooperatives shall give preference in the allotment of outsourced contracts, shops or other economic opportunities coming up in or around the project site (if this is found to be suitable and appropriate for the work to be undertaken by the Concessionaire and the EPC Contractor.) <i>[Table 4.3: entitlement matrix of the ESMF for NMCG updated in Nov 2019, section 3 (ii) under Employment Assistance type of loss.]</i>	
7	Loss of income for workers engaged by Fishing Groups	Workers engaged by the fishing cooperative for rearing and caring of fish stock.	Security Guard and Fish farm workers works for the fishing group for not less than 6 months	- Each affected family of the fish farm workers shall be given a one-time resettlement allowance of fifty thousand rupees only (INR 50,000) (RFCTLARR, 2013 – Second schedule; clause 10) as specified in the entitlement matrix of ESMF. <i>[Table 4.3 of the ESMF for NMCG, updated in Nov. 2019, section 1, under acquisition of agricultural land, page number 37].</i> - The families of the fish farm workers will also be eligible to receive a monthly subsistence allowance equivalent to Rupees Three thousand only (INR 3,000) per month for a period of one year from the date of impact (RFCTLARR, 2013 – Second schedule; clause 5 para 1) Table 4.3 of the ESMF for NMCG, updated in Nov. 2019 section 1, acquisition of	- The LRP implementing agency will prepare an inventory of all the affected person facing income loss and prepare a restoration plan for income restoration - GSPPL to assess the extent of impact through LRP implementing agency and review of all documentary evidence for entitlement for compensation. - The LRP implementing agency is responsible for implementation of livelihood restorations for the affected fishermen workers - GSPPL to ensure compensation and implementation of the LRP is completed prior to start of the construction work of the Bally STP.

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
				<i>agricultural land type of loss, page number 37]</i> - The fish farm workers will be entitled to receive skill training for alternate livelihood. - These workers may be given preference under the project during construction work for unskilled work on case to case basis.	The Concessionaire GSPPL will ensure provision of advance notice to the affected fish farm workers
D. Other Impacts					
8	Additional Assistance to vulnerable groups ¹	Vulnerable households including BPL ² , ST, WHH, disabled and elderly persons	Special Assistance	- All vulnerable families identified as PAPs will be getting an additional one-time lump sum assistance of INR 10,000. - Employment opportunity for PAPs in the project works, if available and if so desired by them. - In case of loss of structure, Compensation will be as specified under section A of the table. - In case of loss on income, compensation will be as specified in specified under section B of the table.	- The LRP implementing agency hired by GSPPL will be responsible for identifying the affected person and prepare an inventory/list of the affected person that will faced income loss - GSPPL through the LRP implementing agency will be responsible to verify the affected person for compensation

¹ Definition of vulnerable people are (i) households below poverty lines households, (ii) poor female-headed households; (iii) poor disabled-headed households; (iv), poor, elderly-headed households, and (v) poor households without tenure security on land.

²As per a report published by the Planning Commission, Government of India, the state-specific poverty line for West Bengal in 2012 was INR 981 per capita per month (Press Note on Poverty Estimates 2011-12, GoI, Planning Commission, July 2013). On adjusting the Planning Commission, Government of India estimates of the state-specific urban poverty line for West Bengal in 2012 (by taking 5.5% average rate in inflation per year), the estimated urban poverty line in 2019 is INR 1718.51 per capita per month, Government of India, Planning Commission. 2013. Press Note on Poverty Estimates 2011-12. New Delhi.

Sl. No.	Impact Category	Application	Entitled Person	Compensation/Entitlement	Responsibility
9	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			■ The contractor shall bear the cost of any impact on structures or land due to movement of machinery during construction ■ All temporary use of land to be through written approval of the landowner or any entity. ■ Location of Construction camps by contractors in consultation with local authorities. ■ Contractor will ensure security and access to households, shops, business units in close proximity of the construction camps and that camps must be located at least 500 m from the habitation.	■ GSPPL and contractor will be responsible for putting in place management plans related to construction work. ■ GSPPL and the Contractor (VA Tech Wabag Pvt. Ltd.) will ensure provision of notice to the communities prior to start of construction work. The local municipal authorities may also be informed and their support can be taken for the same.
10	Any other impact not yet identified, whether loss of asset or livelihood			■ Any unforeseen impacts will be documented and mitigated based on the principles agreed upon in this LRF and following IFC PS5.	■ The LRP implementing agency will identify any other impacts/livelihood loss identified during the detail measurement survey (DMS). The identified impact will be updated the LRP.

5.8 Livelihood Restoration Measures for Fishermen of Bally WSP

The project will cause permanent livelihood impact on the fish farmers carrying collective fishing in the waste stabilisation ponds in Bally. The information regarding the impacts have been discussed in section 4.4.3. In view of the above context, livelihood restoration measures should be undertaken to mitigate adverse impacts on affected fish farmers. The selection of appropriate livelihood restoration strategies of cash compensation and non-cash compensation have been developed based upon the existing baseline of the PAHs and feasibility options of the area. The following aspects should be considered while planning for the livelihood restoration measures for the fish farmers:

- The affected community (fishermen) are presently dependent upon aquaculture as their main livelihoods;
- The affected community presently have an average literacy rate of 61%, with 32% of households surveyed are earning members;
- A small proportion of the fish farmer household surveyed, reflected that they have skill-based training around food and beverage, and none of the affected fishermen have any skill set apart from fishing skills and trading skills.
- Non-availability of ponds nearby the WSP as alternative options for the fishermen to carry on with their existing occupation.

In this context, one type of approach may not be appropriate as a livelihood restoration measure, thus the LRF considers a basket of options, recommended for each affected household or as group activity for livelihood restoration. The project affected households (PAHs) can choose their preferred livelihood restoration alternative during the implementation.

The LRP will update the livelihood restoration options based on the feedback received during the disclosure of the LRF.

5.8.1 Proposed Livelihood Options

The proposed livelihood restoration options are as follows:

5.8.1.1 Alternate Fishing Grounds

The affected fishermen will be assisted in identifying any available alternate fishing ground/water bodies for carrying fishing/aquaculture. The fishermen will be provided with support in finding alternate fishing ponds for carrying out the fishing activities.

The fishermen will be entitled to receive the initial investment made for developing the WSP ponds. The amount will be determined as the documentary evidence provided by the fishermen cooperative groups or in absence of documentary evidence, the investment cost should be assessed by a fisheries expert. Efforts will be made by the LRP implementing agency to formalise the respective fishing cooperatives either through cooperative registration or forming self-help groups. It is expected that the fishermen will be able to restore their livelihood to continue to do fishing at alternate place, without requiring much time, as they will continue to be doing the same livelihood practice. Identification of Alternative source of livelihood for the affected fish farmers

As expressed during the consultation, the affected fishing groups expressed the needs to be associated with livelihood options related to fishing and that may require new skill set. Taking into consideration the existing skill sets and resources, the following alternative sources of livelihood have been identified.

Ornamental Fishing

Ornamental fish breeding and culture is popularly known in the Indian state of West Bengal, majorly confined in Howrah and South 24 Parganas. In West Bengal the major wholesale market for ornamental fish trade is CTI Bazar and Dasnagar in Howrah.¹ About 90% of the Indian exports go from Kolkata. Ornamental fishing is one of the lucrative business fetching profitable returns, yet requires cheap labour and low input cost. This accompanied with favourable climatic condition thus making it suitable for West Bengal in particular for ornamental fish culture. In West Bengal, it is estimated that the total value of domestic aquarium trade is about Rs.300 crore per year and is directly and indirectly supporting about 50,000 of house-holds mainly in rural India.²



Ornamental fishing can be carried out in small scale, in urban set-up where land is a major concern, ornamental fishing can be carried out in culture tank through used of cement cistern in the backyard or on the roof. For small scale culture a minimum of 500 square feet land area is required where the farmer can construct few rectangular concrete tanks. In case of large scale project, more than one hectare land area is required and a numbers of earthen ponds required in addition to cement tanks for the culture of koi carp, catfish, gourami and barbs.³

Box 5.1 Case study

Chandra Mondal, 45, resides in Howrah district of West Bengal in eastern India. As a homemaker, she has the responsibility of not only raising her children but also of keeping the economic wheels of the family moving. The income of her husband is barely enough to meet their daily expenses. Chandra thanks ornamental fish farming for coming to her rescue and helping her to assist her husband. She decided to try ornamental farming which can be done from the house and took to ornamental fish production in 2000.

In 2002, along with 16 other women from her village, Chamrail, she formed Ratnadeep Rangeen Matsyochas Mahila Samanway Samity, a self-help group (SHG) made up of women involved in ornamental fishing. At present, the group has 90 women members and making a monthly earning around Rs 10,000-12,000 every month by doing ornamental fish farming.

The cemented tanks have been built in the backyard of our houses where fishes are being reared after being purchased from breeders. An estimated 5,000 women SHGs and 150 women fisher co-operative societies are in Bengal. The SHGs are engaged in both breeding and rearing of the ornamental fishes, they receive raw material from the shopkeepers and then assemble moulded fibre-glass aquaria, accessories like filters, thermostats, ornamental plants, stones, light fittings, toys, models for aquaria and feed. We take a keen interest in the work as it does not require any formal education and can be done from the precincts of the houses," The demand for ornamental fish has increased manifold because of the increasing popularity of aquariums. We often fail to fill the gap between demand and supply.

Source: Extract from "The Fish Site: Pretty lucrative – India's surge in ornamental fish farming", Gurvinder Singh, 7th June 2019 at 6.00 AM

Mushroom Cultivation

The LRF also consider exploring options for engaging women from the affected household for income restoration. Such intervention are specially designed for women, and can be promoted as an

¹ Ornamental fish trading pattern in West Bengal, International Journal of Fisheries and Aquatic Studies 2019; 7(6): 130-134

² Sinha, Archana & Swain, Himanshu Sekhar & Das, Basanta. (2020). Ornamental Fish Farming a Tool to Empower Rural Women of West Bengal, India. 55. 55-59.

³ Ornamental Fish Farming – Successful Small Scale Aqua business in India Abalika Ghosh, Department of Industrial Fish and Fisheries, A.P.C. College, New Barrackpore, West Bengal , B. K. Mahapatra, ICAR Research Complex for NEH Region, Umiam (Barapani), Meghalaya 793103 and N.C. Datta, Fishery and Ecology Research Unit, Department of Zoology, University of Calcutta, Kolkata- 700019

alternative option for income restorations. Such activity comprises of mushroom cultivation. This is considered as one of the booming enterprise with growing numbers of Chinese restaurants in large cities like Kolkata, Durgapur and Siliguri, demand for mushroom is increasing day by day. Mushroom farming can be carried out in small scale where there is ready access to market and can be sold locally at the household, hotel, restaurant, local market etc.

Fish Feed Business

In India fish culture is done in large fresh water bodies on natural food available without application of external inputs. In semi-intensive and intensive fish production systems, supplementary feeding is provided. Feed ingredients comprises of rice bran, wheat bran, corn meal, corn fibre, broken rice, groundnut cake etc.

Freshwater fish farming plays an important role in the livelihoods and employment of people in West Bengal. The culture and consumption of fish has gained self-sufficiency. According to the State Fisheries, there is a demand and supply gap of around 0.6 tonnes in West Bengal. This gap is being covered through import from Andhra Pradesh. To meet the supply-demand gap, intensive farming is being undertaken and as the industry is shifting from extensive to intensive production method, there will be more prevalence of disease requiring medicines and chemicals for supporting intensive fish farming methods. As a result, there will be an increased demand in quality fish feed in the upcoming decade in West Bengal. The demand for fish feed has a huge potential especially for species such as Desi Magur, Singhi, Pabda, Vietnam Koi, Monosex Tilapia, Gulsha Tangra, Nona Tangra, Amur Carp, Pangasius, Common carp, Grass Carp, Rohu, Catla, Bhakur, Mrigal Carp, Pacu, Chital, Black Carp, IMC Spawn, Silver Carp, Big Head Carp, Rupchanda.

Considering the huge potential of this sector, this can be considered as one of the livelihood options for the affected population.

Implementation Strategies:

- Taking benefit of the prevailing informal institution of the existing fishing cooperative, the proposed intervention can be carried out in collective approach. All the four cooperatives may be registered formally under a cooperative or societies in the form of a formalised community based institutions.
- A skill mapping will be conducted to capture the aspiration, interests, existing skills sets and resources of the PAH's will be conducted. This will form the baseline for designing the feasible intervention for each groups.
- Based on the feedback from affected fish farmers, the LRP implementing agency will help in designing package of options based on the given choices. Each affected families will be given to choose one feasible options for income restoration.
- Each group formed will be registered as a formal institution. Based on the identified activities, each groups will be provided training on the respective activities to be undertaken.
- Post training, a working capital will be provided to start the micro-enterprise; the investment may be explored through government subsidy and CSR program of the project concessionaire.
- A handholding support for 6 month post group formation/ registration will be provided by the LRP implementing agency to handhold the groups in terms of groups functioning, record keeping, skill enhancement and marketing. Besides, regular trainings on fish rearing and fish management practice shall be provided during the handholding period
- The intervention however is not restricted for men members, women from the affected household can be formalised into groups (SHGs) for livelihood promotion and income restorations.
- The income earn from the entity shall be distributed equally among the group members.

5.8.2 Non-farm based livelihood

5.8.2.1 Support to Local Enterprises

Among the farm based livelihood options, the project will assess preference towards entrepreneurship based skill development and provide targeted support that includes:

- Training and capacity building on business enterprise and seed capital for setting up small enterprises such as grocery stores, purchasing transportation vehicle for commercial purposes, Solar electric rickshaw etc;
- Considering bringing in access to capital through financial institutions for raising credit for starting business activity;

5.8.3 Priority in Employment Opportunity in Project

The affected persons having experience as drivers, electricians, security guards, masons or semi-skilled and unskilled labourers can be sourced for construction and operation stage.

Implementation Strategies:

- Identification of employment opportunities in the Project, and skill requirements over the span of Project lifecycle
- Skill mapping of the existing skill set amongst the affected households.
- Making a list of the eligible candidates from the PAHs based on the census survey for the LRP;
- Preparation of a recruitment plan for enrolling the APs for employment in the project.

6. CONSULTATION, PARTICIPATION AND DISCLOSURE

6.1 Public Consultation

A range of formal and informal consultative methods will be carried out in all the three project sites, but not limited to, FGDs, community discussions, in-depth and key informant interviews, in addition to the census and socio-economic surveys. Consultations will be held with special emphasis on vulnerable groups and the affected persons. Public consultations to be conducted to inform the public about the project objectives, its potential impacts during the construction phase and gather their opinion on reducing and mitigating the avoidable impacts. The key stakeholders to be consulted during the project preparation, LRP implementation include:

- (i) all affected persons, including vulnerable households;
- (ii) local community, shops and establishments near the project footprints
- (iii) elected representatives, ULBs, community leaders, and representatives of community based organizations; and
- (iv) Local non-government organizations (NGOs).

Consultations with affected persons during LRP planning will ensure that views of affected persons on compensation and resettlement assistance measures are fully incorporated. Women's participation in consultation is vital at various level and stages of project preparation.

6.2 Information Dissemination and Resettlement Plan

Summaries of Livelihood Restoration Plan will be made available in the local language and should be disclosed and made available at accessible locations for the community by the concessionaire. During the initial stage of the project preparation, GSPPL will inform all the potential affected persons and the general public residing in the project vicinity of the project related requirements and information through reliable means of communication. GSPPL will also conduct consultations and disseminate information to all affected persons during the planning process. Basic information, such as location, impact estimates, entitlements, and implementation schedule, will be presented to affected persons. This will enable stakeholders to provide inputs on the resettlement process, prior to start of the construction work.

The Livelihood Restoration Framework (LRF) will be disclosed on IFC websites prior to final investment committee meetings of the respective lenders. The final LRF as well as the Livelihood Restoration Plan will be placed on the official website of the Concessionaire and the official website of IFC after approval. A notification on the start date of the project construction and implementation will be issued in local newspapers 15 days ahead before the start of the construction. The consultation and disclosure activities to be carried out under the Project are summarised in **Table 6.1**

Table 6.1 Consultation, Participation and Information Disclosure

Activity	Issues to be addressed	Responsibility	Channels of Disclosure	Timing of Disclosure
On site verification and identification of impacts	Discuss the impacts with Affected Persons (APs), and local community to minimize impact	GSPPL and LRP Implementing Agency	Individual meetings, FGD	During the LRP Planning stage
Notification of the affected person of the project cut-off date	Identification of affected person and discuss the date for carrying out the Census Survey and notify cut-off date	GSPPL and LRP Implementing Agency	Notices in local government offices and public areas	During the LRP Planning stage
Census Survey	Discuss concerns and preferences of APs	GSPPL and Consultant engaged for preparation of the LRP and the list of APs to be verified by LRP implementing Agency based on DMS	Quantitative surveys, walk-through, FGD, individual and key informant interviews	During the LRP Planning stage
Consultation with Affected Persons (AP) and Community	Consultation to understand community concerns and preferences of APs	GSPPL and consultant engaged for preparation of LRP and LRP implementing Agency during LRP validation and implementation	Public Meetings and FGDs	During the detail design and LRP Planning stage
Consultation meeting on the draft entitlements	Explanation and discussion of APs' rights and obligations, institutional arrangements, procedures, GRM, eligibility criteria and entitlements)	GSPPL	Community Meeting	During the LRP Planning stage
Disclosure of livelihood restoration framework	Full public disclosure of all subproject planning	GSPPL	Soft copy in Web-site	Within 20 days of Draft LRF Report is submitted

Activity	Issues to be addressed	Responsibility	Channels of Disclosure	Timing of Disclosure
			Letter to each local ULBs	
Disclosure of draft livelihood restoration plan	Full public disclosure of all subproject planning	GSPPL	Soft copy in Web-site Letter to Each local ULBs	Before the construction starts and Within 1 month of Draft LRP Report is submitted
Grievance Redress Mechanism	Any concerns, complaints related to project implementations or compensation disbursement	GSPPL	Hard Copy of GRM in local language to each ULBs and soft copy in website	At all stages of Project design, development and implementation.
Implementation of the LRP	Any-on-going concern	GSPPL and LRP Implementing NGO	Individual meetings, FGD, field visits	
Updating of the Livelihood Restoration Plan based on detailed design	Any last minute rearrangement in alignments and design changes should be updated in the LRP	GSPPL	Soft copy in Web-site Letter to Each local ULBs	Design changes should be addressed in LRP within 30 days of design finalization prior to commencement of construction activities in the particular stretch.
Disclosure of monitoring reports	IFC website disclosure of monitoring reports	GSPPL, IFC	IFC website	Within 14 days upon receipt by/IFC from GSPPL of the final version of the monitoring report

7. COMPENSATION, INCOME, RESTORATION AND RELOCATION

The proposed project does not involve any land acquisition. However, business and shops will be temporarily affected on account of the rehabilitation of sewer pipeline and the fish farmers will be impacted due to the construction of the STP in Bally. Businesses are entitled to income compensation for each day of disturbance on fully closed roads. Once the stretch for carrying out proposed work for desilting/replacement of sewer line is identified, a socio economic survey of businesses, structures present along the relevant sections, should be conducted. All businesses identified in the project-impacted areas (sections ready for construction) on the cut-off date will be entitled to compensation for lost income. For shops such as hawkers, street vendors, etc., the actual income earned in the project area will be considered. Compensation in the case of loss of structure shall be calculated based on the current Basic Schedule of Rate (BSR)¹ of the Public Works Department.

7.1 Valuation and Method for Calculation of Compensation

7.1.1 Structure:

The valuation of structures will be valued through calculating the real replacement cost based on cost of materials, type of construction, labour, transport and other construction costs. No deductions will be applied for depreciation or transaction costs. In case of structure with partial impacts (structure wall, fences etc.), cash compensation at replacement rates will be paid to restore the remaining structure to its original state. Unaffected portions of a structure will also be compensated if they become unviable after impact occurs.

The cost of structures will be estimated based on updated Basic Schedule of Rates (BSR)² as on date without depreciation. During valuation of structure/, the following parameters should be taken in to account:

- Types of construction materials used
- Type of shops/structure (private or state-owned)
- Cost of the various construction materials
- Who will build the structures (owner or contractor) and
- Any hired labour will be required for construction or their own labour;

7.1.2 Business and Livelihood

Compensation for the loss of business/income for (i) titled and non-titled shop owners will be compensated based on daily income as captured during the socio-economic survey and (ii) that workers engaged in shops and business will be compensated based their daily income rates or based on the West Bengal Minimum wage rate³ for the unskilled workers Act⁴. In case the affected person is not satisfied with the compensation, he/she has the right to express concern through formal application to the grievance process.

¹ If the applicable wage rates are not updated for the year of project impact, indexation for inflation will be made.

² If the applicable wage rates are not updated for the year of project impact, indexation for inflation will be made.

³ As per West Bengal minimum wage rate dated August 2019 for workers engaged in manufacturing unit classified under the factory act is liable to provide a monthly wage basis for Unskilled workers is INR 8,005 skilled is INR 9,687 and for highly skilled is 10,655.

⁴ If the applicable wage rates are not updated for the year of project impact, indexation for inflation will be made.

As per the joint site assessment between Wabag and ERM dated 5th and 6th August 2019, approximately 87 shops will be temporary affected during laying of new sewer pipelines. Details of the site specific potential affected shops/business is provided below:

Table 7.1 Indicative Number of Shops and Business Affecting Temporary Loss of Income

Project Site	Number of Affected Shops
Arupara	12 shops (10 shops found to be closed)
Bally	24 and about 10 shops were found closed`
Baranagar	31
Total	87

Source: Joint site visit dated 5th and 6th August 2019

It was identified during the SIA survey, the average monthly income of the affected shops ranges between INR 6000 to INR 20000. The average daily income of the affected shops/vendors is between INR 300 to INR 2000 depending on the nature of the unit. Table 7.2 provide an overview of the income range of the potentially affected shops. Details of the numbers and types of shops will be identified during the census and socio-economic survey for LRP preparation. Moreover, during the livelihood restoration planning, compensation for loss of business for titleholders will be determined based on the income tax declaration to be provided during the census survey. For non-titleholders, the daily income as recorded during the socio-economic survey will be considered for calculating the income loss.

Table 7.2 Indicative Average Monthly Income Range of the Affected Shops

Average Monthly Income in INR	
Average Monthly Income of Shop-owners –Non-titled person and Encroacher (in INR)	6,834
Average Monthly Income of Shop-owners –Titleholder (in INR)	22,627

Source: Household Socio Economic Survey for ESIA

7.1.3 Loss of income for workers engaged in shops and business:

Compensation for workers engaged in the affected business or shops will be as per their daily income rates mentioned during the socio-economic survey or as per the West Bengal Minimum wage rate¹ for the unskilled workers, whichever is higher for the period of business disruption, (approximately assessed to be 3 days as indicated in **section 4.5.1**.

7.1.4 Cost for Leasing Alternate Fish Ponds

The four fishermen groups will be entitled to receive cost for leasing the alternate ponds and initial investment for developing the existing WSP ponds. This leasing cost support would be the collective amount equivalent to one-time resettlement allowance of Rupees Fifty thousand only (INR 50,000) to be received by each of the fishermen (as per the RFCTLARR Act, 2013 – Second schedule ; clause

¹ If the applicable wage rates are not updated for the year of project impact, indexation for inflation will be made.

10 – specified in the entitlement matrix of ESMF for NMCG updated in Nov. 2019). The collective amount for leasing the alternate fishing grounds would be INR 23,00,000. Any additional cost for leasing the alternate pond to be borne by the fishermen themselves.

7.1.5 Working Capital for Fishing at Alternate Location (Option 1)

The fishermen groups will be entitled to receive one-time assistance for starting the fishing activities at the new location. Each fishing cooperative groups (four groups) will be entitled to receive a working capital (this will include the cost of any earth work required to make the pond suitable for fishing, treatment of the water quality, cost of fish seedlings, fish feed, medicines, etc.). Working capital to start aquaculture activities in the new water bodies will be equivalent to individual amount Rupees Three thousand only (INR 3,000) per month for a period of one year. [as per the RFCTLARR Act, 2013 – Second schedule ; clause 10 – specified in the entitlement matrix of ESMF for NMCG updated in Nov. 2019, under section 1 acquisition of agricultural land (page number 38)]. Subsistence allowance taken together with last sale of fish from the existing crop in the WSP meets the working capital needs for restarting fishing at the alternate location.

7.1.6 Working Capital for Fishing related Alternate Livelihood (Option 2)

The fishermen groups will be entitled to receive one-time assistance as working capital for starting fishing related alternate livelihood option. The methods to determine the assistance amount will be as follows:

This working capital support would be collective amount equivalent to one-time resettlement allowance of Rupees Fifty thousand only (INR 50,000) to be received by each fishermen and additionally individual amount of Rupees Three Thousand only (INR 3,000) for a period of one year equivalent to the subsistence allowance as specified in the entitlement matrix of the ESMF (as per the RFCTLARR Act, 2013 – Second schedule; clause 10 – specified in the entitlement matrix of ESMF for NMCG updated in Nov. 2019). Any additional cost to be borne by the fishermen themselves.

It is expected that, this one-time resettlement allowance and the subsistence allowance (collectively) should meet the cost of working capital and also cover the initial capital investment for developing the WSP ponds made by the fishermen.

7.1.7 Compensation for fish farm workers

Each affected family of the fish farm workers shall be given a one-time resettlement allowance of fifty thousand rupees only, and additionally receive a monthly subsistence allowance equivalent to Rupees Three thousand only per month for a period of one year from the date of impact. They will be entitled to receive skill training for livelihood restoration.

7.2 Compensation procedures

Paying compensation to the temporarily affected persons will involve the following:

- For implementation of the LRP, GSPPL may consider hiring a LRP implementing agency.
- The livelihood restoration programmes should be implemented before start of any civil work for the STP such that income of the affected persons is restored to their original state or better, in particular for the fishermen.
- To conduct public awareness and information dissemination prior to construction.
- Once the sewer network for construction is determined, the stretch will be mapped in case the road stretch is required to be fully closed including the estimated period of closure. Two types of disturbances are anticipated from full closure of roads:

(a) Partial disturbance, where there is no vehicular access but pedestrian access is maintained;

or

(b) Full disturbance, where there is no vehicular and no pedestrian access. Similarly, businesses and residents present along the RoW where the proposed work will be undertaken, will be identified.

- For vendors requiring temporary shifting during the construction period, notification will be provided in advance and allowed to salvage all materials for temporary shifting to an alternative location. The assistance will involve identification of impacted vendors, notification to the vendors at least 60 days in advance, as well as compensation with regards to loss of income during the construction period.
- A census survey will be conducted on shops located along the sewer network area, for identifying potential losses based on actual income.
- A LRP will be prepared for all the project affected persons based on the Livelihood Restoration Framework.
- Affected persons entitled for compensation will be compensated either through cheque or direct transfer that will be closely monitored.

8. GRIEVANCE REDRESS MECHANISM

A project specific Grievance Redress Mechanism (GRM) will be established by GSPPL to receive, evaluate and facilitate the resolution of the affected and displaced persons concerns, complaints and grievances. The grievance mechanism will aim to provide a time bound and transparent mechanism to voice and resolve concerns linked to the project. KMDA as the Executing Agency (EA), for reporting and addressing grievances of the affected communities will establish a Grievance Redress Cell (GRC). The GRC will comprise of key members from KMDA (for project execution), District Magistrate (if required), Local Municipal Authority, GSPPL, LRP Implementing Agency and key members of the local Municipal ward. Involvement of at least 2 female members in the GRC is mandatory.

During the project preparation, as part of the public consultation process, information regarding the GRM will be disclosed to the affected persons. As GSPPL will be responsible as the Concessionaire at the ground level, the first level of grievance / complaint will be received by GSPPL. Additionally, a notice board with the contact details of the environment and social safeguard officer (ESSO) who will have the overall responsibility of addressing the grievances from GSPPL will be put up at the site location. Grievances related to compensation will be acknowledged, evaluated and responded through the GRM. The GRM will continue to function, for the benefit of the affected person and the community, during the entire life of the project including the maintenance period.

For ensuring the effective implementation of GRM, both KMDA (for project execution related issues) and GSPPL (for LRP implementation and other environmental, social concerns related to the project) shall designate one of its staff dedicated for the grievance redress process as environment and social safeguard officer (ESSO) who will have the overall responsibility for timely grievance redress on environmental and social safeguards issues, including keeping and maintaining the complaint and redress records. At the site level the ESSO will be supported by Site engineer of the respective location for managing grievances from GSPPL's side.

The Grievance redress cell will have a three tier mechanism proposed for addressing grievances and all grievances and complaints will be resolved through the proposed mechanism.

Tier 1: The first level and immediate contact for resolution of grievances will be the GSPPL onsite engineer under the supervision of the E&S Manager and Social safeguard officer. The complaints /grievances may be received either verbally or through written applications. Prior to construction of any works, the E&S team under the supervision of the Environment & Social Safeguard Officer of GSPPL should notify the local residents and businesses of the temporary disturbance, and inform them of the project. In case the aggrieved person has any complaint with regard to compensation and rehabilitation work, he/she can lodge a complaint with the onsite site engineer who will immediately try to resolve the complaint with the help of the ESSO of GSPPL on site, with the assistance of the ESSO of KMDA. At the 1st Level the site engineer along with the ESSOs of GSPPL and KMDA, elected representative of the respective (Councillor) municipal ward and LRP Implementing Agency will make efforts to resolve the grievance/ complaint within a period of 15 days from the date of receipt of the complaint. In case the aggrieved is not satisfied with the solution provided by Tier 1, the aggrieved person may escalate it to Tier 2.

Tier 2: Complaints and grievances which remain unresolved at Tier 1, will be escalated to the second tier comprising of the CEO, Chief Engineer and the concern Superintending Engineer for the particular project. Tier 2 will make efforts to resolve the complaints/ grievances. Such cases should be resolved within 30 days from the date the escalation of the issue to Tier 2. In case the complainant/s are not satisfied with the decision of the Tier 2 committee, the issue can be escalated to the Tier 3.

Tier 3: As per the ESMP for NMCG (updated in November, 2019), as part of the GRM process, a Grievance Redress Cell (GRC) will be set up at the district level wherever investments under NMCG have been or will be planned. Should the issues remain unresolved, the complaints can be escalated to the third level or Tire 3, the Grievances Redress Cell (GRC). The GRC comprises of the following members:

1. CEO, KMDA
2. District Magistrate
3. Concern Superintending Engineer
4. Project Manager from GSPPL
5. Superintending of Police
6. Mayor of the Municipal Corporation (Elected Member) or any of the representative appointed by him
7. Executive Officer of the Municipal Corporation Member
8. Representatives from NGO
9. Sub Divisional Officer
10. Executive Engineer, PWD and PHED (if required)

The GRC will try to resolve the matter within a time period of 60 days.

9. INSTITUTIONAL STRUCTURE FOR IMPLEMENTATION

This section provides information for preparing, implementing, and monitoring resettlement planning and implementation activities. It describes the organizational procedures for delivering entitlements; and describes the implementation process. The National Mission for Clean Ganga (NMCG) under the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India, is the primary implementing agency (IA) for the project at national level. KMDA is the project Executing Agency (EA) for the Sewage Treatment Plants in Bally, Baranagar, and Arupara under the Namami Gange Mission Project in West Bengal. GSPPL as the Concessionaire (VA Tech Wabag has 100% equity in GSPPL) will be responsible for implementation of the LRP and VA Tech Wabag as the EPC Contractor will be responsible to ensure reduced impacts due to project implementation on the affected persons and the adjacent community where the construction work will be undertaken. The first level of grievance and complaints will be received by the Site Engineers of the EPC Contractor.

The Section below details out the institutional arrangement for the implementation of the livelihood restoration plan, and the roles and responsibilities of each of IA, EA, Concessionaire and the LRP Implementing Agency, aligning with the roles and responsibilities as specified in the Annexure III - Roles and Responsibilities of Social Development Specialists of the ESMF for NMCG (updated in No. 2019).

9.1 Role of NMCG (Implementing Agency)

The roles and responsibilities of Social Development Officer of IA are as follows:

- 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 (in this case Livelihood Restoration Plan);
- Liaison with state administration for implementation of the LRP;
- Monitor the progress of the implementation of the LRP.

9.2 Role of KMDA (Executing Agency)

The Kolkata Municipal Development Authority (KMDA) being the project owner and the EA will be responsible for:

- KMDA will provide administrative support to GSPPL in implementation of the overall project;
- KMDA being the project owner will be responsible for handing over of the project sites to GSPPL;
- ;
- Ensure resolving the existing contractual workers' concerns and issues and hand over the STP locations encumbrance free to GSPPL;
- Provide No Objection Certificate (NOC) or permission from competent authority/ agency for laying of sewer pipelines to GSPPL;
- KMDA will establish a grievance redress process to address project construction related, environment and other social related concerns;
- To support GSPPL with liaising with district administration for convergence of government programmes/schemes for Income Restoration (if applicable) for the affected persons;
- Monitor the physical and financial progress of sewerage project.

9.3 Role of GSPPL (Concessionaire) and EPC Contractor in Livelihood Restoration Planning and Implementation

It has been mentioned earlier that VA Tech Wabag has 100% equity in GSPPL, the project Concessionaire and also it the EPC Contractor. GSPPL will be responsible for (i) project planning, (ii) preparation of detail design, monitoring, and supervision of the work; (iii) reporting to the KMDA, (iv) implementation of the LRP and coordinating all activities in the project, and (v) to receive the first level of grievance and resolve all LRP related grievances. The E&S team under GSPPL will lead the overall responsibility for the following resettlement and rehabilitation activities.

- Identify all the project impacts and project affected persons impacted on account of the project components.
- Identify the project affected persons who may be affected on account of the replacement and desilting work, and coordinate with line department and ensure relocation of utilities, prior to civil works.
- Develop a Livelihood Restoration Plan as per requirement for rehabilitation of the project affected persons and get it approved by IFC, before disclosure and implementation.
- Disclosure of LRP entitlements to affected persons and local community.
- Ensure disbursement of compensation and other entitlements to the project affected persons as specified in the entitlement matrix of the LRP before start of any physical construction work for the PAPs along the sewer pipelines. Implementation of the LRP provisions related to fishing activity at Bally to be completed within 6 months of takeover of Bally site by GSPPL.
- Identify and hire a competent LRP Implementing Agency.
- Update the LRP based on final design and detail measurement survey (DMS) with the support of LRP Implementing NGO. The LRP will be updated as a joint RAP and LRP document, if during finalization of the design, cases of physical displacement are identified as part of the detailed census survey.
- Wabag as contractor shall be the first point of receiving grievances and GSPPL will ensure grievance redress related to LRP implementation.
- GSPPL will be responsible to disseminate information and undertake stakeholder consultation on the status and progress of the construction work, the potential impacts the probable mitigation measures, in order to reduce the impact magnitude with the affected community and persons. It will also inform about the timeline of completion of the work. GSPPL will be responsible to update on the physical progress of the work from time to time to and IFC.
- GSPPL will monitor the progress of LRP implementation by the NGO.
- GSPPL will hire an independent third party to conduct monitoring/audit. LRP implementation completion review/audit will be completed one year after LRP implementation.

9.4 Role of LRP Implementing Agency

The agency will responsible to carry out the following functions:

- To update the LRP based on the detail measurement survey.
- Organise community mobilisation and awareness programmes and executing the stakeholder engagement plan.
- To try and help the fish farmers in particular in identifying alternate fishing grounds.
- Conduct skill mapping exercise with the fish farmers of Bally WSP and accordingly organise need based capacity building training programmes for the fish farmers or their family members.

- Help the fish farmers' through the transition period and establish into new livelihood opportunities.
- Help the PAPs in bank linkages or convergence with other government schemes.
- Compensation disbursement to the non-title holder road side vendors, kiosks and shops for loss of income for the sewer pipeline desilting, replacement work. Also ensure that the affected entities are able to continue their work without difficulty after the construction work is over.
- Apprising GSPPL on the progress of the LRP implementation through regular reporting so that the EPC Contractor can start construction work in the particular sewerage pipeline stretch where compensation have been paid.

10. BUDGET AND FINANCING

In order to ensure that sufficient funds are available for implementing a livelihood restoration plan, the proposed project will allocate funds for compensation at replacement cost as well as for the allowances. The compensation to the project affected persons will be disbursed through direct payment. The approved resettlement cost will include eligible compensation for temporary and permanent impacts to income, structure, and other impacts that will be identified during the resettlement planning.

While preparing the budget the cost items will be accounted as follows:

- (i) For linear work (laying of new trunk sewer line/rising main), there is temporary loss of income for shops and businesses due to disturbance caused during construction. Businesses are entitled to income compensation for each day of disturbance on fully-closed roads. The per day earnings from the shops and business have been considered while calculating the income loss of the affected business.
- (ii) Minimum wage rate of the workers engaged in the affected structure will be considered for calculating the income loss on account of the temporary closure of business/shops
- (iii) Loss of any commercial structure either partial or full will be compensated at full replacement cost. The compensation considered for valuation of structures would be as per the rate specified in the Second Schedule of RFCTLARR Act, 2013.
- (iv) Vulnerable persons are provided assistance for all days of lost income, including time of full closure.
- (v) Lease amount, training cost, working capital and initial development cost of the WSP ponds.
- (vi) One-time resettlement cost and subsistence allowance for the fish farm workers.

The LRP budget would also include lump sum cost for monitoring and external evaluation, cost for grievance redress mechanism and cost for hiring a LRP Implementing Agency for one year and a contingency amount.

The indicative LRP Budget is given in table 10.1. The cost of the compensating the nontitle holder entities, compensation allowance for the fish farm workers and the other cost is same. The estimated livelihood restoration plan budget is **INR 89, 94,868 (Rupees Eighty-nine Lakhs Ninety-four Thousand Eight Hundred and Sixty-eight only)** options proposed for the fishermen has a varying cost.

Table 10.1 Indicative LRP Budget

Sl. No.	Description	Rate (INR)	Unit	Day/ Months	Total (INR)	Maa Ganga Fishing (9 Members)	Jivan Jibika Fishing (13 Members)	Maa Tara Fishing (10 Members)	Maa Kali Fishing (14 Members)
A. Affected Fishermen (Option 1) -Fishing at Alternate Site						Pond 1	Pond 2 & 6	Pond 4 & 5	Pond 3
A.1	Cost for leasing the alternate ponds and initial capital investment for developing the WSP ponds ~ to individual amount of one-time resettlement allowance of Rupees Fifty thousand only (INR 50,000) for each affected fishermen (INR 50,000 x 46 fishermen)	50,000	46		23,00,000	4,50,000	6,50,000	5,00,000	7,00,000
A.2	Working capital to start aquaculture activities in the new water bodies ~ to individual amount Rupees Three thousand only (INR 3,000) per month for a period of one year for each fishermen. (INR 3,000 x 12 months x 46 fishermen)	3,000	46	12	16,56,000	3,24,000	4,68,000	3,60,000	5,04,000
A.3	Skill training and capacity building for effective implementation of the livelihood restoration for fishermen group members (INR 10,000 x 46 fishermen)	10,000	46		4,60,000	90,000	1,30,000	1,00,000	1,40,000
	Total Cost for Option 1				44,16,000				
B. Affected Fishermen (Option 2) -Alternate Fishing Related Livelihood Option									
B.1	Working capital and initial capital investment for developing WSP ponds support to support alternate fishing related activities ~ to individual amount of one-time resettlement allowance of Rupees Fifty thousand only (INR 50,000) for each affected fishermen plus to individual amount Rupees Three thousand only (INR 3,000) per month for a period of one year for each fishermen. (INR 50,000 x 46 fishermen + INR 3,000 x 12 months x 46 fishermen)	86,000	46		39,56,000	7,74,000	11,18,000	8,60,000	12,04,000

Sl. No.	Description	Rate (INR)	Unit	Day/ Months	Total (INR)	Maa Ganga Fishing (9 Members)	Jivan Jibika Fishing (13 Members)	Maa Tara Fishing (10 Members)	Maa Kali Fishing (14 Members)
B.2	Skill Training and capacity building support for alternate livelihood to all the members (INR 10,000 x 46 fishermen)	10,000	46		4,60,000	90,000	1,30,000	1,00,000	1,40,000
	Total Cost for Option 2				44,16,000				
C. Affected Fish Farm Workers - Compensation Allowance									
C.1	One-time resettlement allowance for INR 50,000	50,000	18		9,00,000	-	-	-	-
C.2	Monthly subsistence allowance equivalent to INR 3,000 for a period of one year (INR 3000 x 12 months x 18 workers)	3,000	18	12	6,48,000	-	-	-	-
C.3	Skill Training for fish farm workers for alternate livelihood	10,000	18		1,80,000				
	Total Cost for Compensation Allowance				17,28,000				
D. Affected Non-titleholder Commercial Entities									
D.1	Compensation for income loss for 30 PAPs within the income range of INR 6000 – 10000 for 3 days	308	30	3	27,720				
D.2	Compensation for income loss for 35 PAPs within the income range of INR 10001 – 20000 for 3 days	577	35	3	60,585				
D.3	Compensation for income loss for 4 PAPs with the income of INR 30,000 for 3 days	1154	4	3	13,848				
D.4	Compensation for income loss for 1 PAPs within the income range of INR 30,000 for 3 days	2000	1	3	6,000				
D.5	One-time financial assistance for loss of structure	25,000	1	1	25,000				
	Total Cost for D				1,33,153				
E. Other Costs									
E.1	Monitoring and Evaluation (lump sum)				5,00,000				

Sl. No.	Description	Rate (INR)	Unit	Day/ Months	Total (INR)	Maa Ganga Fishing (9 Members)	Jivan Jibika Fishing (13 Members)	Maa Tara Fishing (10 Members)	Maa Kali Fishing (14 Members)
E.2	Cost for Grievance Redress Mechanism (LS)				5,00,000				
E.3	Hiring of LRP Implementing Agency for 6 months	1,50,000		6	9,00,000				
	Total Cost for E				19,00,000				
	LRP Cost	LRP Options for Fishermen	Compensation Allowance for Fish Farm Workers	Non-titleholder Commercial Entities	Other Costs	Total Cost for LRP	Contingency (10% of Total LRP Cost)	Grand Total Cost for LRP	
	Fishermen Compensation (Option 1)	44,16,000	17,28,000	1,33,153	19,00,000	81,77,153	8,17,715	89,94,868	
	Fishermen Compensation (Option 2)	44,16,000	17,28,000	1,33,153	19,00,000	81,77,153	8,17,715	89,94,868	

Note:

- Affected Fishermen (Option 1) -Fishing at Alternate Site
- Affected Fishermen (Option 2) -Alternate Fishing Related Livelihood Option

11. MONITORING AND REPORTING

Monitoring is an integral part of any project implementation in order to measure project performance and achieve project objectives. Monitoring is the key component to measure that all resettlement activities are implemented as planned in compliance with the Livelihood Restoration Framework. Periodic monitoring will be conducted to ensure that the Resettlement Plan implementation is effectively carried out. Both internal and external monitoring will be developed and will be achieved through an effective reporting system.

11.1 Internal Monitoring

A designated person will be responsible for overall internal monitoring and progress for resettlement implementation. Monitoring will include both the quantitative and qualitative progress against each indicator highlighted in the aforementioned section. It will further forms as a tool to identify future progress requirements, bottlenecks and issues and suggest remedial measures which can be integrated in the wider implementation process. The monitoring will include

- a. Monitoring and verification of RP implementation to determine whether resettlement goals have been achieved, livelihood and living standards have been restored, and provide recommendations for improvement.
- b. Recording of issues raised by the affected persons through the grievance mechanism such as; valuation and disbursement.
- c. Status and progress of resettlement plan implementation.
- d. GSPPL will submit quarterly monitoring reports to IFC on LRP implementation and this will be disclosed on IFC website Refer Annex A for the outline of the quarterly monitoring report.
- e. Internal and third party audits will be conducted during the construction and operation phases of the project to meet IFC's requirements.

11.2 Monitoring Plan

The following plan will help to monitor implementation of the livelihood restoration plan to achieve the LRP objectives.

Table 11.1 Monitoring Plan

Stage	Indicator	Monitoring Plan	Monitoring Indicator	Records	Frequency
During LRP Planning Stage	Census Survey	Additional data will be collected for Livelihood Restoration Plan for identifying the affected person and entity.	- Number of PAPs surveyed and identified - List and inventory of loss identified	PAPs list and records	Once during census survey and during the detail measurement survey
	Informed Consultation	- The affected shops and business facing income loss owing to the construction work will be requiring periodic consultation to identify the extends of impacts on their daily income. - The affected person are to be informed and made aware of the project activities and the potential impacts - The AP are made aware of their entitlements	- Number of consultation conducted with the affected persons - Number of Affected person are aware of the entitlement - Number of disclosure and engagement meetings; - Number of consultation exclusively with vulnerable households - Number of affected person aware of the grievance procedure	Stakeholder Engagement Database	As determined by the requirement of the Project
	Documentation	Documentation of the affected person which includes information about the affected entity, income and photos of the entity and affected person shall be documented during the census survey.	Details of PAPs with proper photograph documented	PAPs list and records	As determined by the requirement of the Project
Before site hand over of the existing facilities by KMDA to GSPPL	Status of redeployment of the existing contracted workers	The existing workers from Arupara and Baranagar facilities will be redeployed to other facilities of KMDA	- Details of workers to be dis-engaged from working in the 3 STPs - Number of workers re-engaged by KMDA in other facilities	Monitoring Report	A third party audit will be undertaken three month from post financial closure and handling of the project to the concessionaire
During LRP Implementation Stage	Livelihood Restoration	Implementation of the Livelihood Restoration Plan	- How much do the affected households know about LRP? - Were the affected households and their assets correctly enumerated? - Were entitlements sufficient?	Monthly Monitoring Report Photographs and video recording of	Monthly

			■ Were vulnerable households identified and assisted? ■ Status of payment of compensation before start of construction ■ Number of affected person receiving compensation and rehabilitation assistance ■ Timeliness of implementation; ■	stretches 'before and after' the construction work for assessing the impact significance.	
Throughout the project cycle	Grievance Mechanism	■ The Affected person will be made aware of the grievance procedure and the process for filling grievance. ■ The point person and mode of communicating the grievance will be shared with the APs	■ How much do affected households know about grievance procedures and conflict resolution procedures? ■ Number of grievance/ complaints Lodged ■ Number of grievance/ complaints addressed ■ Number of Pending Grievance	Monitoring Report	Quarterly/ Monthly

11.3 External Monitoring

An independent external monitoring will be conducted by an external agency/consultant. LRP implementation and a final evaluation on completion of the implementation of the Livelihood Restoration Plan (when all the affected persons, identified under the project have been compensated) will be completed one year after. The External Monitoring Agency (EMA) will conduct external monitoring under a set Terms of Reference (ToR) to be developed. The reports of the EMA are to be prepared and submitted to GSPPL. GSPPL will submit the external monitoring report to IFC. As per IFC requirements, an audit by third party should be conducted during the construction and operation phases of the project. The independent monitor will be hired by GSPPL.

11.4 Monitoring Indicators

For assessing the effective implementation of the Livelihood Restoration Plan, monitoring indicator have been developed. The key baseline monitoring indicators that will be considered during the internal and external monitoring includes:

- Number of identified affected person
- Occupation/livelihood profile and the extent of impact;
- Status of compensation received by number of PAPs;
- Capacity building and livelihood restoration of the fish farmers to their original position or better;
- Utilisation of the compensation amount received;
- Status of the existing contracted workers in terms of their re-engagement or re-deployment.

For ensuring smooth implementation of the LRP, a progress and outcome indicators have been developed to track the implementation of the LRP. The progress and outcome indicators covers the entire cycle of the project implementation. These comprises of (i) Input (ii) (iii) Output and (iv) Impact indicators. An indicative set of indicators that can be covered for each of the categories are summarized as follows:

No.	Category/Indicator	Variables
1	Input Indicator	Funds allocated at the outset; Funds utilized thus far; Total number of project affected households/communities identified under the different project facility Gender , age and ethnicity composition of these individuals; Livelihood and occupational profile; Income levels. Implementing agency identified for implementing the LRP
2	Process Indicators	Status of payment of compensation Number of affected person receiving compensation and rehabilitation assistance Number of consultations/meetings conducted and Timeliness of implementation;
3	Output Indicators	Number of affected persons that have been able to resume back their daily sales Number of individuals that have received unskilled labour job /improved their income; Number of grievances reported

No.	Category/Indicator	Variables
4	Impact Indicators	Change and improvement in the sanitation facility in the areas

APPENDIX A LIST OF EXISTING CONTRACTUAL WORKS AT THE THREE LOCATIONS

**List of existing Manpower at Howrah Arupara and Kona STP along with connected Lifting Stations & MPS
(South & North Howrah Zone)**

Engagement related with the Work : Operation & Maintenance of Sewage Pumping Station under GAP

Vide Tender No. / Work Order/ Extension Order No.: SE (E/M) – II/1H – 1/2011/13B & 105/KMDA/WS/G – 300 Dated – 02.07.2018

Engaged by the Agency : Ganga Action Plan Contract Workers Co-operative Society Ltd.

EXISTING MANPOWER

[Signature]
30/7/19
Superintending Engineer (North)
Water & Sanitation
K.M.D.A.

Sl No.	Zone	Location	Name of the Staff/ Labour	Age	Qualification	Service Duration (Year)	Designation	Salary	ESI/ PF Facility	Remarks
1	South Howrah Zone	Howrah Sewage Treatment Plant	Sibangshu Ranjan Mukherjee	49	VII Pass	28	Operator	11,775.00	Yes	
2			Arun Bhatak	51	VII Pass	28	Operator	11,775.00	Yes	
3			Pratap Ghosh	51	VII Pass	20	Operator	11,775.00	Yes	
4			Sailen Das	51	VII Pass	28	Operator	11,775.00	Yes	
5			Sanjay Bhattacharjee	47	VII Pass	28	Operator	11,775.00	Yes	
6			Subhas Paul	48	VII Pass	25	Operator	11,775.00	Yes	
7			Tarun Ghosh	47	VII Pass	28	Operator	11,775.00	Yes	
8			Pradip Dey	45	VII Pass	27	Operator	11,775.00	Yes	
9			Madhab Ghosh	49	VII Pass	24	Operator	11,775.00	Yes	
10			Sanat Ghosh	49	VII Pass	23	Operator	11,775.00	Yes	
11			Kaushik Kundu	53	VII Pass	23	Operator	11,775.00	Yes	
12			Jatin Ghosh	46	VII Pass	28	Operator	11,775.00	Yes	
13			Ram Prasad Ghosh	46	VII Pass	28	Operator	11,775.00	Yes	
14			Samir Hazra	46	VII Pass	28	Operator	11,775.00	Yes	
15			Jadab Ghosh	48	VII Pass	25	Operator	11,775.00	Yes	
16			Soumen Baduri	46	VII Pass	23	Operator	11,775.00	Yes	
17			Pradip Kundu	51	VII Pass	23	Operator	11,775.00	Yes	

1

18	South Howrah Zone	Arupara Main Pumping Station	Akshoy Das	46	VII Pass	25	Operator	11,775.00	Yes	
19			Bhaskar Chandra Das	47	VII Pass	25	Operator	11,775.00	Yes	
20			Sarbendu Lohar	48	VII Pass	23	Opert. Cum Helper	11,775.00	Yes	
21			Goutam Majhi	40	VII Pass	17	Opert. cum Helper	11,775.00	Yes	
22			Sujit Baduri	42	VII Pass	17	Cleaner	11,775.00	Yes	
23			Sambhunath Ghosh	41	VII Pass	17	Cleaner	11,775.00	Yes	
24			Sadhu Charan Ghosh	52	VII Pass	28	Operator	11,775.00	Yes	
25			Subit Roy	52	VII Pass	28	Operator	11,775.00	Yes	
26			Pratap Karmakar	52	VII Pass	28	Operator	11,775.00	Yes	
27			Dilip Choudhuri	52	VII Pass	28	Operator	11,775.00	Yes	
28			Bikash Bahadur	41	VII Pass	17	Operator	11,775.00	Yes	
29			Kunjabiari Dwari	54	VII Pass	20	Operator	11,775.00	Yes	
30			Meoalal Hela	51	VII Pass	20	Sweeper	11,775.00	Yes	
31			Gangaram Hela	44	VII Pass	15	Sweeper	11,775.00	Yes	
32			Prabir Hazra	54	VII Pass	28	Operator	11,775.00	Yes	
33		B. E College L.S.	Kartick Mondal	53	VII Pass	25	Pump Operator	11,610.00	Yes	
34			Asoke Panja	56	VII Pass	14	Pump Operator	11,610.00	Yes	
35			Kartick Karmakar	54	VII Pass	10	Pump Operator	11,610.00	Yes	
36			Satyajit Chanda	48	Madhyamik	25	Pump Operator	11,610.00	Yes	
37			Santanu Chanda	39	H.S.	10	Pump Operator	11,610.00	Yes	
38		Foresore Road MPS	Anupam Bhattacharya	39	VII	21	Operator	387/-/day	Yes	
39			Ajoy Das	50	VII	19	Operator	387/-/day	Yes	
40			Sushanta Hazra	41	VII	19	Operator	387/-/day	Yes	
41			Kanika Jana	36	VII	1	Operator	387/-/day	Yes	
42		Round Tank Road MPS	Abdul Quam	48	VII	21	Operator	387/-/day	Yes	
43			Tapan Kumar Roy	41	VII Pass	23	Operator	387/-/day	Yes	
44			Arun Banerjee	44	VII Pass	20	Operator	387/-/day	Yes	
45			Manab Deti	44	VII Pass	20	Operator	387/-/day	Yes	
46			Gosto Halder	52	VII Pass	20	Operator	387/-/day	Yes	
47			Barun Kanti Dey	24	Madhyamik	1	Sweeper	387/-/day	Yes	
48		Security Guard	Mrinal Kanti Roy	41	upto VII Pass	20	Operator	387/-/day	Yes	
49			Bimal Das	55	Madhyamik	23	Security Guard	13,500.00		
50			Sailendranath Ghosh	54	VII Pass	23	Security Guard	13,500.00		
51			Madhusudan Ganguly	57	VII Pass	23	Security Guard	13,500.00		

2

52	North Howrah Bally Zone	Ichapur Main Pumping Station	Amar Nath Ghosh	56	Madhyamik	23	Security Guard	13,500.00		
53			Ratan Kumar Das	56	Madhyamik	23	Security Guard	13,500.00		
54			Prabir Naskar	60	VII Pass	23	Security Guard	13,500.00		
55			Jayanta Boler	54	VII Pass	25	Operator	11,775.00	Yes	
56			Samar Nath Chatterjee	54	VII Pass	24	Operator	11,775.00	Yes	
57			Joydeb Koner	52	VII Pass	25	Operator	11,775.00	Yes	
58			Subir Roy	45	VII Pass	25	Operator	11,775.00	Yes	
59			Subir Bhodhak	55	VII Pass	25	Operator	11,775.00	Yes	
60			Bholanath Gupta	58	VII Pass	25	Operator	11,775.00	Yes	
61			Srimangal Somundra	58	VII Pass	23	Sweeper	11,775.00	Yes	
62			Alok Kumar Das	49	VII Pass	26	Operator	11,775.00	Yes	
63			Shyamal Dutta	54	VII Pass	22	Operator	11,775.00	Yes	
64		Bally Khal LS - 3 (Bally)	Partha Banerjee	48	VII Pass	26	Operator	11,775.00	Yes	
65			Sailen Dutta	52	VII Pass	10	Operator	11,775.00	Yes	
66			Jarun Kumar Das	50	H.S Pass	25	Operator	11,775.00	Yes	
67			Subhankar Pal	24	H.S Pass	5	Sweeper	11,775.00	Yes	
68			Amar Saha	54	VII Pass	20	Operator	11,775.00	Yes	
69			Sanjib Mullick	36	VII Pass	18	Operator	11,775.00	Yes	
70			Kunulal Acharya	52	VII Pass	20	Operator	11,775.00	Yes	
71			Gopal Prasad Kesori	40	VII Pass	20	Sweeper	11,775.00	Yes	
72			Pratap Ghosh	59	VII Pass	17	Operator	11,775.00	Yes	
73			Suvendu Mukherjee	40	VII Pass	20	Operator	11,775.00	Yes	
74			Nital Dhole	59	VII Pass	20	Operator	11,775.00	Yes	
75	North Howrah Bally Zone	Gola Bari LS - 6 (Howrah)	Bijay Ghosh	58	VII Pass	18	Sweeper	11,775.00	Yes	
76			Bhola Bag	51	VII Pass	26	Operator	11,775.00	Yes	
77			Ashok Dalal	59	VII Pass	26	Operator	11,775.00	Yes	
78			Nital Ghate	51	VII Pass	26	Operator	11,775.00	Yes	
79			Debasis Bag	32	VII Pass	3	Operator	11,775.00	Yes	
80			Robin Midhya	58	VII Pass	23	Operator	11,775.00	Yes	
81			Laltu Halder	49	VII Pass	19	Operator	11,775.00	Yes	
82			Bhisani Bajpaye	54	VII Pass	19	Sweeper	11,775.00	Yes	
83			Tapas Majhi	45	VII Pass	24	Operator	11,775.00	Yes	
84			Ashok Dutta	44	VII Pass	24	Operator	11,775.00	Yes	
85		Kona M.P.S. (Howrah)	Sankar Mukherjee	43	Madhyamik	19	Operator	11,775.00	Yes	
86										
87										
88										
89										
90										
91										
92										
93										
94										
95										
96										
97										
98										

3

85	Baranagar - Kamarhati	Salt Gola LS - 5 (Howrah)	Alok Mitra	59	VII Pass	17	Sweeper	11,775.00	Yes	
86			Mahesh Prasad Kesori	55	VII Pass	25	Operator	11,775.00	Yes	
87			Sujit Daw	45	Madhyamik	20	Operator	11,775.00	Yes	
88			Suvendu Ganguly	40	Madhyamik	21	Operator	11,775.00	Yes	
89			Goutam Mukherjee	44	VII Pass	20	Sweeper	11,775.00	Yes	
90			Dilip Singh	45	IX Pass	21	Pump Operator	11,775.00	Yes	
91			Debabrata Das	59	VI Pass	21	Pump Operator	11,775.00	Yes	
92			Manindranath Das	59	V Pass	26	Pump Operator	11,775.00	Yes	
93		Belur Math LS - 2 (Bally)								
94										
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										

List of existing Manpower at Baranagar STP along with connected MPS at Kamarhati

Engagement related with the Works: i) Operation, Maintenance, guarding and cleaning etc. of the Pumping machineries, equipment of Sewage Water Main Pumping Station at Baranagar – Kamarhati

ii) Operation, guarding and cleaning etc. of 40 MLD STP Baranagar – Kamarhati at Makhal.

Vide Tender No. / Work Order/ Extension Order No.: i) 09/EE/MD – I/E&M/KMDA of 2016 – 17
ii) 08/EE/MD – 1/E&M/KMDA of 2016 - 17

Engaged by the Agency : i) M/S. SUNNY ENTERPRISE
ii) M/S. KANKINARA ENGINEER'S CO-OPERATIVE SOCIETY LTD.

Sl No.	Zone	Location	Name of the Staff/ Labour	Age	Qualification	Service Duration (Year)	Designation	Salary	ESI/ PF Facility	Remarks
93	Baranagar - Kamarhati	Baranagar - Kamarhati MPS	Subhasish Ghosh	51		3 (around)	Operator	10,122.00	Yes	
94			Bishu Dholui	46		3 (around)	Operator	10,122.00	Yes	
95			Rakesh Hela	41		3 (around)	Operator	10,122.00	Yes	
96			Surender Rabidas	37		3 (around)	Operator	10,122.00	Yes	
97			Tanweer Alam Shah	31		3 (around)	Operator	10,122.00	Yes	
98			Gopal Rabidas	41		3 (around)	Operator	10,122.00	Yes	

4

99	Baranagar - Kamarhati	Baranagar - Kamarhati Sewage Treatment Plant	Pintu Rudra	50		3 (around)	Operator	10,122.00	Yes	
100			Kartik Barik	54		3 (around)	Operator	10,122.00	Yes	
101			Anil Yadav	41		3 (around)	Operator	10,122.00	Yes	
102			Basudev Das	43		3 (around)	Operator	10,122.00	Yes	
103			Ranjit Das	64		3 (around)	Operator	8,080.00	Yes	
104			Sujit Kumar Jha	52		3 (around)	Operator	8,080.00	Yes	
105			Siddhartha Sankar Das	51		3 (around)	Operator	8,080.00	Yes	
106			Anup Kumar Das	46		3 (around)	Operator	8,080.00	Yes	
107			Khokan Dey	48		3 (around)	Operator	8,080.00	Yes	
108			Apurba Bhattacharjee	47		3 (around)	Operator	8,080.00	Yes	
109			Swapna Kumar Chanda	49		3 (around)	Operator	8,080.00	Yes	
110			Tushar Paramanik	59		3 (around)	Operator	8,080.00	Yes	
111			Mrinal Dey	51		3 (around)	Operator	8,080.00	Yes	
112			Nityananda Goswami	62		3 (around)	Operator	8,080.00	Yes	
113			Subhas Chandra Sarkar	55		3 (around)	Operator	8,080.00	Yes	
114			Haranath Biswas	48		3 (around)	Operator	8,080.00	Yes	
115			Gopal Biswas	40		3 (around)	Operator	8,080.00	Yes	
116			Amulyaratan Das	62		3 (around)	Operator	8,080.00	Yes	
117			Suprajit Roy	53		3 (around)	Operator	8,080.00	Yes	
118			Abhijit Bhattacharjee	47		3 (around)	Operator	8,080.00	Yes	
119			Tapan Kumar Das	51		3 (around)	Operator	8,080.00	Yes	
120			Bijoy Das	49		3 (around)	Operator	8,080.00	Yes	
121			Tarak Nath Banik	54		3 (around)	Operator	8,080.00	Yes	
122			Subrata Bhattacharjee	51		3 (around)	Operator	8,080.00	Yes	
123			Alok Adhikary	54		3 (around)	Operator	15,000.00	Yes	

APPENDIX B OUTLINE OF THE QUARTERLY MONITORING FORMAT

Outline of the Quarterly Monitoring Report

1. Introduction
 - a. Brief Project Description
 - b. Objective of the Monitoring
 - c. Approach and Methodology
2. Status of the Implementation of LRP and Key issues
 - a. Progress in implémentation of the project activities
 - b. Number of Affected households and Business Units impacted by the Project
 - c. Status of payment of Compensation and Supplemental Assistance
3. Process Commitments
 - a. Consultation and Disclosure
 - b. Grievance Redressal
4. Summary of Key Recommendations

APPENDIX C RESETTLEMENT POLICY AND LAND ACQUISITION FRAMEWORK (RPLAF) SECTION OF THE ESMF FOR NMCG, NOVEMBER, 2019

National Mission for Clean Ganga

Ministry of Jal Shakti

Department of Water Resources, River Development &

Ganga Rejuvenation, Government of India

Environmental and Social Management Framework (ESMF)

Volume II

Prepared by

The Energy and Resources Institute (January 2011)

Updated by

Lea Associates South Asia Pvt. Ltd.(November 2019)

CONTENTS

Executive Summary.....	1
1. BACKGROUND.....	11
1.1 Introduction	11
1.2 Objective	11
1.3 The ESMF	12
2. Environmental and Social Impacts	14
2.1 General.....	14
2.2 Portfolio of Investments	14
2.3 Environmentand Social Impacts	15
2.4 Experience in implementing ESMF	18
3. Environment and Social Regulatory Framework	21
3.1 General.....	21
3.2 Applicable Lawsand Regulations -Environmental.....	21
3.3 Applicable Laws and Regulations -Social	23
4. Environment and SocialManagement Framework.....	28
4.1 Objectives	28
4.2 Purpose of theESMF	28
4.3 Screening and categorization of Investments (during the Feasibility Study stage)	29
4.4 Addressing environmental and social impacts (during preparation of theDPR).....	32
4.5 Stakeholder Consultations and Disclosure ofESA	55
4.6 Environmental Regulatory Compliance	56
5. Implementation, Monitoring and Reporting Arrangements.....	61
5.1 General.....	61
5.2 Namami Gange InstitutionalArrangements.....	61
5.3 Implementation, Monitoring and Reporting Arrangements for the ESMF	62
5.4 Social Accountability and Grievance RedressalMechanism	66
5.5 Training and CapacityBuilding	66
5.6 Hybrid Annuity	70
6. Public Consultations and Disclosure.....	71
6.1 General.....	71
6.2 Minutes of Public ConsultationMeetings	72

LIST OF TABLES

table 2-1: Portfolio Of Investments Under Namami Gange Program	14
Table 2-2: Budget For Implementing Esmf.....	20
Table 3-1: Environmental Regulations And Legislations	22
Table 3-2: Relevant Social Policies And Acts	23
Table 3-3: Safeguard Policies Of World Bank	26
Table 4-1: Screening Format	29
Table 4-2: Screening Format	31
Table 4-3: Entitlement Matrix	37
Table 4-4: Information To Be Disclosed	51
Table 4-5: Stakeholder Mapping	52
Table 4-6: Environmental Regulatory Requirements For Namami Gange Investments.....	57
Table 4-7: Environmental Regulatory Compliance During Construction And Operation Of Namami Gange Investments	58
Table 5-1: Mitigation, Monitoring, Responsibility And Timeline.....	64
Table 5-2: Esmf Implementation And Monitoring Arrangements.....	65
Table 5-3: Generic Training Programme	68
Table 6-1: Details Of The Public Consultations Held At The Five Selected States	72

List of Appendices

Annexure I: Guidance on EIA of High impact category Sub-Project	87
Annexure II: Generic Environmental Guidelines / Management Plan for Low impact category Investments	93
Annexure III: Roles and Responsibilities of Social Development Specialists	111
Annex IV: Sample Terms of Reference for Environmental and Social Audit of Namami Gange Program Investments	113
Annex V: Comparative Analysis of Right to Fair Compensation and Transparency in LAR&R (RFCTLAR&R) Act 2013 and World Bank Policy 4.12, Involuntary Resettlement and 4.11 Indigenous People	115
Annex VI : Salient Features of Hybrid Annuity Model.....	122

List of Abbreviations

AF	Affected Family
BPL	Below Poverty Line
CPRs	Common Property Resources
EA	Executing Agency
EMP	Environmental Management Plan
EP	Entitled Person
ESA	Environmental and Social Assessment
ESMF	Environmental and Social Management Framework
GAP	Ganga Action Plan
GoI	Government of India
GSMP	Generic Safeguard Management Plan
ha	Hectare
LAA	Land Acquisition Act
MoJS, DoWR, RD&GR	Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation
MoEF &CC	Ministry of Environment ,Forests& Climate Change
NGO	Non-Government Organization
NGP	Namami Gange Program
NMCG	National Mission for Clean Ganga
NLCP	National Lake Conservation Plan
NRCD	National River Conservation Directorate
PAP	Project Affected Person
RFCTLARR 2013	Right to fair compensation and transparency in land acquisition, rehabilitation and Resettlement Act
R & R	Resettlement and Rehabilitation
RAP	Resettlement Action Plan
ROW	Right of Way
SC	Scheduled Caste
SMCG	State Mission for Clean Ganga
SRCA	State River Conservation Authorities
SECs	State Executive Committees
ST	Scheduled Tribe
u/s	Under Section
ULB	Urban Local Body

Glossary of Terms

Bigha	1/5 of an acre
Development Block	A number of villages grouped together form a Development Block.
District Collector/ Magistrate	Administrative head of a District.
Divisional Commissioner	Administrative head of a division comprising of a number of Districts.
Grievance Redressal Cell	A cell set up for grievance redressal by the competent authority at various levels
Hectare	A unit for measuring land area. (10,000 m ²).
Kachha	Structures with stone/ mud wall/ thatch roof
Non-titleholders	Drawing economic benefits from a piece of land, but not the owner of the land
Panchayat	Elected local self-governing body at village level.
Panchayat Samiti	Local Self-governing body at Block level
Pucca	Cement, bricks or concrete build structure
Sarpanch	Elected Head/chief of a village level body.
Semi Pucca	Structures with tiles/ thatch roof/ brick cement wall
Tehsil/ Subdivision	A group of Blocks

EXECUTIVE SUMMARY

Background

River Ganga has significant economic, environmental and cultural value in India. Rising in the Himalayas and flowing in to 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 26 per cent of India's landmass, 30 per cent of its water resources and more than 40 per cent of its population. The Ganga also serves as one of India's holiest rivers whose cultural and spiritual significance transcends the boundaries of the basin.

Despite its importance, extreme pollution pressures pose a great threat to the biodiversity and environmental sustainability of the Ganga, with detrimental effects on both the quantity and quality of its flows. Increasing population in the basin and haphazard urbanization and industrial growth has significantly impacted the water quality of River Ganga, particularly during the dry season.

The previous attempt to clean the river, such as Ganga Action Plan (GAP) launched in 1985 have provided some gains in arresting rate of water quality degradation, but lot more needs to be done. The lessons drawn from this prior experience indicate that improving water quality in the Ganga three-pronged approach has been adopted as mentioned below:

- (i). Establishing a basin-level, multi-sectoral framework for addressing pollution in the river (including national/state policies and river basin management institutions);
- (ii). Making relevant institutions operational and effective (e.g. with the capacity to plan, implement and manage investments and enforce regulations); and,
- (iii). Implementing a phased program of prioritized infrastructure investments (with emphasis on sustainable operations and mobilization of community support)

As a major first step in this direction, the Government of India (GoI) has established the National Ganga River Basin Authority (NGRBA) in 2009 and National Council for River Ganga (Rejuvenation, Protection and Management) in 2016, as an Authority has been created for comprehensive management of the river. The Namami Gange Programme launched in 2015 has adopted a river-basin approach and has been given a multi- sectoral mandate to address both water quantity and quality aspects. Under Namami Gange Programme, diverse set of interventions for cleaning and rejuvenation of river Ganga have been taken up. These include pollution abatement activities including sewage, industrial effluent, Solid Waste etc., River Front Management, Aviral Dhara, Rural Sanitation, Afforestation, Biodiversity Conservation, Public Participation etc. The programme covers short term, medium term and long term activities.

The pace of these projects has gathered momentum and all efforts are being made to complete these projects well within the respective timelines.

National Ganga River Basin Project (NGRBP) started in 2011 and funded by World Bank has now been included as a part of Namami Gange Programme.

National Mission for Clean Ganga (NMCG)

The National Mission for Clean Ganga was established in the form of a national level Program Management Group (PMG) in 2011, for seeking \$1bn assistance from World Bank. Cabinet Committee on Economic Affairs (CCEA) accorded approval on 28.04.2011 for the World bank assisted National Ganga River Basin Project (NGRBP) at an estimated cost of Rs. 7000 crore to be implemented by NMCG as a registered Society under the Societies Registration Act 1860, to act as an implementation arm of NGRBA (External Funding).

With change in Allocation of Business Rules, 1961 vide Gazette Notification dated 31.07.2014, the work related to Ganga & its tributaries was transferred to Ministry of Water Resources, River Development & Ganga Rejuvenation (Now Ministry of Jalshakti) from the Ministry of Environment & Forests. The next major development in the evolution of NMCG was launch of Namami Gange Programme on 13th May 2015 with the approval of Cabinet as a Central Sector Scheme (100% central assistance), with components including all objectives of NGRBA. The non-lapsable fund of Rs 20,000 crore was earmarked for five year period, 2015-2020.

Brief Project Description

The earlier NGRBP programme usually have 70% central share and 30% state share at the sub-projects levels and support for 5 years of Operation and Maintenance. After launching of Namami Gange programme almost all the new projects sanctioned under Namami Gange Programme would have 100% funding from the Central Government for the entire life cycle cost of the assets created, which includes 15-year Operation & Maintenance cost as well. Namami Gange Programme has been segregated into two different components:

- **Component A:** Pertains to ongoing projects of cleaning of river Ganga & its tributaries, including World Bank Assisted NGRBP having remaining central liabilities.
- **Component B:** Pertains to new initiatives to be undertaken under National Ganga Plan in 5 major sectors i.e. Infrastructure Development (Sewage Treatment, River Front Development, and Industrial Waste Water Treatment & Solid Waste Management), Institutional Development, Ecological Sustainability, Research & Development and Communication & Public Outreach.

Portfolio of Projects: NGRBP

The portfolio of river pollution mitigation projects to be implemented under the Namami Gange and its components areas under.

S.No.	Portfolio of Projects	Components
(i)	Sewerage and Sanitation Schemes	▪ Provision for an entirely new sewerage network including individual house connections and gravity based interception and diversion arrangements to drains carrying sanitary sullage/dry weather flow ▪ 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
(ii)	Sewage Treatment Plants/Facility	▪ Entirely new sewage treatment plant/facility ▪ Augmentation of capacities in existing sewage treatment plant/facility ▪ Remodeling/Renovation of existing sewage treatment facilities, resulting in better effluent quality and augmented treatment capacity
(iii)	Solid Waste Treatment Facilities	▪ Engineered landfills with leachate collection and treatment systems ▪ Waste segregation and composting facilities
(iv)	Industrial Pollution Control Facilities	▪ Common Industrial Effluent Treatment Plants(CETP's) ▪ Hazardous Waste Treatment, Storage and Disposal Facility(TSDF's) ▪ Other Industrial Effluent Treatment and disposal facility
(v)	River Front Development Schemes	▪ River Front Development and beautification schemes of river banks ▪ Construction of Bathing Ghats ▪ Redevelopment of Cremation grounds, situated on river banks ▪ Development of electric and or gas based crematoriums situated on river banks

The implementation of these projects is spread across several cities and/or towns within the Ganga basin states/UT of Uttarakhand, Uttar Pradesh, Haryana, Himachal Pradesh, Delhi, Bihar, Jharkhand, Rajasthan, Madhya Pradesh, Chhattisgarh and West Bengal.

Key Achievements under Namami Gange Programme

Under Namami Gange programme, till December 2019, a total of 310 projects have been sanctioned at an

estimated cost of Rs. 28,909.59Crore, out of which 114 projects have been completed and made operational; rest of the projects are at various stages of implementation.

These projects are related to: Sewerage Infrastructure, Ghat Entry Level activities, Institutional development, project Implementation support/ research & study projects/ public relations and Public Outreach, Biodiversity education, Construction of IHHL across Gram Panchayats near Ganga River, Composite Ecological Task Force & Ganga Mitra, Bioremediation and Afforestation etc.

Identified Thrust Areas and Action Points under Namami Gange

There are 7 identified thrust areas and 21 action points for the rejuvenation of Ganga and its tributaries, as below, the details are given in the main report.

- *Thrust Area 1-Aviral Dhara*
- *Thrust Area 2-Nirmal Dhara*
- *Thrust Area 3-Protection and Beautification of riverfront and development of Public amenities*
- *Thrust Area 4-Inter-ministerial Coordination, State's participation and Capacity building*
- *Thrust Area 5-Research and Monitoring*
- *Thrust Area 6-Conservation of plants and aquatic species*
- *Thrust Area 7-People's participation and Creating Awareness*

The Ganga 1 projects were mostly on the main-stem of river Ganga which covered the 5 basin States i.e. Bihar, Jharkhand, Uttar Pradesh, West Bengal and Uttarakhand. The Ganga 2 projects are in continuation to the Ganga 1 projects and sub-project which are similar in nature. The focus of NMCG has also included from Ganga main-stem to the polluted stretches of the tributaries of river Ganga. Thus, the need was felt for updating the ESMF to showcase the inclusion of the tributaries, projects and sub-projects with respect to Ganga 1 and Ganga 2.

Accordingly, the Volume 1 of the ESMF has been updated to provide an overview of the Ganga basin profile including major tributaries like Ramganga, Kali, Yamuna (downstream of Delhi), Hindon, Gomti, Betwa, Chambal, Parbati, Shipra, Sind, Tons, Son, Damodar, Ajay, BurhiGandak, Kiul, Kosi, Mahananda, Ken and Ghagra. The Ganga basin covers 11 States i.e. Uttarakhand, Uttar Pradesh, Haryana, Himachal Pradesh, Delhi, Bihar, Jharkhand, Rajasthan, Madhya Pradesh, Chhattisgarh and West Bengal.

Environmental and Social Analysis (ESA) and Management Framework (ESMF)

All potential projects and sub-projects planned under the NGRBP/Namami Gange programme may have environmental and social impacts. Therefore, the purpose of developing the Environmental and Social Management Frame Work (ESMF) was to facilitate the management of environmental and social issues of all investment projects proposed by the NGRBA/Namami Gange at the very beginning of project planning and implementation. The ESMF currently addresses the broader portfolio of projects¹ to be implemented under the Namami Gange along with its implementation methods like Hybrid Annuity Mode (HAM), DBOT, Retroactive Financing etc. As specific project identification will operate as a demand-driven process and also depends on many other factors like polluted river stretch etc., a single ESMF common to the NMCG, SMCG and all other project implementing agencies is required so that project specific ESIA&ESMP or ESDDR are prepared based upon a common guideline. In this line the ESMF was updated depicting all the various process of project implementation and revised land acquisition details in August 2017. This version of the ESMF is now being updated considering the inclusion of tributaries; a basic profile of such tributaries is already presented in Volume-I of ESMF.

Objectives of ESMF:

The ESMF for Namami Gange project² has following objectives:

- Determine key social and environmental issues associated with River Ganga and possible activities that could be initiated by NGRBA, both at national as well as state level;

¹Portfolio of projects are discussed in detail in Chapter V

² 'Project' comprises all the sub-projects sanctioned under NamamiGange

- Conduct an environmental and social impact assessment of the 'no regret' investments proposed to be supported by the project, identify potential environmental and social impacts associated with such investments and recommend measures to mitigate impacts;
- Carry out an analysis of various stakeholders associated with the project, identify their concerns with regard to environmental and social aspects, and recommend measures to mainstream these aspects into the project;
- Develop an Environmental and Social Management Plan (ESMP) for the project, to ensure that environmental and social issues are effectively addressed in project design and implementation.

Laws and Regulatory Framework

Relevant National key Legislations
• <i>Environment Protection Act, 1986</i> • <i>Environmental Impact Assessment (EIA) Notification 14th Sep' 2006</i> • <i>Air (Prevention and Control of Pollution) Act, 1981</i> • <i>Water Prevention and Control of Pollution Act, 1974</i> • <i>The Noise Pollution (Regulation and Control) Rules, 2000</i> • <i>The Wildlife (Protection) Act, 1972 and Its Amendments</i> • <i>The Forest (Conservation) Act, 1980</i> • <i>Solid Waste Management Rules, 2016</i> • <i>Construction and Demolition Waste Management Rules, 2016</i> • <i>Coastal Regulation Zone (CRZ) Notification 2011 & amendments after</i> • <i>Forest Right Act-2006, The Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006</i> • <i>The Ancient Monuments and Archaeological Sites and Remains Act, 1958</i> • <i>Disaster Management Act, 2005</i> • <i>The National Green Tribunal Act, 2010</i> • <i>Public Liability and Insurance Act, 1991</i> • <i>Explosive Act, 1984</i> • <i>Minor Mineral and concession Rules</i> • <i>The Motor Vehicles (Amendment) Act, 2019</i> • <i>National Forest Policy, 1988</i> • <i>The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Cess Act of 1996</i> • <i>Hazardous Wastes (Management and Handling) Rules, 1989 (the Rules govern handling, movement and disposal of hazardous waste);</i> • <i>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).</i> • <i>Right to fair compensation and transparency in land acquisition, rehabilitation and Resettlement Act 2013</i> • <i>The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act</i>
Applicable World Bank Policies
• <i>Environmental Assessment (OP 4.01)- Umbrella Policy applicable for all infrastructural projects- Applicable in all Investment</i> • <i>Natural Habitats (OP 4.04)- to protect natural habitat including forest & wildlife areas- Applicable where Forest and Wild Life are impacted due to project</i> • <i>Forestry (OP 4.36) – to protect the health and quality of forest, welfare and right of people dependent on forest resource and utilization of natural forests or plantations.</i> • <i>Involuntary Resettlement (4.12)- to avoid minimize involuntary resettlement where feasible- Applicable in case of Private land Acquisition</i> • <i>Indigenous people (OP 4.10)- to protect the dignity, right and cultural uniqueness of indigenous people- Applicable, where project site involves tribes, indigenous people are impacted or benefitted.</i>

Environmental and Social Baseline

The Ganga basin encompasses an area of more than a million square kilometers (1,086,000 sq.km.) spread over four countries: India, Nepal, Bangladesh and China. With 861,404 sq.km. Within India itself, the Ganga basin is the largest river basin in India and covers approximately 26.3 per cent of India's total geographical area. The Ganga flows through the states of Uttarakhand, Uttar Pradesh, Bihar, Delhi, Haryana, Himachal Pradesh, Madhya Pradesh, Jharkhand and West Bengal. The Ganga rises in the Garhwal Himalaya (30° 55'N, 79°7'E) as the Bhagirathi. Throughout the course of the Ganga, from its source at Gaumukh to its mouth at Sagar Island in Bay of Bengal, it is a common practice for Indians to take daily dips in the holy waters of the Ganga, especially at places of pilgrimage like Rishikesh, Haridwar, Garhmukteshwar, Kannauj, Allahabad, Mirzapur and Varanasi.

Based on stream characteristics, the entire 2,525 km course of the Ganga can be divided into the following major five sections: (i) mountainous, (ii) upper plain, (iii) middle plain, (iv) deltaic non-tidal and (v) deltaic tidal plain. In term of physiography, the Ganga basin falls entirely in three major i.e. 1) Northern Mountains, (2) Great Plains (3) Central Highlands regions of India. Major soil type of the Ganga Basin is alluvial soil 52% followed by red soil (11%). Climatically, the tropical and subtropical temperature zones are most predominant in the entire Ganga basin. May is the hottest month in most part of the basin, while January is coldest. The weather in the Ganga basin is characterized by a distinct wet season during the period of south west monsoon (June to September). The Ganga basin, by virtue of its alluvial makeup, is endowed with vast resources of ground water. The mean annual replenishable groundwater in India as a whole has been assessed at 446.87 billion cumec per year, of which about 219.09 billion cumec per year (49%) lies in the states of the Ganga basin. Land use of the Ganga basin is extensively cultivated, constituting approximately more than 45 per cent of the total area of the India. With respect to forest cover, Ganga basin has 17.53% of forest cover to its total geographical region; this is comparatively lesser than country level (21%). This may be due to having major area occupied under Agriculture.

The detailed baseline profile of other tributaries are presented in Volume –I. Increasing population, urbanization, industrialization, and the use of agricultural chemicals continue to pose a significant threat to water quality in the Ganga basin today. The number of cities and towns in the Ganga basin has increased from 1873 in 1991 to 1949 in 2001, while the urban population has increased from 88 million in 1991 to 128 million in 2001. As per census 2011, total 324 class I & class II cities are located in Ganga Basin.

The Ganga basin evidently demands treatment of sewage and minimum ecological flow for its survival as a river. Since a river is a living eco-system and therefore ultimate goal should be to protect the functioning of the river eco-system.

The Ganga basin is one of the most densely populated and fertile river basins in the world. The basin supports about 600 million people over an area of approximately 860,000 sq. km of which some 100 million are directly dependent on the river and its tributaries.

For Ganga stem cities/town, projects have been taken up to create 3308 MLD sewage treatment capacity against the generation of 2953 MLD (Year 2016). The sewage treatment capacity in Ganga main stem towns have now increased from 1575 MLD (Year Dec 2016) to 1954 MLD (Sept 2019), excluding 410 MLD sewage treatment through East Kolkata Wetland.

Identification of potential Environmental and Social Impacts and Mitigation Measures

Since the Project proposed under Namami Gange Scheme are pollution abatement project of River Basin. Although few negative impact may also be encountered due to having project proposal on a fresh land, located in busy city limit and catering city' sanitation etc. Potential Impact and Mitigation measures

applicable for Namami Gange project has been detailed in Annexure IIA of the ESMF Guideline. However, major impact with respect to Environment and Social is presented below

Type of Project	Potential major Impact
Sewerage Scheme	• surface and groundwater contamination due to leakage and/or improper joints in sewers • severance of utilities and requirement for relocation due to sewer laying • disruption due to local traffic diversion and congestion 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 equipment's • Health and safety concerns of workers, while laying or rehabilitating existing sewers.
Sewage Treatment Plants	• 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 • health and safety issues associated with operation and maintenance of sewage treatment facility, particularly exposure to methane and other noxious gases, sludge contaminated with heavy metals etc. • 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 of treated effluent or effluent not conforming to stipulated discharge standards during operation • Sludge from a waste treatment plant may constitute a hazardous and nonhazardous waste.
Industrial Pollution Control Initiatives	• Pollution of water resources • Soil contamination due to the disposal of untreated / partially treated effluents and / or hazardous wastes • air quality, odour 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.
Solid Waste Management Investments	• 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, odour 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 equipment's • Health and safety issues associated with operation and maintenance of solid waste treatment facility, particularly of workers manually handling wastes.
River Front Management Investments	• change in land use, and drainage pattern • change in channel hydraulics, triggering erosion and siltation problems either at in situ or elsewhere along the 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

Type of Project	Potential major Impact
	• impact on environmental aesthetics and cultural value
Major Social Impact applicable for all kind of project	• Direct purchase of small land parcels for SPS/ Lifting station • Land acquisition / taking for sewerage treatment plant leading to loss of livelihood / displacement of non-titleholders / titleholders • Temporary land taking causing inconvenience to local community • Temporary loss of common grazing area

Mitigation Measure: Mitigation measure applicable during planning -designing phase, construction phase and operational phase has been presented in annexure II & III of ESMF for Sewerage scheme and STP projects. Few insights of major points are described below, which is applicable for all STP, Sewerage and River Front Development projects:

- **Regulatory Compliance:** Obtain necessary approval with respect to project as per regulatory compliance
- **Flood Risk Management:** The Design Consultants should design for bypass arrangements, to discharge untreated sewage.
- **Landscape:** Undertake Landscape afforestation in nearby areas this will also to cater the issue of Odor, Noise.
- **Treated Waste Water:** The treated water quality shall comply with the standards laid down by the state pollution control board for disposal onto the land, water body or for irrigation use.
- **Sludge:** Providing adequate and safe sludge disposal facilities, Digested Sludge from a waste treatment plant may constitute a hazardous and nonhazardous waste, therefore periodic testing of Sludge to assess the content of hazardous chemical should be identified (as per CPHEEO manual 2016) before it final disposal at the identified dumping site of MC. Dumping shall be done when the authorized land fill site is not available nearby to project region.
- **Location:** Careful planning and design of STP with adequate buffer zones. Future growth of the surrounding areas shall be considered. Select appropriate location away from sensitive locations such as schools and hospitals
- **Other Air, water, Noise, Soil Pollution control measure** during construction stage (presented in Sample EMP).
- **Health and Safety:** During construction stage, assurance of safe work environment and incident free execution of the project, health and safety of worker as well as overall project is significant in the Namami Gange projects. As per relevant Factory Act 1948 & The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, concessionaire has to be ensured all related measures reflected in the Site specific ESMP of the projects and will be part of Bid documents.

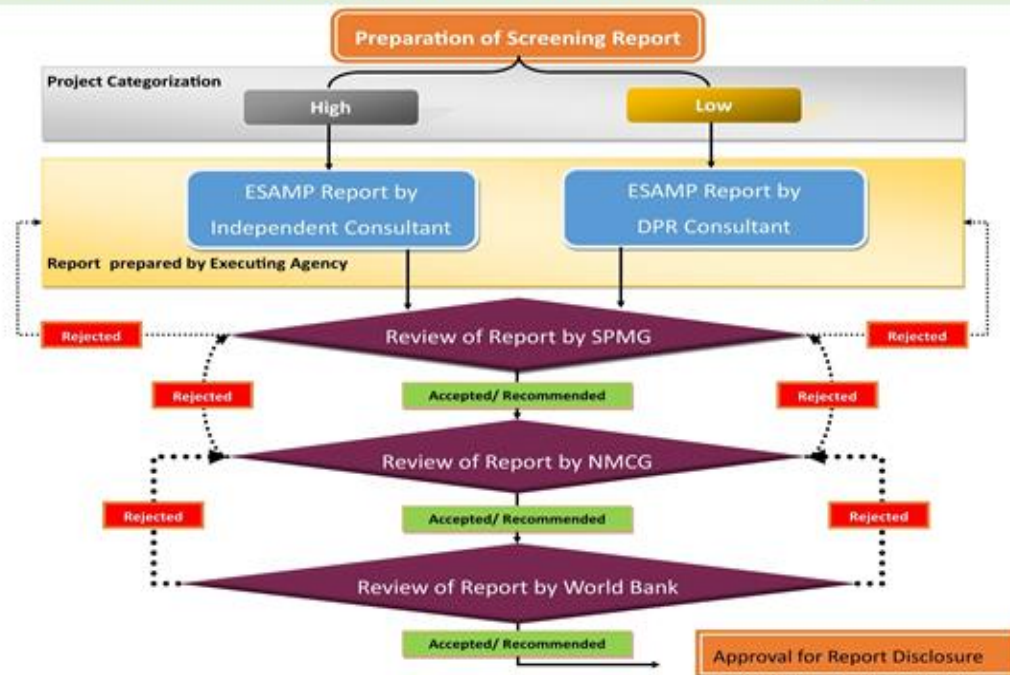
Procedure for Environmental & Social Management

The Environment and Social Management Framework (ESMF) is an integral part of the Namami Gange Programme framework document. The ESMF is aligned with the Environment and Social safeguard policies of World Bank and the concerned rules and regulations of Government of India. This would be used as an umbrella guideline by the Namami Gange program (the NMCG and SMCGs) while preparing and/ or appraising, approving and executing the investments.

Environment and Social Assessment for DBOT/Retro financing Projects:

As per ESMF guideline each project is scrutinized as to its type, location, scale, and sensitivity and the magnitude of its potential environmental impacts (Screening Checklist), based on outcome of screening analysis, proposed investment shall be categorized as High and Low category. Therefore, as per ESMF, the sub-projects are categorized into (i) High Impact and (ii) Low Impact category, in which, for High Category Project, a detailed Environment and Social Assessment and Management Plan (ESAMP) has been carried out preferably by a separate consultant apart from the DPR consultant. Sub Projects which are financing retroactively, a due diligence study to analyse the Environmental and Social issues are required to be carried out by a separate consultant apart from the DPR consultant. The procedures for implementation of ESMF in these types of projects are summarized in above flow chart. The approved ESAMP will form part of the bidding document. After the award of work the selected contractor may need to update the ESAMP based upon the detailed design of the project and shall prepare a site specific ESAMP.

Process of ESAMP Approval at Present for DBOT projects



Environment and Social Assessment for the HAM based PPP Projects:

The agreed action for Environment and Social assessment of projects under HAM projects include:

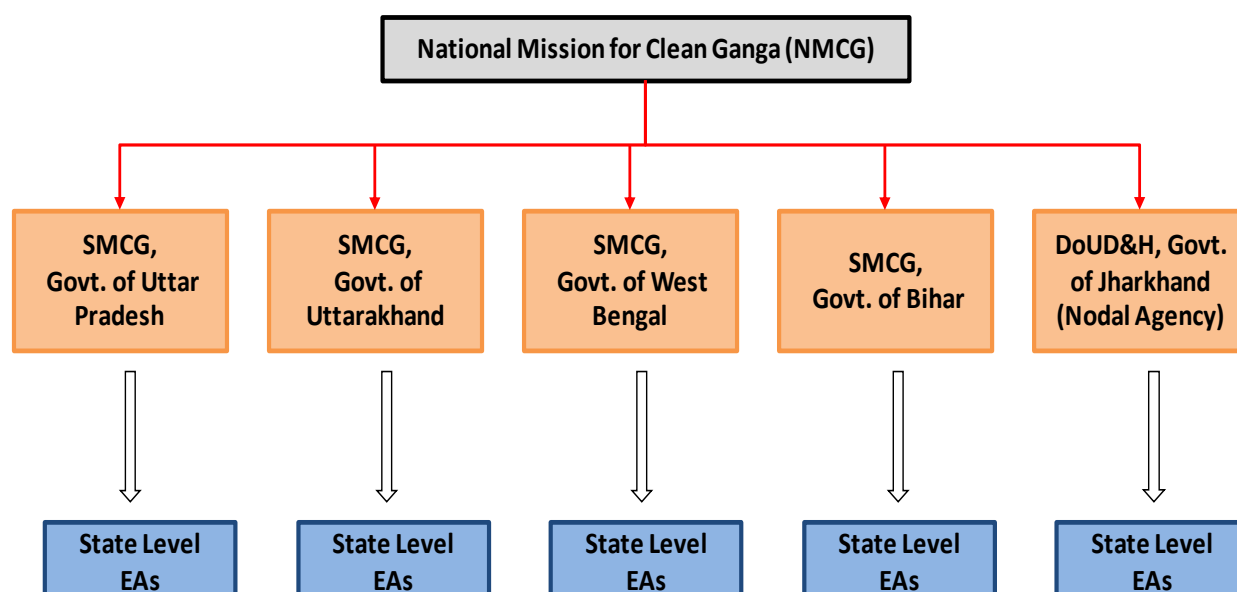
- ESDDR along with Environment and Social Management Action Plan (ESMAP) will be prepared at the DPR stage;
- The ESDDR will cover the basis nature of the projects, a very brief description of the environment and present status along with screening checklist and an analysis of environmental and social issues associated with the project.
- The ESDDR to describe the future action plan to be taken during the detailed design stage by the Hybrid annuity operator/Concessionaire like:
 - Various regulatory clearances (e.g. environmental clearance, forest clearance, NOC etc. as applicable)
 - Preparation of Environmental and Social Assessment(ESA)/EIA
 - Resettlement Action Plan (RAP), as applicable
 - other actions, and management measures to be implemented by the Concessionaire

ESDDR can become part of the bidding document. The public consultation and disclosure process will continue during project implementation. The draft EIA/EMP/RAP etc. for the specific sub-projects will be discussed with the affected communities and the final documents will be placed on the websites of the NMCG and the SMCGs. The copies of the EMP and RAP will also be placed at the offices of the executing agencies, district magistrate and contractor's office. The executive summary of the EIA and RAP will also be translated into local language and placed in the office of the Gram Panchayat of the affected villages.

Project Monitoring& Training: NMCG, through the respective SMCGs monitors all the approved investments under the Namami Gange program to ensure conformity to the requirements of the ESMF. The training program for SMCG, EA and various relevant stakeholders has been envisaged in ESMF,

includes an orientation program on the ESMF, Project Management, Engineering and Public Health. Module has been given in annexure of the main report.

The implementation arrangements for the NMCG program are summarized below



Institutional arrangement & Mechanism of ESMF & Audit Implementation

At the NMCG as well as at the 5 SMCG levels, one officer for Environmental Safeguard and one officer for Social safeguard are appointed for managing social and environmental issues. These officers assist the EAs in implementation of ESMF provisions. In the EA, an officer each is designated as social and environment officer who are responsible for the implementation of ESMF tasks at the field level with the assistance and participation of the local self-government.

Further in each of the sub-projects level, each of the contracting agencies also deploy their own Environment and Health and Safety officer to implement the ESAMP at site.

Consultation functionaries as per Audit findings

As per part of Implementation, monitoring and reporting arrangement of ESMF, an independent Environmental and Social audit was conducted by third party in 2018. The audit was conducted as per the ESMF guidelines. In Audit report, it is reported that key government agencies such as state nodal agencies, Districts implementing units, have been consulted at the various levels to obtain their consent on the ESMF in general and specially on the land acquisition process and resettlement framework. ESA document prepared as per ESMF framework, have incorporated Stakeholder and public consultation at various stages at the local, regional and district levels, community and the relevant stakeholders (SMCG, EA, other departments irrigation department, forest department etc). Specific attention has been paid to Project Affected Persons, habitations or livelihoods will be directly impacted by the proposed sub-project, shopkeepers, Students etc. The mandate for conducting the audit was as per annexure IV of this report. The Audit was conducted in all the five basin states to verify/ witness the corrective action taken by the SMCG/ nodal agencies in addressing the Non-compliance identified during the Environmental and Social Audit.

Present Functionality of Grievance Redressal Mechanism: At NMCG GRM officers are designated to address all queries registered in the NMCG portal. The GRM officer is supported by one social expert who coordinates with all the SMCGs. At SMCG level, reporting of grievances are being monitored by environmental and social experts. The details are mentioned in the report.

Budget for implementing ESMF: As per finding of Audit conducted in year 2018 for 30 STPS & Sewerage

schemes implemented in five basin states i.e. Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal, majorly budget for ESAMP has been considered as ranges from 0.5% to 1% of the total project cost, while Communication and Public Outreach, GAAP expected as 0.1% to 1% of the basic Capital Cost of the project.

Budget for implementing ESMF

S.No	Item	Unit	Unit Cost		Total Cost		Source of financing
			Rupee	US\$	Rupee	US\$	
1	Preparation of specific ESIA/ESDDR for Ganga-1	38	550000	7857	20900000	298571	World Bank
2	Preparation of ESIA and ESDDR for Ganga-2	30	617000	8814	18510000	264429	
3	Capacity Building##	5	10000000	142857	50000000	714285	
4	Implementation of specific ESMP*/RAP	68	10000000	142857	680000000	9714285	
5	Annual ESMF Auditing#	10	7000000	100000	70000000	1000000	
	Total				839410000	11991570	
	Total (Say)				850 Million	12.5 Million	

*This include cost of implementation of ESAMP/RAP including land purchase cost on an average

Annual ESMF audit cost for 10 years starting from 2018 till 2028

The capacity building cost is lumpsum for training and other purposes for 5 basin states SPMG and NMCG

1. BACKGROUND

1.1 INTRODUCTION

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. Ganga is India's holiest river and has a cultural and spiritual significance that far transcends the boundaries of the basin.

2. Increasing population in the basin and haphazard urbanization and industrial growth has significantly impacted the water quality of River Ganga, particularly during the dry season. The primary sources of pollution are untreated sewage and industrial wastewater. Non-point pollution sources from agriculture and livestock, religious activities at various locations along the river, 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 attempt to clean the river, such as Ganga Action Plan (GAP) launched in 1985 have provided some gains in arresting rate of water quality degradation, but lot more needs to be done.

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 strategy for addressing pollution in the river (ii) making relevant institutions operational and effective and (iii) implementing a phased program for Ganga clean-up.

5. As a major first step in this direction, the Government of India (GoI) has established the National Ganga River Basin Authority (NGRBA) in 2009 and National Council for River Ganga (Rejuvenation, Protection and Management) in 2016, as an Authority has been created for comprehensive management of the river. The Namami Gange Programme will adopt a river-basin approach and has been given a multi-sectoral mandate to address both water quantity and quality aspects. The Namami Gange Program has resolved that by year 2020 no untreated municipal sewage or industrial effluent will be discharged into River Ganga. National Ganga River Basin Project (NGRBP) started in 2011 is funded by World Bank has now been included as a part of Namami Gange Programme.

1.2 OBJECTIVE

6. The Namami Gange program will finance infrastructure investments to reduce pollution loads at priority locations on the river. The investments are intended to exemplify, among other attributes, the high standards of technical preparation and implementation, sustainability of operations, and public participation. The majority of investments in the Namami Gange program are expected to be in the wastewater sector, particularly in wastewater treatment plants and sewerage networks. Investments will also be supported in industrial pollution control and prevention (e.g. common effluent treatment plants), solid waste management (e.g. collection, transport and disposal systems), and river front management (e.g. improvement of the built environment along river stretches, improvement of small ghats and electric crematoria, and the conservation and preservation of ecologically sensitive sites). Many investments are

likely to combine elements of more than one of these sectors.

7. An investment framework has been finalised for selection of program investments. The objectives of this investments framework are to:

- a) provide a filter for all the Namami Gange investments, for ensuring that these selected investments are well-prepared and amongst the most effective in reducing the pollution loads;
- b) make transparent the decision-making process on investments selection;
- c) Ensure that the investments are implemented in a sustainable manner; and
- d) Investment projects need to ensure compliance with National and local Environmental and Social legislation/regulation as well as World Bank safeguards policies (wherever applicable).

1.3 THE ESMF

8. The ESMF (Volume I) covers River Ganga and some of the major and minor tributaries which are spread across the 11 Ganga basin states/UT of Uttarakhand, Uttar Pradesh, Haryana, Himachal Pradesh, Delhi, Bihar, Jharkhand, Rajasthan, Madhya Pradesh, Chhattisgarh and West Bengal. The tributaries of Ganga covered in ESMF are Ramganga, Kali, Yamuna (downstream of Delhi), Hindon, Gomti, Betwa, Chambal, Parbati, Kshipra, Sind, Tons, Son, Damodar, Ajay, Burhi Gandak, Kiul, Kosi, Mahananda, Ken and Ghagra.

9. The Ganga 1 projects were mostly on the main-stem of river Ganga which covered the 5 basin States i.e. Bihar, Jharkhand, Uttar Pradesh, West Bengal and Uttarakhand. The Ganga 2 projects are in continuation to the Ganga 1 projects and sub-project which are similar in nature. The focus of NMCG has now included Ganga main-stem to the polluted stretches of the tributaries of river Ganga. Thus, the need was felt for updating the ESMF to showcase the inclusion of the tributaries, projects and sub-projects with respect to Ganga 1 and Ganga 2. The projects in Ganga 2 have been taken up on the tributaries of river Ganga especially the Kali, Ramganga, Hindon, and Yamuna (downstream of Delhi). Further, the updation of the ESMF has also provided an opportunity to update the report based on the latest information w.r.t. identified thrust areas & action points; key achievements; funding mechanism; brief on Namami Gange programme, NMCG Authority and Ministry of Jal Shakti; Vision & objectives of NMCG; Policy making Apex Council, State Ganga Committees; State River Conservation Authorities; census data; water quality monitoring data; water supply; waste water and sewage generation data.

10. The Aravalli ranges have been designated as Natural Conservation Zone in the Plan in accordance with Regional Plan-2021. For protection of Aravallis, the notification of the MoEF, Government of India dated 07.05.1992, shall be applicable. Similarly, for execution of any project, the project proponent will have to obtain environmental clearance in terms of notification dated 14.09.2006, which is mandatory in nature. Similarly, the restrictions applicable to the Eco-Sensitive Zone notified by MoEF or for protection of environment shall also be followed and implemented.

11. Few of the tributaries of Yamuna (Chambal, Sahibi) which have influence of Aravalli region in the state of Rajasthan and Haryana are Eco sensitive area. In order to protect the area falling under Aravalli Range and restrict activities which are likely to cause environmental degradation, MOEF & CC has issued a notification dated 7th May, 1992, and prohibit tree cutting, mining and new development activities like Construction of any clusters of dwelling units, farms houses, sheds, community centers, information centres, Transmission line etc. Punjab land preservation Act 1900 is applicable in these zone, so in case of involvement of any project interventions such as (establishment of STP, CETP, Landfill site) prior approval

from MOEF &CC shall be required along with preparation of EIA,EMP according to respective guideline.

12. Given the distributed nature of investments in multiple states, the investments under the program may entail environmental and social impacts. The environment and social frameworks intended to help manage the social and environmental impacts through appropriate measures during the planning, design, construction and operation phases of various investments. The framework will identify the adverse environment and social impacts and provide specific guidance on the policies and procedures to be followed for environmental and social assessment along with roles and responsibilities of the implementing agencies.

13. The projects taken up by NMCG are based on Hybrid Model. The projects of NMCG will be developed by a private sector entity selected through PPP concept under annuity or Hybrid annuity or any other contractual arrangement between the public entity and a private company. Under this model, Environment and Social Due Diligence Report (ESDDR) and Environment and Social Management Action Plan (ESMAP) will be prepared at the DPR stage. The ESDDR would cover the brief description of the environment, current status with screening checklist and analysis of both social and environmental project related issues and ESMAP would include the action plan to be taken during the design stage.

14. The document essentially comprises the following key sections:

- A brief summary of key probable Environmental and Social Impacts
- Environment and Social Regulatory Framework applicable for the program
- Environment Management Framework
- Social Management Framework
- Project Appraisal, Monitoring and Reporting Arrangements
- Institutional Arrangements
- Training and Capacity Building for ESMF

2. ENVIRONMENTAL AND SOCIAL IMPACTS

2.1 GENERAL

15. The implementation of the river pollution mitigation investments may have environmental and social issues like pollution of surface and ground water bodies or other natural resources, issues related to air pollution or other environmental health and sanitation, inconvenience to public due to traffic diversions and construction activities, issues of land acquisition and rehabilitation and resettlement. The NMCG recognizes these environmental and social issues and prepares itself to address their mitigation through a set of management procedures elaborated in this Environmental and Social Management Framework (ESMF). NMCG, through state level SMCGs will ensure that policies and procedures described in the ESMF are applied to all investments.

16. To evolve its environmental and social management procedures, the NMCG has carefully examined the portfolio of investments previously executed under the river pollution mitigation investments under Ganga Action Plan (Phase I and II) along with similar other urban infrastructure investments implemented elsewhere in the country under various Government of India sponsored schemes, supplemented by detailed environmental and social analysis of Ganga Basin and field visits to existing and proposed sample investments.

2.2 PORTFOLIO OF INVESTMENTS

17. The portfolio of investments to be implemented is presented in Table 2.1. These investments in the first phase of program is spread across several cities and/or towns within the Ganga main stem states of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal and may be extended to entire Ganga basin comprising of 11 states in later phases.

Table 2-1: Portfolio of Investments under Namami Gange Program

S.No.	Portfolio of investments	Possible Portfolio Components
1	Sewerage and Sanitation Systems/ Sewage Treatment Plants (New / Upgradation)	• 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 • Entirely new sewage treatment plant/facility • Augmentation of capacities in existing sewage treatment plant/facility • Remodelling /Renovation of existing sewage treatment facilities, resulting in better effluent quality and augmented treatment capacity
2	Solid Waste Management	• Engineered landfills with leachate collection and treatment systems • Waste segregation and composting facilities • Waste Processing or Waste to Energy Facilities

S.No.	Portfolio of investments	Possible Portfolio Components
3	Industrial Pollution Control Initiatives	• Common Effluent Treatment Plant • Common Hazardous Waste Management Facilities • Pilot treatment facilities for various industrial sectors • Waste Minimization and Clean Technology Programs
4	River Front Management Investments	• River Front Management and beautification • Construction of Bathing Ghats • Development of Cremation grounds Improvement to existing crematoria situated on riverbanks

18. The Investments 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 and sanitation for the citizens of the concerned cities and towns. The Investments, to be implemented, have its own beneficial as well as adverse impacts. The significance of these impacts depends on the individual project, its size and location. The likely beneficial impacts of the investments include the following.

- Improvement in sewerage collection and 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
- 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 ENVIRONMENTAND SOCIAL IMPACTS

19. This section identifies the environmental and social impacts of the investments with a view to facilitate early evaluation of such impacts and integrate suitable mitigation measures during planning stage itself. Based on field visits and discussion with the potential executing agencies, the typical adverse impacts associated with the investments are summarized below:

2.3.1 Sewerage Schemes

20. The investments involve laying of sewers (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 remodeling of existing sewage pumping stations among others. Most of these investments would be concentrated in one location except for laying of sewers (both gravity and pressure lines), which are linear investments and the sewers are largely buried below ground or sometimes may be laid on or above the ground depending upon the available/required slope or gradient.

21. Although there would not be any permanent negative or adverse environmental impacts, the potential environment issues associated with sewerage and sanitation investments are:

- surface and groundwater contamination due to leakage and/or improper joints in sewers

- severance of utilities and requirement for relocation due to sewer laying
- disruption due to local traffic diversion and congestion 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 equipment's
- Health and safety concerns of workers, while laying or rehabilitating existing sewers.

2.3.2 Sewage Treatment Plants

22. The investments may involve construction of new sewage treatment plants, augmentation of treatment capacity in existing sewage treatment plants and renovation and/or re-modelling of existing sewage treatment plants, resulting in improved effluent quality and disposal as per prescribed standards. Most of these investments would be concentrated in one location and the requirement of land for these investments is small as compared to other infrastructure development investments.

23. Although there would not be any permanent negative environmental impacts, the potential environment issues associated with sewage 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 floodplains
- change in hydrology and drainage patterns due to the construction activity, particularly, if sewage treatment facility is located in floodplains
- health and safety issues associated with operation and maintenance of sewage treatment facility, particularly exposure to methane and other noxious gases, sludge contaminated with heavy metals etc.
- 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 of treated effluent or effluent not conforming to stipulated discharge standards during operation
- Sludge from a waste treatment plant may constitute a hazardous and nonhazardous waste.

24. Most of the portfolio of infrastructure investment under Namami Gange programme belongs to sewerage infrastructure and River Front Development. A sample construction and operation stage impacts and management measures are given in Annexure- IIA

2.3.3 Solid Waste Management Investments

25. These investments may 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 investments is rather small as compared to other infrastructure development investments. Generally, the land for the solid waste treatment facility will be selected away from habitations.

26. Although there would not be any permanent negative environmental impacts, the **potential**

environment 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 floodplains
- change in hydrology and drainage pattern, if the facility is located in floodplains
- air quality, odour 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 equipment's
- Health and safety issues associated with operation and maintenance of solid waste treatment facility, particularly of workers manually handling wastes.

2.3.4 Industrial Pollution Control Initiatives

27. Investments under this component could involve development of common industrial effluent treatment plants or hazardous waste management plants, etc. However, implementation of these pollution control facilities may lead to certain **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, odour 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.

2.3.5 River Front Management Investments

28. 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. These works would be included under one investment. 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 investments will not generally involve displacement of people.

29. There would not be any permanent adverse or negative impacts due to these investments, 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. Impacts due to such investments could be minimized or mitigated by appropriate interventions and engineering designs.

30. The **environmental issues** that may arise due to investments like river front development schemes, beautification of river banks, construction of bathing *Ghats*, and development of cremation grounds are:

- change in land use, and drainage pattern
- change in channel hydraulics, triggering erosion and siltation problems either *in situ* or elsewhere along the 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

31. **Health and Safety:** During construction stage, assurance of safe work environment and incident free execution of the project, health and safety of worker as well as overall project is significant in the Namami Gange projects i.e. Sewerage and Sanitation, Sewage Treatment Plant, Solid Waste treatment facilities, Industrial pollution control facilities and River front development project. As per relevant Factory Act 1948 & The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, concessionaire has to be ensured all related measures reflected in the Site specific ESMP of the projects and will be part of Bid documents.

32. As regards to the **Social Impacts**, the requirement of land for all these investments is rather small. However, wherever there is displacement of titleholders/non-titleholders, it may involve resettlement issues and may result in temporary loss of access to private and common properties during construction. Social issues that may arise due to these kinds of investments are:

- Direct purchase of small land parcels for SPS/ Lifting station
- Land acquisition / taking for sewerage treatment plant leading to loss of livelihood / displacement of non-titleholders /titleholders
- Temporary land taking causing inconvenience to local community
- Temporary loss of common grazing area

33. So far, in most cases, SPS and STPs have been designed in existing government land that is free of encroachment and other encumbrances. In case of requirement of private land, EAs have preferred direct purchase on the basis of willing buyer – willing seller. Where ever, government land has been taken, non-titleholders have been compensated for assets and assisted in relocation (e.g., Patna RFD).

34. Most of these investments would be concentrated in one location and the requirement of land for these investments is rather small as compared to other infrastructure development investments. Hence, the social impacts would be minimal but in case of displacement Resettlement Action Plan³ need to be prepared.

2.4 EXPERIENCE IN IMPLEMENTING ESMF

35. As per part of Implementation, monitoring and reporting arrangement of ESMF, an independent Environmental and Social was conducted by third party in year 2018. The audit was conducted as per the ESMF guidelines. The mandate for conducting the audit was as per annexure IV of this report. The Audit was conducted in all the five basin states to verify/ witness the corrective action taken by the SMCG/ nodal agencies in addressing the Non-compliance identified during the Environmental and Social Audit. The major findings/ outcome of the E&S Audit are as under:

- a) **Good Practices:** as part of Audit procedure, discussions with various stakeholders at Central and State levels were conducted and also the reviewed the relevant documents which revealed number of good practices as follows:

³ e.g. places where Government land is available and no displacement is involved a Generic ESMP is prepared/ to be prepared. Places where private land acquisition is involved /physical displacement or displacement of Non-title holders is required (e.g cases like Patna RFD and Begusarai WWT) , an abbreviated RAP /RAP is prepared/to be prepared.

- As per Audit findings, it is intimated that overall institutional framework to implement NMCG projects is complied with the NGRBA/Namami Gange Programme Framework, wherein SMCGs/Nodal Agency dedicatedly facilitated the implementation with support from Executing Agencies at respective project locations.
- As part of internal monitoring within dedicated agencies under the project, the monitoring and supervision by NMCG was found appreciative. It is stated in the Audit report that the safeguards officials of NMCG frequently visited project locations and also regularly communicated to SMCG as well as to EA insisting upon (i) appropriate implementation of various ESMP compliances including inclusion of ESMP in Bid/Contract document and EMP budget in BoQ, (ii) deployment of safeguards officials along with necessary directions for their consistent inspection of project site, (iii) formulating project specific ESMP for inclusion in future projects, and (iv) formulating robust grievance redress mechanism. In addition to this, Dynamic monitoring system was found in place for making use of freeware messaging system. The day-to-day progress, grievances and site photographs were exchanged in WhatsApp groups for constant monitoring of the projects and immediate action.
- Liaisoning of SMCG with local governing bodies was observed to be good. The efforts taken by the States in creating an enabling environment in close coordination with District Administration, especially sub-divisional office was found noteworthy in the E&S Audit.
- With regard to selection of feasible site, Audit finding insights that the available government land was preferably utilised for establishing various project components in all the project sites as option 1 under Namami Gange Projects. In cases, where government land was not available, the SMCG/EA in coordination with respective district administration has purchased land following mutual negotiation process.
- Biometric system has been adopted for construction labourers by few of the Contractors, which is appreciative. Also the wages for the labourers were reported bank-transferred.
- Environmental and Social Due Diligence was carried out by NMCG in Allahabad and Buxar (information based on the public-disclosed documents) which is appreciative. Similar Due Diligence exercise to be done in other project locations.

Health and Safety at worksite: Site visits undertaken during E&S Audit of Implemented and under construction project envisaged that Health and Safety Officer in the Contractor's team has been mobilised in all the project sites. Based on the proposed design, the safety aspects were well taken care. Site-specific Health and Safety Plan has been developed and implemented, provided PPEs to workers, Training Provisions, Documentations etc. Markings and sign-boards were given near energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Safety equipment such as helmet, safety Shoves, Gloves, masks was observed on labourers. Contractors were equipped with health safety aspect during construction workers.

b) Recommendations: Audit observed few more environmental and social issues which should be addressed at various levels of implementation:

- According to E&S Audit, it was reported that, Sample EMP's included in the ESMF with respect to various components of the project, was generally used as a replica by the SMCG/EA and does not reflect sub-project-specific site features, therefore, Preparation of sub-project specific EMP has been suggested and the same need to be followed for the proposed Hybrid Annuity based Contracts and in other new Contracts.
- Preparation of respective Sludge management Plans should be made mandatory. Sludge Disposal Plan is not provided by the Contractor. States (Jharkhand, as of now) which have plans for Solid Waste Management, is reportedly integrating the sludge generated from respective STPs.

- Regulatory requirements should be fully complied. All the required permissions should be obtained before commencement of civil works. Permission like Ground Water Extraction, outdated fire-safety equipment placed at site; DG with inadequate emission standards use at site; Use of high-capacity DG set without obtaining permission from SPCB were need to be improved at active project sites.
- It is reported in E&S audit that, Capacity building of respective E&S personnel of EA and Contractors is required. Safeguards Officers requires to take pro-active role in ensuring compliance to ESMF.
- With respect to Public consultation and outreach, it is reported that, Consultation at various stages of the project needs to be expedited. Deployment of safeguard officials to be consistently done. Public consultation and outreach is observed to be weak. People are concerned about the lack of prior information regarding the civil work schedule in respective localities.
- Related to land related grievance: Appropriate consultation to be carried out with aggrieved party. If found entitled, should be accordingly assisted following the provision of Resettlement Policy and Land Acquisition Framework given in ESMF.
- Environmental Monitoring Formats should be included in the Bid / Contract document.
- The supervision of ESMP by the EA is need more attention, during audit it was observed limited to fulfilling the periodic progress reporting requirements of SPMG/NMCG.
- Designated area for storing construction materials is not provided. This was observed that the Contractor is making use of the land provided by the EA/District Administration, wherever possible. However, the Contractor also stores the construction materials in private land without formal agreement with the land-owner.
- Grievance redress mechanism is informal and there is no toll-free number is provided as envisaged in the ESMF.
- Labour Contract were reported as widely practiced and the hired labours or their employers have inadequate awareness about the environmental and social safeguard measures. Contractors do not have any capacity building plan for the hired labourers

36. **Budget for implementing ESMF:** As per finding of Audit conducted in year 2018 for 30 STPS & Sewerage schemes implemented in five basin states i.e. Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal, majorly budget for ESAMP has been considered as ranges from 0.5% to 1% of the total basic capital cost, while Communication and Public Outreach, GAAP expected as 0.1% to 1% of the basic Capital Cost of the project.

Table 2-2: Budget for Implementing ESMF

S.No	Item	Unit	Unit Cost		Total Cost		Source of financing
			Rupee	US\$	Rupee	US\$	
1	Preparation of specific ESIA/ESDDR for Ganga-1	38	550000	7857	20900000	298571	World Bank
2	Preparation of ESIA and ESDDR for Ganga-2	30	617000	8814	18510000	264429	
3	Capacity Building##	5	10000000	142857	50000000	714285	
4	Implementation of specific ESMP*/RAP	68	10000000	142857	680000000	9714285	
5	Annual ESMF Auditing#	10	7000000	100000	70000000	1000000	
	Total				839410000	11991570	
	Total (Say)				850 Million	12.5 Million	

*This include cost of implementation of ESAMP/RAP including land purchase cost on an average

Annual ESMF audit cost for 10 years starting from 2018 till 2028

The capacity building cost is lumpsum for training and other purposes for 5 basin states SPMG and NMCG

3. ENVIRONMENT AND SOCIAL REGULATORY FRAMEWORK

3.1 GENERAL

37. The national, state and local environmental and social regulatory requirements that are applicable to the investments proposed are given in this section. As the applicability of these legal requirements would depend on the nature of the specific investments, the exact applicability cannot be determined at this stage. SMCGs and the State level executing agencies (EA) would ensure compliance of these requirements by all concerned.

38. NMCG would verify whether the investments are in compliance with these regulatory requirements prior to granting approval to the investments and disbursement of funds. During implementation, NMCG would ensure that SMCGs monitor the ESMF compliance in all investments on an on-going basis.

3.2 APPLICABLE LAWS AND REGULATIONS -ENVIRONMENTAL

39. The following laws and regulations are applicable to the environmental and social aspects of the investments implemented under the programme:

- Policy and Regulatory Framework of Government of India(GoI)
- Environmental Policy and Regulations of the respective State Governments
- Legislations applicable to construction activities

3.2.1 Legal Framework of Government of India

40. The Government of India has laid out various policy guidelines, acts and regulations pertaining to environment. The Environment (Protection) Act, 1986 is 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 & Climate Change (MoEF&CC) and the Central Pollution Control Board (CPCB)/State Pollution Control Boards (SPCBs).

3.2.2 Key Environmental Laws and other related Regulations

41. The key environmental laws and regulations as relevant to the investments under the NGRBP/Namami Gange are given in **Table 3.1**. The key environmental regulations can also be accessed at www.MoEF&CC.nic.in/rules-and-regulations

Table 3-1: Environmental Regulations and Legislations

S. 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 &CC, Gol, DoE, State Govt. CPCB, SPCBs
2	Environmental Impact Assessment Notification 14th Sep-2006	Mandatory environmental clearance to certain category of new development activities following environmental impact assessment	Yes	This notification is applicable only for Sewage Treatment Facility and Solid waste Treatment facility investments	MoEF &CC, EIAA
3	Municipal Wastes(Management and Handling)Rules, 2000	To manage collection, transportation, segregation, treatment, and disposal of municipal solid wastes	Yes	This notification is applicable only for Municipal Solid waste Treatment facility investments	MoEF &CC, EIAA, CPCB, SPCBs
4	Coastal Regulation Zone(CRZ) Notification 1991(2011)	Protection of fragile coastal belt	No	If Project location is located along coastal belt	
5	Land Acquisition Act, 1894 (As amended)	Sets out rules for acquisition. of land by government	Yes	applicable in case of acquisition of land for investments	Revenue Department, State Government
6	The Forest (Conservation) Act,1980	To check deforestation by restricting conversion of forested areas into non- forested areas	Yes	applicable if there is diversion of forest land for non-forest activities i.e. forest land required for any of the investments	Forest Department, State Government and Ministry of Environment and Forests, Government of India.
7	Wild Life (Protection) Act, 1972	To protect wildlife through National Parks and Sanctuaries	No	This act will be applicable, if there are any points of wildlife crossings in proximity to project locations	Chief Conservator Wildlife, Wildlife Wing, State Forest Department and Ministry of Environment and Forests, Government of India
8	Air (Prevention and Control of Pollution) Act, 1981	To control air pollution by controlling emission of air pollutants as per the prescribed Standards.	Yes	This act will be applicable during construction;	SPCBs
9	Water Prevention and Control of Pollution) Act, 1974	To control water pollution by controlling discharge of pollutants as per the prescribed standards	Yes	This act will be applicable during construction	SPCBs
10	The Noise Pollution (Regulation and Control) Rules, 2000	The standards for noise for day and night have been promulgated by the MoEF &CC for various land uses.	Yes	This act will be applicable for all construction equipment deployed at worksite	SPCBs

S. No	Act / Rules	Purpose	Applicable Yes/ No	Reason for Applicability	Authority
11	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 investments 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).
12	Public Liability and Insurance Act, 1991	Protection from hazardous materials and accidents.	Yes	Contractor need to stock hazardous material like diesel, Bitumen, Emulsions etc.	SPCBs
13	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
14	Minor Mineral and concession Rules	For opening new quarry.	Yes	Regulate use of minor minerals like stone, soil, river sand etc.	District Collector
15	Central Motor Vehicle Act, 1988	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
16	National Forest Policy, 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 investments	Forest Department, State Government and Ministry of Environment and Forests, Government of India
17	The Mining Act	The mining act has been notified for safe and sound mining activity.	Yes	The construction activities for investments will require aggregate. These will be procured through mining from approved quarries	Department of Mining, State Government

3.3 APPLICABLE LAWS AND REGULATIONS -SOCIAL

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

Table 3-2: Relevant Social Policies and Acts

Acts/Rule/Policy	Year	Objective	Applicability to this project	Responsible Agency
National Social Policies and Acts				
Right to fair compensation and transparency in land acquisition, rehabilitation and Resettlement Act	2013	Fair compensation for acquisition of Immovable assets; Resettlement of displaced population due to LA and economic rehabilitation of all those who	Yes. as some subprojects will be acquiring private land	Revenue Department of respective state governments.

Acts/Rule/Policy	Year	Objective	Applicability to this project	Responsible Agency
		are affected due to land acquisition.		
Seventy Third Constitution Amendment Act,	1992	The Act enables participation of Panchayat level institutions in decision- making by broadening the village level functions, supporting implementation of development schemes. 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.	Yes, as some sub projects may come in panchayat areas	Department of Panchayat Raj of respective state governments.
The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act	2006	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.	Yes, as some sub projects especially in Jharkhand may be located in tribal areas	Ministry of Tribal Affairs, GOI and Department of Tribal Welfare of various state governments.
State Specific laws				
Bihar Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2014.	2014	To assist implementation of National Act on land Acquisition and R&R. Fair compensation for acquisition of immovable assets; Resettlement of displaced population due to LA and economic rehabilitation of all those who are affected due to land acquisition.	Yes, as some sub projects will be acquiring private land	Revenue department and requiring body
Bihar Rayati Land Lease Policy	2014	Allows government to take land on perpetual lease from land owners by paying four times of the minimum value registered in rural areas and two times in urban areas.	Yes, if land acquisition is not necessary and land owner agrees to give land on lease.	Revenue department and requiring body
Uttar Pradesh Land Direct Purchase Policy (through Mutual Consent)	2015	Allows government to directly purchase land from land owners through mutual consent. The policy apart from land cost also provides for R & R assistance	Yes, as private land will be required for the purpose of the project	Revenue department and requiring body

3.3 Other legislations applicable to construction activities

43. Construction stage generally involves 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) Act, 1986 (the Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of child labour is prohibited in Building and Construction Industry);
- 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, travelling 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).

3.4 Applicable World Bank Policies

44. The Operational Policies of World Bank that are applicable in the project are as under:

Table 3-3: Safeguard Policies of World Bank

World Bank Safe Guard Policies	Objective	Applicability	Safeguard Requirements
OP/BP4.01	Environment Assessment: The objective of this policy is to help in ensuring that the projects proposed for World Bank financing are environmentally sound and sustainable through Environment Assessment (EA). EA is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. EA evaluates a project's potential environmental risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation.	Applicable for all infrastructure projects under Namami Gange programme. The scale and detailing of the EA report depends largely upon the project categorization.	EA report and ESMP (combined with social report) for projects under DBOT/EPC mode. Environment and Social Due Diligence (ESDD) for projects under PPP mode followed by a detailed EIA report during the detailed design stage. For High category projects
OP 4.04: Natural Habitats	Natural Habitats: The objective of this policy is to protect the natural habitats including the forest areas and wildlife in order to protect and enhance the environment which is essential for long-term sustainable development. World Bank therefore supports the protection, maintenance, and rehabilitation of natural habitats and their functions in its economic and sector work, project financing, and policy dialogue. The Bank supports, and expects borrowers to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development.	Applicable on case to case basis where disturbance to forest areas/natural habitats are envisaged to be impacted from the projects.	Necessary requirement include permission from competent authorities in the state government as well preparation of documents for necessary action plan to protect the surrounding natural habitats/forest areas.
OP/BP 4.12	Involuntary Resettlement- The objective of this policy is to avoid or minimize involuntary	There will be need for limited land	Resettlement Action Plan in consultation

World Bank Safe Guard Policies	Objective	Applicability	Safeguard Requirements
	resettlement where feasible, exploring all viable alternative project designs. Furthermore, it intends to assist displaced person in improving their former living standards; community participation in planning and implementing resettlement; and to provide assistance to affected people, regardless of the legality of title of land	acquisition for some sub projects such as waste water treatments or river front development resulting in relocation or loss of shelter for non- titleholders; loss of assets or access to assets; loss of income sources or means of livelihood.	with the community and project authorities.
OP 4.10	Indigenous People -This policy aims to protect the dignity, right and cultural uniqueness of indigenous people; to ensure that they do not suffer due to development; that they receive social and economic benefits	This policy is triggered as some projects may be located in tribal areas.	Indigenous Peoples Plan will be prepared in consultation with the community and project authorities.

4. ENVIRONMENT AND SOCIAL MANAGEMENT FRAMEWORK

4.1 OBJECTIVES

45. There may be adverse impacts that have to be effectively managed during the planning, design, construction and operational phases of Namami Gange investments. These impacts may have the potential to cause major and minor, and reversible and irreversible societal/community damage; as well as result in project delays, incomplete implementation, partial achievement of the project development goals and, reputation risks to various stakeholders. Proper management is therefore necessary for smooth and effective project implementation.

46. The Objective of Environment and Social Management Framework (ESMF) is to ensure environmentally sustainable development in NGP's endeavor of Mission Clean Ganga by effective management of environmental and social issues in all the investments with a special focus on the following:

- ensure that all investments adhere to the national, state and local regulatory requirements during the design, implementation and operation stages
- ensure that best environmental and social practices are mainstreamed/ integrated during design, implementation and operation of the investments
- strive to enhance environmental conditions wherever feasible
- undertake to develop communication strategy, capacity building and training initiatives for all stakeholders such as the SMCG, EAs, ULBs, NGOs and common citizens.

4.2 PURPOSE OF THE ESMF

47. The purpose of the ESMF is to facilitate the management of environmental and social issues of the river pollution mitigation investments. At this stage, although the portfolio of investments has been broadly identified, the specific investment projects, i.e. their size, type and location, are 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 investments. The specific project identification will be a need based/ demand-driven process, consistent with the overall objectives of 'Mission Clean Ganga'. The Environment and Social Management Framework (ESMF), therefore, would be used as an umbrella by the Namami Gange program (the NMCG and SMCGs) and all implementing agencies while preparing and/ or appraising, approving and executing the investments.

48. Environmental impacts: There may be adverse environmental impacts for which mitigation plans are essential. These impacts include direct, indirect, cumulative, and induced impacts in the project's area of influence. Each project needs to be scrutinized as to its type, location, scale, and sensitivity and the magnitude of its potential environmental impacts. Environmental impacts include those related to the natural environment (air, water, and land); human health and safety; and trans-boundary and global environmental aspects. Environmental guidelines – policies and requirements – seek to avoid, minimize, or mitigate adverse environmental impacts.

49. Social impacts: Project-related social impacts include displacement impacts and impacts to

vulnerable groups. Broadly, this includes physical displacement (relocation, loss of residential land or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources or means of livelihood). If a project directly or indirectly affects the dignity, human rights, livelihood systems, or culture of SC/ ST/ BPL groups or affects the territories or natural or cultural resources. Social management plan seeks to avoid, minimize or mitigate these adverse impacts. Related to displacement impacts, if these adverse impacts cannot be avoided, then affected people should receive assistance/compensation so that they are at least as well off as they were in the absence of the project.

50. Through the ESMF, the SMCs and the NMCG will also be implementing international good practices for managing social and environmental issues.

4.3 SCREENING AND CATEGORIZATION OF INVESTMENTS (DURING THE FEASIBILITY STUDY STAGE)

51. Each project is scrutinized as to its type, location, scale, and sensitivity and the magnitude of its potential environmental impacts. The extent of assessment required to identify and mitigate the impacts largely depends upon the complexities of project activities. The scrutiny and screening will be based on a detailed Environment and Social Screening exercise, summarized in the following Format:

Table 4-1: Screening Format

Environment and Social information format for screening			
	Project Title: Implementing agency: Project cost: Project components: Project location (Area/ district)		
	Screening Criteria	Assessment of category (High/ low)	Explanatory note for categorisation
1	Is the project in an eco-sensitive area or adjoining an eco-sensitive area? (Yes/No) If Yes, which is the area? Elaborate impact accordingly.		
2	Will the project create significant/ limited/ no social impacts? • Involuntary land taking resulting in loss of income from agricultural land, plantation or other existing land-use. • Involuntary land taking resulting in relocation of title holder or non-titleholder households. • Any reduction of access to traditional and river dependent communities (to river and areas where they earn for their primary or substantial livelihood). • Any displacement or adverse impact on tribal settlement(s). • Any specific gender issues.		
3	Will the project create significant / limited / no environmental impacts during the construction stage? (Significant / limited / no impacts) • Clearance of vegetation/tree-cover • Direct discharge of construction run-off, improper storage and disposal of excavation spoils, wastes and other construction materials adversely affecting water quality and flow regimes. • Flooding of adjacent areas • Improper storage and handling of substances leading to contamination of soil and water • Elevated noise and dust emission • Disruption to traffic movements • Damage to existing infrastructure, public utilities, amenities etc. • Failure to restore temporary construction sites		

Environment and Social information format for screening			
	- Possible conflicts with and/or disruption to local community - Health risks due to unhygienic conditions at workers' camps - Safety hazards during construction		
4	Will the project create significant / limited / no environmental impacts during the operational stage? (Significant / limited / no impacts) - Flooding of adjacent areas - Impacts to water quality due to effluent discharge - Gas emissions - Safety hazards		
5	Do projects of this nature / type require prior environmental clearance either from the MOEF&CC or from a relevant state Government department? (MOEF&CC/ relevant State Government department/No clearance at all)		
6	Does the project involve any prior clearance from the MOEF&CC or State Forest department for either the conversion of forest land or for tree-cutting? (Yes/ No). If yes, which?		
7	Please attach photograph and location maps along with this completed Environmental Information Format For Screening.		
Overall Assessment			

**Detailed explanation/ justification for arriving at specific category (high/ low) to be provided in the specified column*

52. The level of impact category (high/ low) shall be determined through a process of environmental and social screening as described above and shall be provided as part of the Feasibility Report, and has to be agreed by the SMCG.

53. The NGRBA program as per World Bank safeguard policies is categorized as A. However, sub-projects are categorized as high / low impact categories where high impact category project will correspond to Category A and low impact corresponds to Category B projects as per World Bank's safeguard operational policy 4.01.

4.3.1 Addressing safeguard issues in projects for retroactive financing

54. It is likely that some project may be considered for financing retroactively. These projects shall carry out the following due diligence, prior to the approval for financing under NGRBA Project.

55. For each project, Environmental and social screening will be carried out as part of due diligence exercise using the screening matrix of the Environmental and Social Management Framework of NGRBA Project (**Table 4.1 above**), **to identify the category of the project**. The bank team will follow the steps as described below:

Step1: As part of the due diligence, NMCG will visit the project area to carry out detailed interactions with implementing agency, contractors, and consultation with the communities.

Step 2: The project DPR, design, drawings will also be carried out by the team.

Step 3: A report summarizing the findings along with the project profile including baseline, shall be prepared under following heads:

Compliance to the Environmental and social regulatory requirements

1. Issues related to planning and design of the subproject
2. Issues related to construction and OHS
3. Land requirement and acquisition
4. Status of Compensation disbursement
5. Disbursement of R&R Assistances
6. Stakeholders Consultation, documentation and disclosure
7. Grievance redress mechanism

Step 4: The findings including gap analysis with respect to the agreed EMF of NGRBA project shall be summarised in a tabular form as shown below:

Summary Gap Analysis: The gap analysis matrix from environmental and social safeguard planning and implementation point of view based on the due diligence study will be summarized as below:

Table 4-2: Screening Format

	Key Principles and Attributes	Gap	Remarks
1.	Assessment of environmental Impacts		
2.	Implementation of Mitigation and Management Measures		
3.	Principle of Avoidance		
4.	Linkages with other projects		
5.	Involuntary restriction of access to legally designated parks and protected areas		
6.	Recognition of untitled persons such as squatters and encroachers including customary rights		
7.	Avoiding displacement of Indigenous People		
8.	Planning		
a)	Threshold for Resettlement Plan (RP)		
b)	Need to replace / restore CPRs		
c)	Consultation and participation of PAPs during project planning		
d)	Participation of NGOs in project planning		
e)	Cut-off date		
f)	Definition of a family for R&R assistance		
g)	Need and scope of census and socio-economic surveys		
h)	Compensation		
i)	Primary Authority for Land Acquisition		
j)	Principle to restore/improve living standards		
k)	Compensation for land at replacement value		
l)	Treatment of depreciation and Salvage		
m)	Transaction and transition fee		
n)	Land for Land as an option for compensation		
9.	Resettlement Assistance		
a)	Cash assistance over and above compensation		
b)	Assistance to poorest of the poor or vulnerable people		
c)	Provision of infrastructure and public services at resettlement sites		
10.	Implementation		
a)	Implementation of RP		
b)	Participation of civil society in implementation of RP		
c)	Opportunity for PAPs to participate in planning, design and implementation		
d)	Disclosure of Resettlement Plan		

	Key Principles and Attributes	Gap	Remarks
11.	Grievance Redressal Mechanism		
a)	Procedure for dispute resolution and appeals		
b)	Composition of Grievance Redress Committee		
c)	Participation of representative of PAPs and civil society		
12.	Monitoring		
a)	Independent monitoring		
b)	Periodic evaluation and monitoring		

Step 5: The due diligence report (DDR) will also provide specific recommendations to ensure compliance with the ESMF.

Step 6: The report will be shared with the Bank, for review and clearance, prior to the approval of retro-active financing.

56. The final due-diligence report shall follow disclosure requirements, as agreed in the ESMF and will also be disclosed at World Bank's Info shop.

4.3.2 Addressing safeguard issues in projects for PPP Projects:

57. Under the NGRBA framework, National Mission for Clean Ganga (NMCG) under Namami Gange programme shall finance commercially viable projects under PPP model. Viable projects may also include those projects that will become viable after receiving viability gap funding under a government scheme. The necessary procedures for preparation of safeguard documents with respect to PPP mode of projects are included in the Addendum-I.

4.4 ADDRESSING ENVIRONMENTAL AND SOCIAL IMPACTS (DURING PREPARATION OF THEDPR)

4.4.1 High impact categories

58. A proposed investment will be classified as High impact category, if it is likely to impact (adverse or moderate) the environmental and social aspects of the investments. The High Category investments will also include all those investments which require the mandatory environmental clearance as per the EIA notification SO1533 (E) dated Sept 2006, published by Ministry of Environment and Forests.

59. The investments categorized as 'High' 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 investment and the environmental and social sensitivity of the area. The ESA shall examine all the potential negative and positive environmental and social impacts of the investment, compare them with those of feasible alternatives (including the "without investment" situation), and recommend any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

60. The ESA may include (a) a detailed description of the environmental and social condition of the project area; (b) an assessment of the potential impacts; (c) formulation of mitigation measures; and (d) preparation of an Environment and Social Management Plan. The ESA report will contain the following chapter scheme: (1) Introduction; (2) Description of the project; (3) Description of the environment; (4) Alternatives; (5) Anticipated environmental and social impacts and mitigation measures; (6) Socio-

economic assessment; (7) Environmental and Social Management Plan; (8) Public consultation and disclosure; and (9) Conclusions.

4.4.2 Resettlement Policy and Land Acquisition Framework (RPLAF)

61. NMCG has developed an Entitlement Matrix, which is in line with Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement 2013 other applicable laws and Acts of the Government of India to address the issues related with affected persons.

62. R&R will be undertaken as per the entitlement matrix or State R&R policy where applicable, to address the issues related to the resettlement and rehabilitation of the affected persons.

63. This aims to resettle and rehabilitate the affected persons on account of its investments in a manner that they do not suffer from adverse effects 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 Namami Gange program that the resettlement shall minimize dependency and be sustainable socially, economically and institutionally.

64. Special attention will be paid for the improvement of living standards of marginalized and vulnerable groups.

65. The broad principles of the R&R 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, any one moving into the project area after the cut-off date will not be entitled to assistance.
- Appropriate grievance redress mechanism will be 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.
- Cut of Date shall be preliminary notification under RFCTLAR&R Act 2013 for titleholders and in case of Non-title holder's end date of socio –economic survey.

66. As required, a Resettlement Action Plan will be prepared including a fully itemized budget and an implementation schedule.

Preparation of Resettlement Action Plans

67. Having identified the potential impacts of the relevant investments, the next step is to develop action plans to mitigate the impacts. The RAPs will provide the link between the impacts identified and proposed mitigation measures to realize the objectives of involuntary resettlement. The investment specific RAP will take into account magnitude of impacts and accordingly prepare a resettlement plan that is consistent with this framework before the sub-project is accepted for Namami Gange program financing. Any affected person will be assisted as provided in the National Policy or State Policy where applicable on resettlement and rehabilitation.

- a) The above RAP plan will be prepared as soon as subproject is finalized, prior to NMCG/SMCG's approval of corresponding civil works bid document.
- b) Investments 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

68. 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)

69. The EA 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. Families belonging to scheduled caste and scheduled tribe categories
- v. Vulnerable persons such as the disabled, destitute, orphans, widows, unmarried girls, abandoned women, or persons above the age of 50 years of age, who are not provided or cannot immediately be provided with alternative livelihood, and who are not otherwise covered as part of a family;
- vi. Families that are landless (not having homestead land, agriculture land or ether homestead or agriculture land) and are below poverty line, but residing continuously for a period of not less than three years in the affected area preceding the date of declaration of the affected area;
- vii. Losing access to private property or common property resources

70. The EA on completion of the survey will disseminate the survey results among the affected community. Based on the social impact assessment survey, EA 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.

71. Every-draft Resettlement Action Plan (RAP) prepared shall contain the following particulars namely.

- a) The extent of area to be acquired for the project, the name(s) of the corresponding village(s)/ municipality area and the method employed for acquiring land with the relevant documentation.
- b) village wise or municipality wise list of 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) Socio-economic survey of affected people including income/asset survey of APs.
- e) a list of agricultural labourers in such area and the names of such persons whose livelihood depend on agricultural activities;
- f) 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;
- g) information on vulnerable groups or persons for whom special provisions may have to be made;
- h) a list of occupiers; if any
- i) a list of public utilities and Government buildings which are likely to be affected;
- j) a comprehensive list of benefits and packages which are to be provided to project affected families by impact category;
- k) 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;

- l) details of the basic amenities and infrastructure facilities which are to be provided for resettlement;
- m) the entitlement matrix;
- n) the time schedule for shifting and resettling the displaced families in resettlement zones;
- o) grievance redressal mechanism;
- p) institutional mechanism for RAP implementation;
- q) monitoring and evaluation indicators and mechanism;
- r) budget; and
- s) Any other particulars as the Administrator for Resettlement and Rehabilitation may think fit to include for the information of the displaced persons.

Land Acquisition, R&R Benefits for Affected Families

72. In case land/house is acquired, as per Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLAR&R) Act, 2013 the compensation will be paid to the land holders/house owners and the resettlement and rehabilitation (R&R) benefits shall be extended to all the affected families as per provisions of the Act or state R&R Policies, where applicable and entitlement framework of this ESMF. Any affected and/or displaced family/person will be assisted as per the provisions of the RFCTLAR&R Act 2013 and/or state R&R Policies wherever applicable.

73. Value of land to be determined as per various sections of the RFCTLAR&R Act, 2013 namely:

- Section 11 (1) publication of preliminary notification
- Section 26 (Market value of the land)
- Section 28 (parameters to be considered for market value)
- Section 29 (determination of value of attached things to the land).
- Section 30 (award of solatium)
- Project will be guided by First Schedule of RFCTLAR&R Act, 2013 for determination of land value.
- In case of land purchase through private negotiation, section 46 of RFCTLAR&R Act 2013 will be applicable. Project may also use any state specific instrument for direct purchase of land.

74. Provisions for R&R at the community level will be as follows:

- The common property resources and the community infrastructure shall be relocated in consultation with the community.
- During construction phase alternative access shall be provided in case of loss of access to private land / or common resource property.

75. Any unforeseen impacts shall be document and mitigated based on the principles agreed upon in policy Guideline.

76. The following is the entitlement matrix, as per RFCTLAR&R Act, 2013:

Table 4-3: Entitlement Matrix

Type of Impact/Loss	Unit of Entitlement	Entitlements as per Policy
1. Agricultural Land		
Acquisition of agricultural land	Land Holder	- Cash compensation as defined in First Schedule of RFCTLAR&R Act, 2013 or any state policy - Where jobs are created through the project, after providing suitable training and skill development in the required field, make provision for employment at a rate not lower than the minimum wages provided for in any other law for the time being in force, to at least one member per affected family in the project or arrange for adjoin such other project as may be required; or one- time payment of five lakhs rupees per affected family; or(c) annuity policies that shall pay not less than two thousand rupees per month Per family for twenty years with appropriate indexation to the Consumer Price Index for Agricultural Labourers (RFCTLARR Act, 2013, Second Schedule – clause4). - In case of a project involving land acquisition on behalf of a acquiring body, each affected family which is involuntarily displaced shall get a monthly subsistence allowance equivalent to three thousand rupees per month for a period of one year from the date of award. (RFCTLARR, 2013 – Second schedule; clause 5 para1) - Each affected family that is displaced and has cattle, shall get financial assistance of such amount as the appropriate Government may decide but not less than Twenty Five thousand rupees, for construction of cattle shed. (RFCTLAR&R Act, 2013 Second Schedule clause) - Each affected family shall be given a one-time resettlement allowance of fifty thousand rupees only (RFCTLARR,2013 – Second schedule; clause 10) - In case of a project involving land acquisition on behalf of an acquiring body, the stamp duty and other fees payable for registration of the land or house allotted to the affected families shall be borne by the acquiring body. The land for house allotted to the affected families shall be free from all encumbrances. The land or house allotted may be in the joint names of wife and husband of the affected families (RFCTLAR&R Act, 2013. Second Schedule – clause 11).
2. House		
i) Acquisition of House	Affected Family	- If a house is lost in rural area, a constructed house shall be provided as per the Indira Awas Yojana specifications. If a house is lost in urban area, a constructed house shall be provided, which will be not less than 50 sqmts in plinth area (RFCTLAR&R Act, 2013. Second Schedule – Clause 1 para 1). - Provided that any such family in urban areas which opts not to take the house offered, shall get a one-time financial assistance for house construction, which shall not be less than one lakh fifty thousand rupees (RFCTLAR&R Act, 2013. Second Schedule – Clause 1 para3). - Provided further that if any affected family in rural areas so prefers, the equivalent cost of the house may be offered in lieu of the constructed house (RFCTLAR&R Act, 2013. Second Schedule – Clause 1 para 4).

Type of Impact/Loss	Unit of Entitlement	Entitlements as per Policy
		- Each affected family which is displaced from the land acquired shall be given a monthly subsistence allowance equivalent to three thousand rupees per month for a period of one year from the date of award (RFCTLARR, 2013 – Second schedule; clause 5 para1). - Right to salvage material from the demolished structures - Three months' notice to vacate structures - One-time financial assistance of such amount as the appropriate Government may decide but not less than fifty thousand rupees, for shifting of the family, building materials, belongings and cattle. (RFCTLARR, 2013 – Second schedule; clause 6) - Each affected family that is displaced and has cattle, shall get financial assistance of such amount as the appropriate Government may decide but not less than Twenty Five thousand rupees, for construction of cattle shed. (RFCTLARR, 2013 – Second schedule; clause7) - Each affected person who is rural artisan, small trader or self- employed person who has been displaced shall get a one-time financial assistance of such amount as the appropriate Government may decide but not less than (Rs. 25,000/-) twenty-five thousand rupees, for construction of working shed or shop. (RFCTLARR, 2013 – Second schedule; clause8) - Each affected family shall be given a one-time resettlement allowance of fifty thousand rupees only(RFCTLARR,2013 – Second schedule; clause 10) - In case of a project involving land acquisition on behalf of an acquiring body, the stamp duty and other fees payable for registration of the land or house allotted to the affected families shall be borne by the acquiring body. The land for house allotted to the affected families shall be free from all encumbrances. The land or house allotted may be in the joint names of wife and husband of the affected families (RFCTLAR&R Act, 2013. Second Schedule – clause 11).
iii)BPL without homestead land and residing in the area for not less than three years	Affected Family	- Has been residing in the affected area continuously for a period of not less than three years preceding the date of declaration of the affected area and which has been involuntarily displaced from such area, shall be entitled - If a house is lost in rural area, a constructed house shall be provided as per the Indira AwasYojana specifications. If a house is lost in urban area, a constructed house shall be provided, which will be not less than 50 sqmts in plinth area (RFCTLAR&R Act, 2013. Second Schedule – Clause 1 para1). - Provided that any such family in urban areas which opts not to take the house offered, shall get a one-time financial assistance for house construction, which shall not be less than one lakh fifty thousand rupees (RFCTLAR&R Act, 2013. Second Schedule – Clause 1 para 3). - Provided further that if any affected family in rural areas so prefers, the equivalent cost of the house may be offered in lieu of the constructed house (RFCTLAR&R Act, 2013. Second Schedule – Clause 1 para4). - Right to salvage material from the demolished structures - Three months' notice to vacate structures

Type of Impact/Loss	Unit of Entitlement	Entitlements as per Policy
		One-time financial assistance of such amount as the appropriate Government may decide but not less than fifty thousand rupees, for shifting of the family, building materials, belongings and cattle. (RFCTLARR, 2013 – Second schedule; clause 6)
3. Livelihood losses		
i) Rural artisan, small trader or self-employed Person displaced	Each affected person	Will get a one-time financial assistance of such amount as the appropriate Government may decide but not less than (Rs. 25,000/-) twenty-five thousand rupees, for construction of working shed or shop. (RFCTLAR&R Act, 2013. Second Schedule – clause 8)
ii) Employment Assistance	Affected Family	- Where jobs are created through the project, after providing suitable training and skill development in the required field. make provision for employment at a rate not lower than the minimum wages provided for in any other law for the time being in force, to at least one member per affected family in the project or arrange for a job in such other project as may be required (RFCTLAR&R Act 2013, Second Schedule, Clause 4(a).; - The acquiring body shall give preference to the affected persons or their groups or cooperatives in the allotment of outsourced contracts, shops or other economic opportunities coming up in or around the project site; and - The acquiring body shall give preference to willing landless labourers and unemployed affected persons while engaging labour in the project during the construction phase.
4. Other Benefits		
i) Additional assistance for Scheduled Caste and Scheduled Tribe families	Affected Family	Appropriate level in Scheduled Areas under the Fifth Schedule to the Constitution, as the case may be, shall be obtained. in all cases of land acquisition in such areas, including acquisition in case of urgency, before issue of a notification under this Act, or any other central Act or a state Act for the time being in force (RFCTLAR&R Act, 2013 section 41(3)). - In case of a project involving land acquisition on behalf of a Requiring Body which involves involuntary displacement of the Scheduled Castes or the Scheduled Tribes families, a Development Plan shall be prepared, in such form as may be prescribed. Laying down the details of procedure for settling land rights due, but not settled and restoring titles of the Scheduled Tribes as well as the Scheduled Castes on the alienated land by undertaking a special drive together with land acquisition (RFCTLAR&R Act, 2013 section 41 (4)). - Where the affected families belonging to the Scheduled Castes and the Scheduled Tribes are relocated outside of the district then, they shall be paid an additional twenty-five per cent rehabilitation and resettlement benefits to which they are entitled in monetary terms along with a one-time entitlement of fifty thousand rupees (RFCTLAR&R Act, 2013 section 41(11)). - Provided that in every project those persons losing land and belonging to the Scheduled Castes or the Scheduled Tribes will be provided land equivalent to land acquired or two and a one-half acres, whichever is lower (RFCTLAR&R Act 2013, Second Schedule; clause 2) - In addition to subsistence allowance of INR 50,000, the

Type of Impact/Loss	Unit of Entitlement	Entitlements as per Policy
		Scheduled Castes and the Scheduled Tribes displaced from Scheduled Areas shall receive an amount equivalent to fifty thousand rupees. (RFCTLAR&R Act, 2013, Second Schedule, , clause 5, para2) In cases of displacement from the Scheduled Areas, as far as possible, the affected families shall be relocated in a similar ecological zone, so as to preserve the economic opportunities' language, culture and community life of the tribal communities. (RFCTLAR&R Act 2013, clause 5 para 3)
ii)One time Resettlement allowance	Any Affected family not already covered under clause 2 (iii)	Shall be entitled to one time resettlement allowance of fifty thousand rupees (RFCTLAR&R Act 2013, Second Schedule clause10).
5. Exemptions from stamp duty etc.		
		In case of a project involving land acquisition on behalf of an acquiring body, the stamp duty and other fees payable for registration of the land or house allotted to the affected families shall be borne by the acquiring body. The land and house allotted will be in the joint names of wife and husband of the affected families. The land for house allotted to the affected family shall be free from all encumbrances (RFCTLAR&R Act, 2013 clause 11)
6. Trees and standing crops		
Trees on land being acquired	Land holders	Market value of the trees to be computed as per the provisions of Horticulture and Forest Department.
Standing crops at the time of acquisition , if any	Land holders	- Advance notice to harvest crops - Market value of standing crops to be computed as per provisions of Agriculture Department.

Please note that this is bare minimum and Project should also consider the additional R&R provisions given in state specific policy / rules.

77. According to the assessment of the preliminary list of prioritized works, there may be need for private land acquisition in some cases which could result in involuntary displacement and loss of livelihood. However, project 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 takes place, the principles and procedures defined in the Framework will apply.

78. Once the location of the works is known during project implementation, individual resettlement or land acquisition plans will be prepared for each sub-project. The Resettlement Action Plans will be reviewed and approved by SMCG/ NMCG before being implemented.

79. During DPR preparation, analysis of alternatives will be carried out to avoid or reduce involuntary acquisition of private land.

80. Immediately after FR approval and in parallel with DPR preparation, the EA along with the ULB would initiate land acquisition process for the project. This would facilitate identification of the land, its survey and preliminary cost estimation so that the State Govt. is in readiness to issue the appropriate notification under prevalent LA Act upon approval of DPR for speedy acquisition of the land.

4.4.3 Tribal Management Framework (TMF)

81. Though to the extent possible, private land owned by a tribal family will not be acquired, as part of ESMF, a Tribal Management Framework (TMF) is being prepared. The TMF aims at effectively promoting participation of tribal families throughout the project cycle. The general objective of the TMF is the inclusion of tribal 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 are to ensure that: (a) works are culturally appropriate (b) works and services provided do not in advertently 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 TPs and communities in all stages of the project.

82. **Objectives:** The principal objectives of the framework are to:

- (i) Ensure that project engages in free, prior, and informed consultation with the tribal community wherever they are affected.
- (ii) ensure that project benefits are accessible to the tribal community living in the project area
- (iii) avoid any kind of adverse impact on the tribal community to the extent possible and if unavoidable ensure that adverse impacts are minimized and mitigated
- (iv) ensure tribal 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.

83. The grievance if any will be addressed as per the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, which recognizes the rights of forest-dwelling Scheduled Tribes and other traditional forest dwellers over the forest areas inhabited by them and provides a Guideline for it.

4.4.4 Gender Assessment and Development

84. Gender Development plan 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

85. 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 EA 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.

86. Gender analysis will be an integral part of the initial social assessment at the screening stage itself. The issues identified can be scaled up during the feasibility and detailed analysis can be carried out during the DPR stage.

87. 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:

88. 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.

89. 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

4.4.5 Labour Management Procedure and Gender Based Violence (GBV)

Labour Management Procedure

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

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

a) Construction Labour Management Plan

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

project area.

b) Objectives

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

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

c) General Requirements

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

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

d) Hiring and Recruitment Procedure

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

- The implementing agency in consultation with the PMU will include a code of conduct relating to the accommodation to be signed with the contract document of contractors.
- The contractor shall not employ any person below the age of 18 years nor will have any forced labour;
- The construction labourers will be provided with documented information regarding their rights under national labour and employment law such as but not limited to Factories Act, Minimum Wages Act, Trade Unions Act, and Workmen’s Compensation Act;

- First priority for employment of labour should be given those impacted by the project such as landowners who have lost land / donated land;
- No discrimination shall be done by the construction contractor with respect to recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, termination of employment or retirement, and disciplinary practices;
- The contractor to ensure that work hours are set at eight hours a day, 48 hours a week, with a weekly rest day for all engaged labour;
- Every labour is entitled to a maximum of only two hours a day as Overtime (OT) work. OT pay is twice the hourly remuneration;
- The project will ensure that equal wages for male and female workers for work of equal nature or value is maintained;
- A grievance redress mechanism for workers will be put in place by the contractor to raise workplace concerns. The workers will be informed about the grievance mechanism at the time of recruitment; and
- The Contractor will ensure that they develop and implement a procedure to review the performance of their sub-contractors.
- The procedure developed should include regular inspection of the camp sites, maintaining information pertaining to labour sourced by sub-contractors;

e) Worker's Accommodation

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

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

f) Security

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

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

g) Provisions for Drinking Water

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

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

h) Cooking Arrangements

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

- Places for food preparation are designed to permit good food hygiene practices, including protection against contamination between and during food preparation;
- Adequate personal hygiene including a sufficient number of washbasins designated for cleaning hands with clean, running water; and
- All kitchen floors, ceiling and wall surfaces adjacent to or above food preparation and cooking areas are built using durable, non-absorbent, easily cleanable, non-toxic materials;
- Food preparation tables are equipped with a smooth, durable, easily cleanable, non-corrosive surface made of non-toxic materials.
- To ensure that the fuel need of labourers in the project area does not interfere with the local requirements, necessary arrangements for supply of fuel to the labourers shall be done by the contractor.

i) Wastewater Generation

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

j) Solid Waste Management

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

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

- The solid wastes of domestic nature generated shall be collected and stored separately in appropriate containers with proper sealing on them;
- Separate bins with proper markings in terms of recyclable or non-recyclable waste shall be provided in the houses and kitchen premises in sufficient numbers for collection of garbage;
- Food waste and other refuse are to be adequately deposited in sealable containers and removed from the kitchen frequently to avoid accumulation; and

- The contractor shall identify the nearest municipal solid waste storage facility and tie up with the concerned urban local body for disposal of waste at frequent intervals.

k) Medical Facilities

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

- A first aid centre shall be provided for the labour within the construction site equipped with medicines and other basic facilities;
- Adequate first aid kits shall be provided in the campsite in an accessible place. The kit shall contain all type of medicines and dressing material;
- Contractor shall identify and train an adequate number of workers to provide first aid during medical emergencies;
- Regular health check-ups shall be carried out for the construction labourers every six month and health records shall be maintained;
- Labours should have easy access to medical facilities and first aider; where possible, nurses should be available for female workers;
- First aid kits are adequately stocked. Where possible a 24/7 first aid service/facility is available.
- An adequate number of staff/workers is trained to provide first aid; and
- Information and awareness of communicable diseases, AIDS, etc. shall be provided to workers.

l) Recreation Facilities

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

m) Impact of influx of migrant labourer

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

n) Avoiding Gender Based Violence

- Contractor will prepare and implement robust measures to address the risk of gender-based violence that include

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

o) Contractor's responsibility

102. Within 30 days from the appointed date, the Contractor shall prepare and submit 4 hard copies and 1 soft copy of Labour Influx and Worker's Camp Management Plan to the concerned PEA that addresses specific activities that will be undertaken to minimize the impact on the local community, including elements such as worker codes of conduct, training programs on HIV/AIDS, etc. A Workers' Camp Management Plan addresses specific aspects of the establishment and operation of workers' camps.

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

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

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

Measures to Avoid Gender Based Violence

103. The gender-based violence (GBV) risk rating for the National Ganga River Basin Project (P119085) is Low. The National Ganga River Basin Project (P119085) is the parent project for the National Ganga River Basin Project (P169111). The geographical spread, broad project interventions and associated risks and impacts are expected to be similar to the parent project at this stage.

104. To start the GBV retrofitting process, the World Bank team organized a workshop in line with

requirements of the GBV Taskforce of the World Bank^[1]. (2017). The emerging discussions also referred to the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 and subsequently, constitution and functionality of Vishakha Committees. Further, the Bank team conducted an extensive mapping exercise of service providers in the state to strengthen the referral system for a potential victim. The Bank team put forth the context and internal risk assessment based on review of project documents and estimates of labor influx and scale of on-going construction. The risk rating for the parent project [National Ganga River Basin Project (P119085)] was evaluated to be 'Low'. However, given the specific context of some of the states such as Uttar Pradesh^[2] and potential presence of women-headed households near construction sites in Madhya Pradesh, Uttar Pradesh, Bihar and West Bengal (plains topography - states) the following actions were recommended and agreed upon with the client:

- Sensitization of contractors and laborers by nodal officers
- Constitution and functionality of Vishakha Committee
- Strengthening of Grievance Redressal Mechanism
- Strengthening of infrastructure on camp sites from a safety perspective.

Legal and policy environment for women's safety

105. Some of the key policies and laws pertaining to gender-based violence in India include the following:

- National Policy for the Empowerment of Women⁴ Year of adoption: 2001.
- India has signed and ratified Convention on Elimination of Discrimination against Women (CEDAW)⁵. Since then, the national policy for Women 2016 and other policies and amendments on acts has been reflecting the principles highlighted in the related international conventions. The goal of this Policy is to bring about the advancement, development and empowerment of women.
- The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, is introduced to prevent and provide redressal of complaints of sexual harassment. One of the main provisions in this act is that it calls for constituting an Internal Complaints Committee at each office or branch with 10 or more employees/workers.
- The Protection of Women from Domestic Violence Act, 2005⁶ defines domestic violence, describes the powers and duties of protection officers, service providers and lists the procedures for obtain reliefs.
- The Dowry Prohibition Act, 1961 makes giving and demanding dowry as a punishable offence. Section 8B identifies Dowry Prohibition Officers who are appointed not only to prevent the offence but also to collect evidence and perform additional functions that are deemed to serve the purpose of the act.
- The Protection of Children from Sexual Offences Act, 2012⁷ has been framed to strengthen the legal measures for protecting children from any kind of sexual offences. Despite having sexual offences covered under different sections of Indian Penal Code, those existing sections do not entirely cover similar offences against children. Recognizing the children as a person of 18 years or below, the various offences have been clearly defined under this Act. The Act also

^[1] <https://www.worldbank.org/en/news/press-release/2017/08/08/task-force-recommends-steps-to-tackle-gender-based-violence-in-world-bank-supported-projects>

^[2] Uttar Pradesh had the highest number of crimes against women. While the state recorded 14.5% of the total cases of crimes against women, it accounted for 12.4% of the total number of rape cases, second only to Madhya Pradesh, which recorded 12.5% of the total rape cases in 2016.

National Crime Records Bureau, 2016

⁴ "Draft National Policy for Women 2-16_0.pdf" on <http://wcd.nic.in/sites/default/files>

⁵ <http://treaties.un.org/>

⁶ "TheProtectionofWomenDomesticViolenceAct2005.pdf" on <http://ncw.nic.in/acts>

⁷ "childprotection31072012.pdf" on <http://wcd.nic.in/sites/default/files>

defines the gravity of certain offences carried out against children and suggests stringent punishments accordingly.

- The Convention on the Rights of the Children⁸ lays out a universal definition of 'child'. It articulates how children should be treated in a non-discriminatory manner and calls for action that considers the best interests of the child.
- India ratified the Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others⁹ and following that, the country enacted The Immoral Traffic (Prevention) Act in 1956 and punishes trafficking in relation to prostitution.

State-level mitigation measures

- *Registration of laborers:* The state agencies have undertaken registration of laborers in collaboration with the labor department across the five states. This initiative covers migrant laborers as well and is beneficial for them to access health benefits, pension and several other safety nets deployed by the government. Additionally, it helps the state agencies keep track of laborers on-site.
- *Separate toilets:* While all camp-sites had separate toilet facilities for men and women laborers, it was noticed that several sites might not have adequate facilities to match the number of laborers staying and working on sites. A screening checklist will be created to monitor adequate provision of infrastructure at camp sites and ensure safety of women laborers.
- *Grievance redressal mechanism on-site:* An established procedure to address complaints is being rolled-out across sites.
- *Safety information on-site:* Project sites will be required to prominently display safety related information for laborers.
- *Awareness amongst communities:* Across the five states, the project will undertake community level consultations and prominently display information related to the general helpline number, as well as contact details of junior/field engineers in case instances involving laborers come to the forefront.

4.4.6 Consultation and Information Disclosure

Consultation

106. The Consultation process envisages involvement of all the stakeholders at each stage of project planning and implementation. The EA /NMCG 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

⁸ http://www.unicef.org/crc/files/Rights_overview.pdf

⁹ <http://www.ohchr.org/en/professionalinterest/pages/traffickingpersons.aspx>

107. Dissemination of project information to the community and relevant stakeholders is to be carried out by the EA 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 investments. 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

108. 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 a joint responsibility of the consultants undertaking the design if not carried out by the EA in house and the EA itself.

109. 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

110. 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.

111. 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.

Information Disclosure

112. 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 EA;(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 EA 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.

113. 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. Disclosure of information will enhance governance and accountability specifically with respect to strengthening of monitoring indicators to help Namami Gange program.

114. This Information Disclosure Policy is intended to ensure that information concerning the Namami Gange program, 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 NMCG and EAs 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

115. The Table 4-4 below specifies the type of additional information and frequency of dissemination for investments 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
- Hard copy of the ESAMP and RAP shall be placed at construction site and also at SMCG office. Community will be informed about the same during finalization of RP / ESMP and through social intermediation process".
- 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.
- Wherever civil work will be carried out a board will be put up for public information which will disclose all desired information to the public, for greater social accountability.
- All information will be translated into local language and will be disclosed to the public through the *Panchayat*, District Magistrate's office, concerned EA offices, websites of NMCG and SMCGs.

Table 4-4: 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.	On the website of NMCG, SMCG and EAs The client would make the RAP available at a place accessible to displaced persons and local NGOs, in a form, manner, and language that

Topic	Documents to be disclosed	Frequency	Where
			are understandable to the PAPs 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 EA
	Resettlement & Rehabilitation Policy translated in local language	Once in the entire project cycle.	Distributed among Project Affected Persons (PAP)
	Information regarding impacts and their entitlements in local language	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 EA office and website of SMCG and EAs
	R&R and LA monthly progress report.	10th day of every month	Website of EA. Hard copy in the office of EA and contractor in local language
	RAP Impact Assessment Report	At midterm and end of the RAP implementation	NMCG, SMCG and EA's Website in local language.
	Land Acquisition notifications	As required under the LA Act	SMCG and EA's website. Hard copy in the office of EA and contractor in local language
	Grievance redressal process.	Continuous process throughout the project cycle.	On the web sites of NMCG, SMCG, EAs 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 EA; Also PAPs to be informed on one to one contact by EAs
Public Consultation	Minutes of Formal Public Consultation Meetings	Within two weeks of meeting	On the web sites of NMCG/SMCG, EAs 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 EA

Stakeholder mapping

116. Through the formal and informal consultation, stakeholder mapping has been done, identifying their interests concerned with the project activities, refer Table 4-5.

Table 4-5: Stakeholder Mapping

Stakeholder Category	Interests	Potential/Probable impacts
Primary stakeholders		
Project affected people	Access to the facility, Project entitlement, Time-bound delivery of benefits, enhanced quality of life	(+/-)

Stakeholder Category	Interests	Potential/Probable impacts
Beneficiaries	Access to the facility, Project entitlement, Time-bound delivery of benefits, enhanced quality of life	(+/-)
Secondary stakeholders		
NMCG; SMCG; Municipalities; EAs (For e.g., Uttarakhand Peyjal Nigam, UP Jal Nigam, Bihar Urban Infrastructure Development Corporation, Urban Development Department, Kolkata Metropolitan Development Authority)	Project implementation, Contracting; Project management, Monitoring and evaluation	(+/-)
NGOs, CSOs, Research institutes (GB Pant Institute of Himalayan Environment and Development, PSI, Shree Hari Ganga Samiti, IIT Kanpur, Ganga Sewak Samaj, WWF, CEE, Centre for flood management studies, Krishi Gram Vikas Kendra, IIT Kharagpur, Calcutta University, Ramakrishna Mission)	Development, Community participation, and Community welfare	(+/-)

117. This is a tentative mapping is likely to change during the project implementation. Each of these stakeholders will be part of the consultation process and their views will be incorporated in to the project design. The key stakeholders in can be grouped into two categories viz., primary and secondary. Their respective roles are presented below:

Primary Stakeholders

118. Project Affected Persons (PAPs) have the following roles:

- i) Participate in public meetings and identify alternatives to avoid or minimise displacement
- ii) Assist DPR consultants and NGOs in developing and choosing alternative options for relocation and income generation
- iii) Participate in census survey and meetings with host population
- iv) Provide inputs to entitlement provisions, thus assisting in preparation of the resettlement action plan
- v) Participate in grievance redress as members of grievance redress cells(GRC)
- vi) Decide on relocation and management of common properties
- vii) Labour and other inputs in the project
- viii) Members of implementation committee

119. Beneficiaries and Host Population has the following roles:

- i) Assist DPR consultants and NGOs in data collection and design
- ii) Provide inputs to site selection
- iii) Identify possible conflict areas with PAPs
- iv) Identify social and cultural facilities needed at resettlement sites
- v) Assist in identification and design inputs for IG schemes
- vi) Help develop consultation process between hosts and PAPs.

- vii) Manage common property
- viii) Participate in local committees.
- ix) Assist PAPs in integration with hosts.

Secondary Stakeholders

120. NMCG, SMCGs, EAs, Municipalities have the following roles:

- i) Establish separate cell for social development
- ii) Notification at various stages for land acquisition and joint measurement of land to be acquired along with the revenue department
- iii) Design and approval of resettlement policy
- iv) Coordinate with line departments such as telephone, state electricity board, public health engineering department and forest department for shifting of utilities and cutting of trees
- v) Participate with NGOs in verification survey of PAPs and categorisation of PAPs
- vi) Participate in consultations with PAPs and beneficiaries
- vii) Designing and distribution of ID cards along with NGO
- viii) Coordinate and facilitate relocation of displaced persons including designing and construction of resettlement colony / vendor market; provision of basic amenities; distribution of plots / houses / to residential and/or commercially displaced persons
- ix) Coordinate with NGO in identifying land for relocation of common property resources
- x) Coordinate with civil construction contractor to relocate common property resources
- xi) Permission and liaison with line departments for provision of basic amenities in resettlement colonies, land acquisition and income restoration schemes;
- xii) Coordinate with revenue department for facilitating disbursement of compensation and resettlement and rehabilitation assistances
- xiii) Monitoring of physical and financial progress
- xiv) Approval of micro plans
- xv) Participate in training programs for income restoration organized by NGOs
- xvi) Consult with panchayat and block office to facilitate inclusion of PAPs' name for poverty alleviation schemes of government of India.

121. **NGOs have following roles:**

- i) Develop rapport with PAPs and between PAPs and EAs
- ii) Verification of PAPs
- iii) Consultations with the community
- iv) Assess the level of skills and efficiency in pursuing economic activities, identify needs for training and organize programmes either to improve the efficiency and/or to impart new skills

- v) Assist PAP in receiving rehabilitation entitlements due to them
- vi) Motivate and guide PAP for proper utilisation of benefits under R&R policy provisions
- vii) Assist PAPs in obtaining benefits from the appropriate development programmes.
- viii) Help PAPs in increasing their farm income through provision of irrigation facility or improving farm practices, and
- ix) Ensure marketing of produce particularly those under self-employment activities.
- x) Complete the consultation at the community level and provide support by describing the entitlements to the entitled persons (EPs) and assisting them in their choices
- xi) Accompany and represent the EPs at the Grievance Redress Committee meeting.
- xii) Assist EPs to take advantage of the existing government housing schemes and employment and training schemes that are selected for use during the project, and
- xiii) Promote location specific Community Based Organisations (CBOs) of PAPs to handle resettlement planning, implementation and monitoring.
- xiv) Create awareness among PAPs of HIV/AIDS, trafficking of women and child, child labour, health and hygiene,

4.4.7 Low impact categories

122. Low impact category investments are those which are likely to cause minimal or no adverse environmental impacts on human populations or the physical environment. The impacts in case of low category investments are largely localized and are temporary in nature. In such cases, detailed ESA would not be required.

123. These investments would require the preparation of an Environmental and Social Mitigation Plan as a part of the DPR either as a separate chapter or a volume (as needed), analyzing the environmental and social issues and providing the corresponding mitigation measures. There will also be a separate section in the summary of the document mentioning the key mitigation measures proposed through the ESMP.

124. A Guidance Note for carrying out ESA is provided in Annex I, and an outline Environment and Social Management Plan for low impact category investments is provided in Annex II. However, during the project preparation, these measures shall be validated with actual site conditions and updated to make these more project-specifics.

125. All ESAs, ESMPs, and RAPs of all investments will be shared with the SMCGs for review and clearance. The NMCG and SMCGs may obtain expert opinion as necessary for reviewing environmental and social screening, ESAs, ESMPs and RAPs.

126. The EA/DPR consultant will prepare the ESMP in accordance with the specifications and conditions included in the bid documents. The generic terms of reference for the scope of DPRs would be suitably amended in each case in accordance with the screening and assessment provided in the FR.

4.5 STAKEHOLDER CONSULTATIONS AND DISCLOSURE OFESA

127. Planning and design of all the investments 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 High impact category investments, 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 and address the concerns of the stakeholders and address them upfront in the project feasibility and design of the project.

128. 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.

129. In case of High impact category investments, 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 SMCGs and NMCG.

130. Consultations were done in ESA prepared under Namami Gange: Stakeholder and public consultation were undertaken at various stages at the local, regional and district levels, so as to incorporate the various environmental concerns and needs of the community and the relevant stakeholders (SMCG, EA, other departments irrigation department, forest department etc). Specific attention has been paid to Project Affected Persons, habitations or livelihoods will be directly impacted by the proposed sub-project, shopkeepers, Students etc. The minutes of consultations undertaken at various stages along with attendance has also been presented in the ESA reports prepared under Namami GangeProgram.As per ESMF guideline, stake holder and public consultations were undertaken at following level

- SMCG Office : Consultations with concerned Environmental, Social personal, GRM officer, Land and revenue officer, Project Director and other concerned staff.
- District Level: Consultations were majorly undertaken with respective District collector, Development officer (District Level), Sub divisional Magistrate (SDM), District Education officer, District Transport Officer etc.
- Implementation level (Execution Agency): Majorly discussions were held with Project coordinator, Project Manager, respective Assistant & Junior engineer who are responsible at field level execution and plan.
- Community level: Panchayat Officer, Area representative of respective Town, NGOs
- Household level: Majorly project affected people, households who' s habitation or livelihood are getting affected due to investment, local beneficiaries
- Sensitive locations of local community: Temple, School, any gathering area fairground etc.

4.6 ENVIRONMENTAL REGULATORY COMPLIANCE

131. In addition to the above, the investments should also comply with all the applicable environmental regulations and should secure required clearances / authorizations. **Table 4-6**, Table 4-7 provide a summary of such clearances and permissions.

Table 4-6: Environmental Regulatory Requirements for Namami Gange investments

S. No.	Type of Clearance	Applicability	Project Stage	Responsibility	Time Required
1	Environmental Clearance from MoEF&CC/SIAA	Applicable for select investments	Pre-Construction	EA	Not Applicable
2	Forest Clearance for land diversion	For forest land acquisition	Pre-Construction	EA	6-8 Months
3	Tree felling permission	For roadside tree cutting, incase sewers are to be laid	Pre-construction	EA	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	Labour license from labour commissioner office	Engagement of Labour	Construction stage (Prior to initiation of any work)	Contractor	2-3 Months

Table 4-7: Environmental Regulatory Compliance during Construction and Operation of Namami Gange Investments

S. No	Project Portfolio	Applicable Legislations	Obligations	Responsibility
A Sewerage & Sanitation Investments				
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	• Ensure Air and Noise Quality is within stipulated limits of SPCB's • Ensure minimum hindrance to traffic, pedestrians and minimum interruption to services	• Contractor during construction and operating agency during operation & maintenance • ULB/EA/Contractor
2.	Sewerage Network and Pumping Stations	Air Act, 1981 & Noise Rules as per EP Act, 1986	• Ensure Air and Noise Quality is within stipulated limits of SPCB's	• Contractor during construction and operating agency during operation & maintenance • ULB/EA/Contractor
3.	Sewerage Network, Pumping Station and Treatment Plant	Water Act, 1974 Hazardous Wastes (Management and Handling) Amendment Rules, 2000	• 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 andCPCB	• Contractor during construction and operating agency during operation & maintenance • ULB/EA/Contractor
4.	Low Cost Sanitation	None	• Ensure Air and Noise Quality is within stipulated limits of SPCB's • Ensure minimum hindrance to traffic, pedestrians and minimum interruption to services	
5.	Generators at Sewage Pumping Stations and Sewage Treatment Plant	Air Act 1981 & Noise Rules as per EP Act, 1986	• Secure Consent to establish and Consent to Operate for sewage treatment plant from SPCBs	ULB/EA/Contractor
			• Ensure Air and Noise quality is within the stipulated limits of SPCB and CPCB	

S. No	Project Portfolio	Applicable Legislations	Obligations	Responsibility
B Industrial Pollution Control Investments				
1.	Common Effluent Treatment Plants	Hazardous Wastes (Management and Handling) Amendment Rules, 2000	- Secure the Consent to Establish and Consent to Operate from SPCBs - Obtain Environmental Clearance from MOEF&CC - Ensure Air, water(surface and ground)and Noise Quality is within stipulated limits of SPCB's/CPCB	ULB/ EA/ Contractor
2.	Hazardous Waste Receiving, Treatment, Storage and Disposal Facilities	Hazardous Wastes (Management and Handling) Amendment Rules, 2000	- Secure the Consent to Establish and Consent to Operate from SPCBs - Obtain Environmental Clearance from MOEF&CC - Ensure Air, water(surface and ground)and Noise Quality is within stipulated limits of SPCB's/CPCB	ULB/ EA/ Contractor
C Solid Waste Management Facilities				
A.	Engineered Landfill Sites	MSW Rules, 2000 Air, Act, Water Act and EPA	- Secure the Consent to Establish and Consent to Operate from SPCBs - Obtain Environmental Clearance from MOEF&CC - Ensure Air, water(surface and ground)and Noise Quality is within stipulated limits of SPCB's/CPCB	ULB/ EA/ Contractor
B.	Composting Facilities	MSW Rules, 2000 Air Act Water Act and EPA	- Secure the Consent to Establish and Consent to Operate from SPCBs - Obtain Environmental Clearance from MOEF&CC	ULB/ EA/ Contractor
			- Ensure Air, water(surface and ground) and Noise Quality is within stipulated limits of SPCB's/CPCB - Ensure no odour and fly nuisance in and around the waste segregation units within the compost yard through appropriate mitigation measures	

S. No	Project Portfolio	Applicable Legislations	Obligations	Responsibility
D River Front Development Schemes				
A.	River front development and beautification schemes	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/ EA/ Contractor
B.	Construction of Bathing Ghats	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/ EA / Contractor
C.	Redevelopment of cremation grounds situated along river banks	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/ EA/ Contractor
D.	Modification of electric /CNG crematoriums situated along river banks	Air Act, 1981	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/EA/ Contractor

5. IMPLEMENTATION, MONITORING AND REPORTING ARRANGEMENTS

5.1 GENERAL

132. Namami Gange program provides financial assistance for implementation of river pollution abatement/mitigation investments in Ganga main stem states. In addition to complying with various technical and performance standards, the investments to be supported under this program shall comply with the Environmental and Social Management Framework. The implementation, monitoring and reporting arrangements for the ESMF have been worked out within the overall institutional structure for implementation of the Namami Gange program, as described in the sections below.

5.2 NAMAMI GANGE INSTITUTIONAL ARRANGEMENTS

133. As nodal Ministry for the Namami Gange program, the Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation (DoWR, RD&GR) through NMCG is the primary implementing agency for the project at the national level. The implementing agencies at the state level are the State Mission for Clean Ganga (SMCGs). At the local level, specific Executing Agencies (EAs) will be selected for implementation of various activities, including infrastructure investments under the Namami Gange program. EAs 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.

134. The main functions of the various agencies with regard to the Namami Gange program include the following:

- The NMCG will be 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 SMCGs where needed; and monitoring implementation performance;
- The SMCGs 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 EAs where needed; and monitoring implementation performance of the EAs;
- The EAs will plan and implement the activities/investments and put in place arrangements for satisfactory and sustainable operation and maintenance of the assets created. The EAs will be responsible for all contract management, including preparation of feasibility reports and DPRs, and seeking the necessary approvals.

5.3 IMPLEMENTATION, MONITORING AND REPORTING ARRANGEMENTS FOR THE ESMF

135. Within the above overall implementation Guideline of the Namami Gange program, 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.

136. A Social Development Officer and an Environmental Officer are appointed for managing social and environmental issues (including safeguards issues) at both central level as well as in each of the project states. These officers assist the EAs in implementation of ESMF provisions.

137. In the EA, an officer each are designated as social and environment officer who are responsible for the implementation of ESMF tasks at the field level with the assistance and participation of the local self-government. These officers also have the responsibility of implementing safeguard activities 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 SMCGs inviting all EAs in the state for providing information on the progress of the project work.

138. An independent Environment and Social/Compliance Monitoring Audit will be conducted by third party inspection agency for each of the sub projects, A sample terms of reference for the audit is presented in Annex IV.

139. The project cycle for an investment under the Namami Gange program and the interface with the ESMF requirements are summarized hereunder.

Project Screening

140. Upon receipt of request for funding, SMCG will assess the eligibility of the sub-project in line with the agreed framework. The scope of the project would be discussed and the guidelines for project preparation would be shared. The screening criteria and categorisation of sub-projects on that basis would also be explained. Once the FR is approved and the categorisation of the sub-project has been agreed upon, the EA would be advised on the appropriate DPR preparation toolkit that needs to be followed.

141. The EA will prepare a Detailed Project Report (DPR) including environment and social management plan (ESMP) tailored to the specific sub-project (for Low impact category investments). For High impact category investments, the EA will engage external agencies to undertake preparation of the ESMP (including RAP as relevant) in line with the requirements of ESMF. While initiating the ESMP (including RAP, as relevant), the EA/ external agency will be guided by the model Terms of Reference annexed and shall interact with the Environmental and Social Specialists in the SMCG to seek guidance in the finalization of scope of work and the development of the plans.

142. On receipt of the ESMP (including RAP, as relevant), specialists will evaluate the completeness of the documents and their compliance with the ESMF. Further actions, if any required, will have to be carried out by the EA prior to the appraisal of the project.

Project Appraisal

143. During project Appraisal, the SMCG will appraise the project preparation leading to the approval of the DPR. The aspects that will be appraised during the project appraisal will include the following

aspects:

- Environmental and social suitability of site
- Adequacy of the ESMP (including RAP, as relevant) as per the ESMF including analysis of alternatives, if possible
- Compliance with regulatory requirements and clearances
- Comprehensiveness of the ESMP (including RAP, as relevant) 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 ESMP (including RAP, as relevant), including institutional capacity and contractual provisions
- Inclusion of ESMP (including RAP, as relevant) budgets in the project cost and contract documents
- ESMP (including RAP, as relevant) 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)

144. The Environment and Social Management Plan (ESMP) 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 SMCG and NMCG.

Project Approval and Disbursement

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

146. The civil works will be initiated only after the required land has been acquired and declared free from encroachments and other encumbrances and the EA 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 EA / 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 III.

Monitoring and Reporting Arrangements

147. The NMCG, through the respective SMCGs will monitor all the approved investments under the Namami Gange program 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 investments and regular visits by the environmental and social specialists of the NMCG and SMCGs. In

addition to the above, the NMCG will undertake an annual ESMF audit and will review the status of ESMF compliance, as per the sample terms of reference provided in Annexure IV.

148. The NMCG 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 investments. Policy and regulatory issues will be debated internally by the NMCG'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.

149. An external evaluation of the RAP implementation prepared under Namami Gange program will also be undertaken twice during the implementation of the project – midterm and at the end of the implementation. Table 5-1 below details out the mitigation measures for each impact type, monitoring measures, responsibility and timeline.

150. Tribal Management Framework (TMF) will be implemented by SMCGs with the help of EAs. In absence of in-house capacity of EAs, third party may be hired, either an NGO or a consulting firm.

151. During implementation, meetings will be organized by the SMCGs inviting all EAs in the state for providing information on the progress of the project work. The project cycle for an investment under the Namami Gange program and the interface with the ESMF requirements are summarized Table 5-1 & Table 5-2.

Table 5-1: Mitigation, Monitoring, Responsibility and Timeline

S. No	Impact	Monitoring Measures	Responsible Agency	Timeline
1	Land acquisition	Regular internal monitoring by the EA and SMCG and periodic evaluation	EA	12 months from the start date. Compensation to be paid before the start of civil works.
2	Acquisition of house/ structure	Regular internal monitoring by the EA ,SMCG and periodic evaluation	EA	
3	Loss of livelihood or source of livelihood	Regular internal monitoring by EA; midterm and end term evaluation	EA	12 months from the start date of the activities of the priority investment. Assistance to be paid before the start of civil works.
4	Loss of access to private and / or common property	Regular internal monitoring by the EA; ; midterm and end term evaluation	EA, ESMF Auditors	12 months from the start date of the activities of the priority investment. Assistance to be paid before the start of civil works.
5	Displacement of Non Titleholders	Regular internal monitoring by the EA; a; midterm and end term evaluation	EA, ESMF Auditors	
6	Group support to Tribal community	Regular internal monitoring by the social development professional of EA along with NGO; midterm and end term evaluation	EA; District Administration ; ESMF auditors	12 months from the start date of the activities of the priority investment, followed by annual audit
7	Gender Action Plan	Regular internal monitoring by the social development professional of EA along with NGO; mid-term and end term evaluation	EA, ESMF Auditors	12 months from the start date of the activities of the priority investment, followed by annual audit

Table 5-2: ESMF Implementation and Monitoring Arrangements

Milestones	Objectives	Process	Responsibility	Decision/Target/ Deliverable
1. Sub- Project Screening (at the FR stage)	To approve categorisation of proposed sub-projects into high/ low impact investments	a. Discussions with EA to - assess eligibility of project based on Namami Gange's priorities in consonance with Mission Clean Ganga - identify scope of project report b. EA to submit FR along with proposed impact categorisation c. SMCG may seek expert opinion	• NMCG • SMCG • EA	• Decision to proceed or not • Identification of impact category
2. Sub- Project Appraisal (at the DPR stage)	To ensure satisfactory compliance with ESMF	Detailed appraisal of the ESMP (including RAP, where relevant), including site visits/investigations if necessary assess suitability of site, adequacy of ESMPs, risk analysis and regulatory clearances EA to submit ESMP as part of DPR for approval	• SMCG • NMCG	• Review report and decide to - accept - accept with modifications - reject and instruct to resubmit DPR
3. Approval	Approvals from SMCG/ NMCG/ World bank	a. SMCG to recommend to NMCG b. NMCG to recommend to Empowered Committee and World Bank (wherever applicable) c. Review of Sub Project EAs and ESAMPs by the World Bank including review and clearance of EA TORs for High Impact projects by the Bank	• SMCG • NMCG	• Approval of DPR
4. ESMP Implementation Monitoring and Review	Ensure Implementation of agreed ESMP (including RAP, where applicable)	a. Prepare quarterly progress reports b. Schedule field visits as required c. Third party audit	SMCG, EA, Contractors	• Quarterly Progress Report

5.4 SOCIAL ACCOUNTABILITY AND GRIEVANCE REDRESSAL MECHANISM

152. Social Audit, a viable instrument of sustainable program delivery, is in fact People's Audit, which provides a succinct view of performance based on society's perceptions and analysis at large. Citizen's Monitoring Committee will perform Social Audit in a manner prescribed by the Government of India.

153. The GRM for the project is an integrated system with Grievance Redressal Cells (GRCs), with necessary officers, officials and systems, at the local EAs, ULBs, SMCGs and the NMCG levels. Grievances are submitted through various mediums, including in person, in written form to a noted address, through phone line or through direct calls to concerned officials, and online. All local contact information and options for complaint submission are available on site on local information boards. The project abides by the RTI Act of 2005 and under provisions of Section 4 of the Act; it has committed itself for proactive disclosure and sharing of information with the key stakeholders, including the communities/beneficiaries. The project has 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.

154. As part of GRM, contractor is responsible for recording and resolving grievances. Contractor maintains the grievance register at the site. Any issue beyond contractor's control is escalated to SPMG. The social specialist of SPMG is responsible for addressing the issues. Grievances can directly be sent to NMCG as well through portal.

155. **Present Functionality of Grievance Redressal Mechanism:** One GRM officer has been appointed in NMCG to address all queries registered in the NMCG portal. The GRM officer is supported by one social expert who coordinates with all the SMCGs. At SMCG level, reporting of grievances are being monitored by environmental and social experts. All Executing Agencies have a GRM mechanism at each project site. The project manager and deputy project managers are in-charge of these GRMs. To register grievances, a register has been kept at all project site offices and sometime field team received grievances over mobile phones as well as on WhatsApp messages. To resolve the grievances, project manager from EAs side and contractor's project engineer and his team work together sorted out at the earliest. If site team are unable to resolve the issue its own, the complaint/matter is brought up to senior management of EA as well as Contractor and also discussed in monthly review meetings and escalated to the level of SPMG and NMCG. In continuation, Grievance Redressal Committees (GRCs) has also been constituted in some of the basin States. The GRC discusses grievances on weekly basis at their safety meetings.

5.5 TRAINING AND CAPACITY BUILDING

156. Being a new entity, the NMCG & SMCGs staff will need additional training in the management of environmental and social issues of the program. The training program for various relevant stakeholders will include an orientation program on the ESMF, Project Management, Engineering and Public Health. Course outline for various modules, the duration and the participation envisaged has been illustrated in Table 5.3

157. The training program is to be co-ordinated and anchored by NMCG with the support from agencies / individuals experienced in safeguard aspects of urban infrastructure investments for developing courses on conducting training programs.

158. The training will focus on the environmental and social issues. The contents will basically focus on

the ESMF, concept, regulatory requirements, Environment and Social priority issues, project cycle of Namami Gange program investments, outline of EA / SA and report formats in respect of the Environmental aspects. In respect of social aspects the course content will focus on the R & R policies and procedures, Land Acquisition process, identification of PAPs, Social entitlement frameworks, social assessment, RP techniques, and Risk Assessment and management skills. The generic training program is elaborated in Table 5.3

159. In addition to the above, Namami Gange program will make a conscious effort to mainstream the environmental and social issues within the training programs of NMCG. The program will be structured in such a way that it clearly brings out the value addition and enhancement benefits of proper management of environmental and social issues.

160. As part of the capacity building exercise, NMCG also aims at developing decentralized local capacity on managing environmental and social issues associated with various investments. In order to achieve the above objective, the specialists will develop a network of technical man power resources such as staff from universities / research institutions, civil society organisations, etc. These persons will be trained during the course of Namami Gange program, so that they can provide support to the ULBs in implementing ESMP (including RAP, as relevant) recommendations and also offer support on an on-going basis.

Table 5-3: Generic Training Programme

Programs	Contents	Duration / Schedule	Participants	Programs	Contents
Program 1 Orientation Program / Workshop for Project Development agency	Module 1 - ESMF Profile - Namami Gange Concept - ESMF Concept - Regulatory Requirements-E&S Priority Issues - Sub project types of Namami Gange program - ESA and SESA Process Outline - Reports & Formats	Module 2 Environmental Assessment Process - Environmental Laws & Regulations - EIA process - Identification of Environmental Impacts - Impact Identification Methods - Identification Mitigation Measures - Formulation of Environmental Management Plan - Implementation and Monitoring - Institutional Mechanism	Module 3 Social Assessment Process - Social Assessment process - Description of Namami Gange program R&R, tribal and gender frameworks and procedures and National requirements - LA process - Necessity for RAP and its preparation process	1½ day (1 st , 3 rd and 5 th year of the project)	- Environment and social staff of NMCG and SMCG - Heads of Statutory Boards and other monitoring agencies
Program - 2 Orientation Program / Workshop for Project Implementing agency	Module 1 - ESF Profile - Namami Gange Concept - ESMF Concept - Regulatory Requirements-E&S Priority Issues - Sub project types of Namami Gange program - ESA and SESA Process Outline - Reports & Formats	Module 2 Environmental Assessment Process - Environmental Laws & Regulations - EIA process - Identification of Environmental Impacts - Impact Identification Methods - Identification Mitigation Measures - Formulation of Environmental Management Plan - Implementation and Monitoring - Institutional Mechanism	Module 3 Social Assessment Process - Social Assessment process - Description of Namami Gange's R&R, tribal and gender frameworks and procedures and National requirements - LA process - Necessity for RAP and its preparation process	1½ day (1 st , 3 rd and 5 th year of the project)	- Municipal Commissioners of the ULBs and Heads of EAs - Engineering/Public Health personnel from the ULBs and social and environment staff of EAs - Engineering personnel from Statutory Boards, and environment and social staff of potential private operators / consultants.

Programs	Contents				Duration / Schedule	Participants
Program-3 Workshop on Sectoral Environmental and Social Assessment	Module 1– Water supply, sewerage and sanitation • ESMF Concept • Regulatory Requirements-E&S Priority Issues • Outline of ESA Process • Identification of Environmental and Social Impacts • Developing Mitigation Measures including entitlement frameworks • Formulation of Environmental and Social Management Plan including preparation of Resettlement Action Plan • Implementation and Monitoring arrangements • Budget preparation for implementation of ESMP • Case Studies	Module 2– Solid waste management • ESMF Concept • Regulatory Requirements-E&S Priority Issues • Outline of ESA Process • Identification of Environmental and Social Impacts • Developing Mitigation Measures including entitlement frameworks • Formulation of Environmental and Social Management Plan including preparation of Resettlement Action Plan • Implementation and Monitoring arrangements • Budget preparation for implementation of ESMP • Case Studies	Module 3– River Front Development • ESMF Concept • Regulatory Requirements-E&S Priority Issues • Outline of ESA Process • Identification of Environmental and Social Impacts • Developing Mitigation Measures including entitlement frameworks • Formulation of Environmental and Social Management Plan including preparation of Resettlement Action Plan • Implementation and Monitoring arrangements • Budget preparation for implementation of ESMP • Case Studies	Module 4 – Open Forum Feedback and comments from the Participants.	1½ days (every alternate years) (Introduction will be common to all and participants will be split according to their respective sectors)	• Municipal Commissioners of the ULBs and heads of other EAs. • Engineering/Public Health personnel from the ULBs and other EAs. • Engineering personnel from Statutory Boards, and potential private operators / consultants. • Environment and social staff of NMCG; SMCGs; and EAs

5.6 HYBRID ANNUITY

161. A brief presentation of the revision of ESMF was given by the NMCG's Environmental and Social Experts wherein provisions for implementation of revised land acquisition and R&R acts, Retro-financing of projects and Hybrid Annuity based Private-Public Partnership (PPP) projects were discussed. The projects of NMCG will be developed by a private sector entity selected through PPP concept under annuity or Hybrid annuity or any other contractual arrangement between the public entity and a private company. For projects under Hybrid Annuity model, Environment and Social Due Diligence Report (ESDDR) and Environment and Social Management Action Plan (ESMAP) will be prepared at the DPR stage. The ESDDR would cover the brief description of the environment, current status with screening checklist and analysis of both social and environmental project related issues. On the other hand, ESMAP would portray the action plan to be taken during the design stage by Hybrid annuity operator such as regulatory clearances, preparation of Environmental and Social Assessment (EIA/SIA), Resettlement Action Plan (RAP) and other management measures to be implemented by SPV/PPP Concessionaire/ operator.

162. Hybrid Annuity based Public Private Partnership (PPP) model for Waste Water Treatment Namami Gange program was launched by the Government of India with a project cost of Rs. 20,000 Crore. This includes the ongoing commitments to the tune of Rs. 7,200 Crores and new initiatives to the tune of Rs. 12800 Crores. Out of this, Rs. 12,800 Crores about 65% of the allotment i.e. Rs. 8,000 Crores is for Sewage Treatment infrastructure. The major challenges faced in the previous efforts to clean the river Ganga were (i) lack of ownership,(ii) lesser support for sustainability of assets, and (iii) sub optimal performance of the treatment infrastructure. Namami Gange program has been conceived as a central sector scheme with 100% funding for creation and maintenance of the assets. Further for ensuring better accountability, optimal performance and improved scale of investments, Government of India has approved for setting up of suitable institutional infrastructure and adopting Hybrid Annuity based Public Private Partnership (PPP) model for creation and maintenance of the assets. The development of assets under this PPP model will be undertaken by a Special Purpose Vehicle (SPV).

163. Under Hybrid Annuity based PPP model, a suitable Concessionaire for the Sewage Treatment Plants will be procured through competitive process in line with the PPP procurement process of Government of India in other infrastructure segments. The procurement will be based on lowest bid project cost quoted by the selected bidder for developing and operating the treatment infrastructure for a period of 15 years. 40% of the capital cost quoted is payable on completion of construction and balance 60% of the cost will be paid over the life of the project as annuities along with Operation & Maintenance(O & M) expenses.

164. In this model the Concessionaire will invest in the construction of treatment infrastructure using his own equity and debt funds from Financial Institutions. Salient features of Hybrid Annuity Model are:

- (a). Bidding and Concessionaire
- (b). Bid parameter
- (c). Cash Construction Support
- (d). Escalation clause in the project cost
- (e). Stable cash flow of annuity payments
- (f). Performance linked payment
- (g). Assured O&M payouts
- (h). Concession Period
- (i). Reduces sponsor's risk for funding equity commitment

Further details have been presented in Annexure VI.

6. PUBLIC CONSULTATIONS AND DISCLOSURE

6.1 GENERAL

165. The development of the ESMF is based on a consultative process that engaged key stakeholders at the national, state, and local levels and sought their feedback. Key government agencies have been consulted at the various levels to obtain their consent on the ESMF in general and specially on the land acquisition process and resettlement framework.

166. National level consultations on ESMF were held as follows:

- i. April 17, 2010: A meeting on the international River clean-up experiences was held at Scope Complex, Lodi Road, New Delhi where MoEF&CC, World Bank, States, ULBs, NMCG expert members, and some NGOs participated. Consultations on broad outline of ESMF were conducted.
- ii. Sept.1,2010: A meeting was organized in MoEF&CC with States and PIAs—It was first consultant meeting on ESMF where MoEF&CC made a presentation and draft of ESMF was shared with the States.
- iii. Oct. 25-26, 2010: A workshop for consultation on Investment frameworks and ESMF was organized in the World Bank where States, PIAs, NMCG and World Bank participated and agreed on the broad contours of the ESMF. It was agreed that States would conduct the public consultations at important towns where projects are likely to be implemented under the program.

167. Following the national level consultations, public consultations have been carried out in sample sub project areas in each of the five participating states to get feedback and suggestions from the affected community on the ESMF. The dates of these consultation meetings were announced in the local newspapers in advance so that all interested parties could participate and provide suggestions. The ESMF was translated into local language and disclosed on the websites and placed with the offices of the nodal agencies prior to the consultation meetings. Representatives of the State Nodal Agencies facilitated the public consultation meetings. The consultants preparing the ESMF attended the public consultation meetings in all the states to note the stakeholder suggestions and feedback. The minutes of the meeting was prepared highlighting the key discussions and issues raised by the stakeholders.

168. The schedule of the public consultations at the state level is provided in **Table 6.1**. The minutes of the meetings are given in the sections that follow.

Table 6-1: Details Of The Public Consultations Held at The Five Selected States

S.No	State	State Nodal Agency	Venue	Date	Time
1	Uttarakhand	Uttarakhand Peyjal Nigam	Nagar Pallika Bhawan, Haridwar, Uttarakhand	10th December 2010.	2:30 pm to 5:00 pm
2	West Bengal	Urban Development Department	Kolkata, West Bengal	21st December 2010	2:00 pm to 4:00 pm
3	Jharkhand	Urban Development Department, Jharkhand)	Vikash Bhawan D.C. Office, Sahibganj, Jharkhand	23rd December 2010	11:00 am to 2:00 pm
4	Uttar Pradesh	Ganga Pollution Control Unit, U.P JalNigam	Nagar Nigam, Guest House, Kanpur, Uttar Pradesh	28th December, 2010	3:00 pm to 5:30 pm
5	Uttar Pradesh	Ganga Pollution Control Unit, U.P JalNigam	Sadan Hall, Nagar Nigam, Allahabad, Uttar Pradesh	29th December 2010	3:00 pm to 5:00 pm
6	Bihar	Department of Urban Development	Patna, Bihar	4th January 2011	3:00 pm to 5:00 pm

6.2 MINUTES OF PUBLIC CONSULTATION MEETINGS

169. Public Consultation on Environment and Social Management Framework (NGRBA Program), held at Haridwar, Uttarakhand

Minutes of Meeting

Date: 10th December 2010.

Time: 2:30 PM

to 5:00 PM **Venue:** Nagar Pallika Bhawan, Haridwar, Uttarakhand

Attended by:

- State Nodal agency (Uttarakhand Peyjal Nigam): Mr. Prabhat Raj (Executive Engineer), Mr. S. C Gupta (General Manager), Mr. Y. K Mishra (Project Manager),
- Consultancy team from TERI: Mr. Sakaram Somayaji, Mr. C. GHiremath, Ms. C. Sita Lakshmi
- Number of participants: 22 (representatives from NGOs, elected members of Nagar Pallika Haridwar and concerned individuals from Uttarkashi, Gangotri, Dehradun and Haridwar, list attached)

170. The public consultation meeting was flagged-off by Mr. Y. K Mishra who welcomed the participants and briefed them about the agenda of the meeting. Further the meeting was carried forward by Mr. Prabhat Raj, who presented the details about the Environment and Social Management Framework, starting from the current status of river Ganga, future government plans, possible assistance by World Bank, overall significance of ESMF, stake-holder participation during the project, etc. A brief summary of all the important points discussed during the meeting are mentioned in the following points:

- A target-oriented, continuous and regular mechanism to create education and awareness among the people, particularly the younger generation about the importance of keeping river Ganga clean.
- Provide proper sanitation facilities, along with efficient operation and maintenance systems, to the tourists and pilgrims (like the Kaavadis) who visit the state during religious occasions and other festivals.

- Active participation from the NGOs, the local communities and the *panchayats* needs to be ensured in the process of planning, implementation and monitoring of the project.
- All efforts should be made to safeguard and minimize any possible negative impact on the socio-cultural beliefs and traditions of the local communities regarding river Ganga, while implementing the sub-projects.
- Regular operation and maintenance mechanism for sustainable management of the facilities created during the sub-projects, along with sufficient budgetary provisions.
- In order to ensure proper cleaning of Ganga, all the tributaries in the state also needs to be covered under the project.
- A common concern among the stakeholders was the lack of any solid waste management plan, as of today, in the district. This project should incorporate suitable mechanisms for proper solid waste management in the river basin.
- To avoid time and cost run-over, the time gap between planning and implementation of the project needs to be minimised. This will also prevent the project to suffer due to price-escalations and consequent budget insufficiency.
- All safety and precautionary measures must be taken to avoid any accidents during the construction phase of the projects. Although the notice of the project along with other details and the specific agenda of the meeting was made available on the website of Peyjal Nigam, the ward members of Nagar Pallika, Haridwar suggested that hard copies of these details be provided to them individually, as internet is not easily accessible by everyone, so as to make their participation more effective.
- Ensure proper coordination between different government agencies/ departments with clear allotment of responsibilities and provide sufficient accountability at each level.

171. The meeting was concluded by Mr. Y. K. Mishra followed by vote of thanks given by Mr. S.C Gupta.

172. Public Consultation Meeting on Environment and Social Management Framework (NGRBA Program) held at Kolkata

Minutes of Meeting

Date: Tuesday, 21 December 2010

Time: 2p.m.

Venue: Unnayan Bhawan, Salt Lake, Kolkata

Attended by:

- Mr. N Dey, Special Secretary, Urban Development Department, Government of West Bengal, Mr. Chunar Dey, DGO, GAP
- Consultancy team from TERI: Dr. Sujana Dhar, Ms Avanti Roy Basu
- No. of participants: 43 (including representatives from Barrackpore, Khardah, Panihati, Kamarhati, Gaeshpur, Konnagar, Serampore, Naihati, Halisahar, Mahestala, Behrampore, Jangipur, Nabadwip, Bhatparamunicipalities, Kolkata Metropolitan

Development Authority, Howrah Municipal Corporation, Chandannagar Municipal Corporation, West Bengal Pollution Control Board, Jadavpur University, ME Directorate and KMW&SA). Signed list of participants attached as AnnexureIV.

173. The public consultation meeting was initiated by Mr N Dey who welcomed the participants and briefed them about the agenda of the meeting. The details of the Environment and Social Management Framework (ESMF), including the future activities planned by the government, possible assistance by World Bank, overall significance of the ESMF, stakeholder participation during the project, etc. were discussed.

174. A brief summary of the important points discussed during the meeting are mentioned below.

- The various river pollution mitigation projects to be implemented under NGRBP, namely sewerage and sanitation schemes, sewage treatment plants (new/ up gradation), solid waste management, industrial pollution control initiatives and river front development schemes were highlighted. He stressed on the importance of the treated sewage water to only flow into the river.
- Mr.Dey presented the genesis of the NGRBP/Namami Gange and informed the participants that the mission is to clean River Ganga by 2020 and to bring the water quality to acceptable limits, which primarily flows through 5 states, namely, Uttar Pradesh, Uttarakhand, Bihar, Jharkhand and WestBengal.
- He described the structure of the NGRBA/Namami Gange, chaired by the Hon'ble Prime Minister of India. The organizational structure of the NGRBP/Namami Gange is as follows: At the national level, NGRBA /Namami Gange is chaired by the Hon'ble Prime Minister of India, and the Empowering Steering Committee (ESC) has been formed. At the state level, SGRBA (State Ganga River Basin Authority) /SMCG is chaired by the Hon'ble Chief Minister of the respective states. Also, State Project Planning and Monitoring Unit/ SMCG will be the state nodal agency and will be formed in West Bengal shortly. The SMCG will be a registered body and will be headed by the Principal Secretary of the State Urban Development Department. The State Executing Agency (SEA) will be formed at the state level. For execution of the project, EA (Executing Agency) – NGO or any state agency. City level monitoring agencies at the district level will also be formed.
- He discussed in length about the purpose of the ESMF (Environment and Social Management Framework) including matters related to land acquisition, entitlement issues, resettlement and rehabilitation of the Project Affected Persons (PAPs).
- The laws and regulations as well as World Bank Safeguard policies applicable to the project were discussed.
- The environmental categorization of the various sub-projects envisaged under the NGRBP was discussed.
- He mentioned that based on proper guidelines, feasibility reports (FR) will be prepared, and after obtaining necessary approvals from the state government and GoI, the DPR will be documented. The modifications will be made at the FR stage, and not at the DPR stage.
- Many activities related to RFD have already been implemented in many parts of the state. He stressed on the need of ladies' changing room (as part of the RFD sub-project) and the need of low-income scheme (as part of the sewerage and sanitation subproject).
- The O&M cost for the first five years will be included within the project cost, and will follow the 70:30 pattern (70% by GoI and 30% by state government). The funds will flow from GoI to SMCG to

EA.

- The representatives of Panihati, Mahestala, Bhatpara, Gayeshpur and Chandan Nagar municipalities raised their queries, which were successfully handled by Mr.ChunarDey (GAP), Prof. A Majumdar (Jadavpur University) and Dr T K Gupta(WBPCB).
- Observations that the different agencies mostly failed to operate and maintain properly the sewage treatment plants e.g. Activated Sludge Process, Trickling Filters etc. constructed under GAP-Phase I and Phase- II were heard. The STPs like Waste Stabilization Ponds (WSP), however installed under GAP Phase I and Phase II operated and maintained satisfactorily. So, efforts must be exerted for installation of WSP for treatment of city sewage. Accordingly land selection (in rural areas) and acquisition should receive priority for interest of the work.
- Prof Mazumder stated that the current phase of GAP envisages installation of sewerage system in the town. The storm water during rain will flow along surfacedrains leading to Ganga. Thus house connections in the sewerage system need guarantee from the municipal authorities. If house connections are not done then sullage will continue to get discharged in the river. Thus house connection is a challenge for the future action plan.
- He also mentioned that recycling and reuse of treated waste water must receive serious attention in the projects. This will ensure use of treated wastewater in agriculture, pisciculture, ground water recharging etc. One has to conceive ecologically balanced wastewater treatment system for abatement of river pollution
- One of the objectives of GAP must be the positive impact on public health, Non- point pollution needs also to be addressed, and more thrust is needed to ensure peoples' participation in the programme.

175. Representatives of certain municipalities expressed their opinions and suggestions during the participatory discussion, and a few experts present in the meeting presented their views accordingly. A brief summary of the interactive session is given below:

- **Panihati Municipality** – Under the Ganga Action Plan, 13 nos of towns were covered in the 1st phase within KMA including Panihati. However, the representative of Panihati Municipality complained that the sewage treatment plant (STP) constructed under GAP I is currently non-functional.
- **Mahestala Municipality** – There are several small-scale industrial units in Mahestala, which discharge untreated/partially treated wastewater directly into the river and pollute it. The representative of Mahestala Municipality opined that due to financial reasons, it is not possible for these small units to set up waste water treatment facilities at an individual level. Also, there is no sewerage network in Mahestala. As a response to this, Dr T K Gupta, Chief Engineer, West Bengal Pollution Control Board (WBPCB) suggested that Common Effluent Treatment Plant (CETP) will be constructed for which land has to be identified. The formalities of land possession (for the CETP) may be discussed in the Committee meeting at a later stage during the project. The smaller industries need to be shifted to the common location so that their wastewater is managed in an efficient manner (through the CETP).
- **Bhatpara Municipality** – There are 18-19 large-scale industries in Bhatpara. The sewerage system in Bhatpara is decades old, with problems like sewerage congestion due to weak O&M practices. Even after making repeated requests to the WBPCB, no actions were taken from their end. Therefore, the problems related to management of industrial wastewater as well as sewage do exist in a big way. Dr T K Gupta assured that he will take necessary actions to address their grievances.

- **Gayeshpur Municipality** – The problems discussed by the representative of Gayeshpur municipality are similar to that of Bhatpara. He added that there is land available in Gayeshpur for any construction that might be required.
- **Chandan Nagar Municipality**–Untreated sewage from various point and non- point sources fall into the river. The representative from Chandan Nagar Municipality was of the opinion that municipal engineers should be involved in the decision making process

176. The meeting ended with the vote of thanks given by Mr Dey. He was grateful for the overwhelming response of the participants for the meeting, and requested their whole- hearted participation throughout the project.

177. Public Consultation on Environment and social management Framework (NGRBA Program), held at Sahibganj, Jharkhand

Minutes of Meeting

Date:23/12/2010

Time: 11:00 am

to 2:00 pm **Venue:** VikashBhawan, D.C. Office, Sahibganj, Jharkhand

Attended by:

- State nodal agency:
 - Mr. K. Ravi Kumar (District commissioner,Sahibganj)
 - Mr. SangramBesra (Deputy Secretary, Urban Development Department)
 - Mr. Gajanand Ram (Associate town planner, Urban Development Department, Jharkhand)
 - Mr. Sisir Kumar Soren (Executive officer, Sahibganj)
 - Mr. Suresh Kumar (Executive officer, panchyat,Rajmahal)
- Consultancy team from TERI: Mr. Sunil Kumar, Ms.G.Mini
- Number of Participants: 75 Representatives from NGOs, elected members of Nagar palika Sahibganj and concerned individuals from Sahibganj and Rajmahal. Signed list of participants attached as Annexure IV.

178. The public consultation meeting was flagged-off by Mr. K. Ravi Kumar (District Commissioner, Sahibganj) and Mr. Gajan and Ram (Associate town planner, Urban Development Department, Jharkhand) who welcomed the participants and briefed them about the agenda of the meeting.

179. Further the meeting was carried forward by Mr. Gajanand Ram, who presented the details about the Environment and Social Management Framework (ESMF), starting from the current status of river Ganga, future government plans, possible assistance by World Bank, stakeholder participation during the project and the overall significance of ESMF. Various agencies involved in implementing the current programme were also explained in detail to the gathering. The guidelines were translated to vernacular and made available to public and also all the documents related to NGRBA program has been uploaded in the MoEF&CC/NMCG website.

180. Mr. K Ravi Kumar and Mr. Gajanand Ram also briefed the gathering about the earlier efforts (GAP I and GAP II) to clean Ganga. The main reasons for the programme to be not so successful were cited as lack of proper operation and maintenance of assets created and comprehensive planning.

The Projects Planned under NGRBA program in Sahibganj and Rajmahal are:

- Sewage treatment system
- Solid waste management
- Improved crematorium
- River front beautification

181. A no. of sub-Projects would be considered under the above mentioned categories. Another important component considered under NGRBA program would be to create public awareness to check activities, which contribute to pollution in the river.

A brief summary of all the important points discussed during the meeting are mentioned below:

- It was informed that in Rajmahal & Sahibganj majority of the population lived in slum areas and they also need to be considered and sensitized while planning any projects/schemes. At the moment the fringe population are availing all the infrastructural benefits without being accountable to any kind of maintenance. Earlier there were only 18 wards in 2001 census and currently there are around 28 wards.
- It was emphasized that the projects have to be location specific and the paying capacity of the community has to be considered while planning the projects.
- Small industrialists were conspicuous by their absence in public consultation meeting, hence it was opined that they should also be included in any further meetings especially the brick manufacturing industries which are normally situated at the bank of the rivers.
- The public wanted to know whether the levy of public contribution/tax for operation and management of the existing projects and upcoming projects under the scheme would be same for the local public and the industrialist. It was clarified that reference of taxation system would be as per State Govt. decision.
- It was expressed that in the upcoming sewerage project there should not be any mixing of drinking water pipelines with sewerage pipelines. Also solid waste should not be diverted towards sewer drainage. In response to the questions raised, the DC clarified the technical details of the drainage system and assured that mixing of drainage and drinking water can not happen.
- A common concern among stakeholders was the indifference towards the rules and regulations when it comes to usage and maintenance of the infrastructure facilities provided. For instance, in spite of some existing drainage network people still continue to dispose their waste into the river, open defecation is common, littering of riverbanks is widespread. So how will the agency ensure discipline when the new projects come up? In response to the questions and concerns raised the D.C. conveyed that part of the problem is due to lack of manpower in Urban Local Bodies. New recruitments will take place and effective measures will be put in place to abide by the rules and regulations.
- It was suggested that projects should not be like as how case it should be fruitful to the entire beneficiary.

- It was suggested that anti erosion projects/ works, which is currently under CWC, should be included in the Ganga main stem project.
- Since Sahibganj is a underdeveloped district levy of tax should be lesser as compared to other major towns and cities. Another justification given for less levy of tax is that Sahibganj being a non-industrial area/zone becomes the least polluter of the river. Hence, “polluter pays “concept has to be considered and higher taxes have to be levied from high polluting towns and cities.
- Currently dead animals are disposed in river Ganga as there are no burial places for animals. Nagar Palika also does not have any disposal place for dead animals.
- Another suggestion was to ensure proper coordination between different government agencies/ departments especially the Drinking Water and Sanitation Department and the urban body while implementing the project.
- The community was keen to know both tangible and in tangible benefits of the project, which was explained to them in detail by the District collector and the Associate town planner.
- People did not voice any concern regarding R&R issue. They mentioned that they are largely satisfied by the existing compensation scheme.
- A common concern voiced by the stakeholders was regarding the difficulty of land acquisition in *khush mahale* state of government. Nearly 1000 acres of land in Sahibganj comes under *khushmahale* state. There is a high possibility that certain portion of the *khushmahal* land would come under project (mainly for
 - laying pipelines, sewerage junctions, pump house, sewage treatment plant etc.) and giving compensation for such land will create problems as these lands are claimed both by the government and the community.
- Peoples were also largely concerned about the decreased river flow of Ganga, and expressed their doubts about the existence of the river in another 10 to 12 years. Most of the queries related to planning and implementation of the project raised were satisfactorily answered by the D.C. and Associate Town planner.

182. The meeting was concluded by Mr. Gajan and Ram followed by vote of thanks, especially to Mr. K.Ravi Kumar (District commissioner) for their presence and valuable suggestions.

183. Public Consultation on Environment and Social Management Framework (NGRBA Program), held at Kanpur, Uttar Pradesh

Minutes of Meeting

Date: 28th December 2010.

Time: 3:00 PM

to 5:30 PM **Venue:** Nagar Nigam, Guest House, Kanpur, Uttar Pradesh

Attended by:

- State Nodal agency (Ganga Pollution Control Unit, U.P Jal Nigam): Mr. C M. Chaudhary (General Manager), Mr. Mukesh Kumar (Project Manager)

- Consultancy team from TERI: Ms. Sonia Grover, Ms. Swati Dabral, Mr. C. G Hiremath
- Number of participants: 38 (Mayor, Commissioner, Additional Municipal Commissioner, elected members of Kanpur Municipal Corporation, representatives from NGOs and Schools, concerned government officials, list attached as Annexure IV).

184. The public consultation meeting was initiated by Mr. C M. Chaudhary who welcomed the participants and briefed them about the agenda of the meeting. Further Mr. Mukesh Kumar presented the scope and objectives of the Environment and Social Management Framework (ESMF). Details about the ongoing and proposed projects under NGRBA program for Kanpur city was also presented during the meeting. A summary of the important points discussed during the meeting are mentioned below:

- Disposal of unburnt or half burnt dead bodies into the river Ganga should be prohibited and promotion of social institutions to perform last religious rites of unidentified and unclaimed dead bodies.
- More crematoriums should be built and existing ones should be renovated to cater to the need of growing population.
- Stakeholders' involvement at both project planning and implementation phase of the projects.
- Provision of proper sanitation facilities during religious occasions and other festivals.
- Inclusion of social development projects in the projects portfolio proposed by NGRBA program.
- Promotion of awareness generation at community and school levels especially in the fields of better solid waste disposal (idols, calendar, flowers, polythenes), promote usage of crematoriums, etc.
- Involvement of local communities (Pandits) for maintaining the river *ghat* to curb pollution. Initiative to start same rituals with the bodies specified for burning in electric crematorium as is done with normal bodies to enhance acceptance of e-crematoria.
- Administrative and financial support for regular operation and maintenance of the projects.
- Establishment of institutional facilities for monitoring and maintaining the minimum flow (at least 50% of the volume generated) in the river, which is currently being interrupted by infrastructural activities (dams, barrages, diversions) on the upstream side of river Ganga.
- Facilitate reuse of treated wastewater for agricultural practices, parks, firefighting, etc.
- Provision of segregated wastewater treatment from industry and domestic sectors.
- Provision of buffer zones (no-man zone)/integrated river front development for protection of river *ghat* against pollution (solid and liquid waste disposal, infrastructural development). Facilitate usage of this buffer zone for afforestation or flower plantation)
- Creation of Ganga Heritage Zone to focus development and protection against pollution.
- Adopt bioremediation techniques for treating wastewater until the new STPs become functional.
- Facilitate proper solid waste management along with the provision of utilisation of compost in agricultural/gardening activities.
- Prohibition of reverse boring of wastewater by the industries which are likely to pollute groundwater.

- Proper coordination between different government agencies during appraisal of the proposals and environmental impact assessment of the projects which may cause time delay for execution.

185. The meeting was concluded followed by vote of thanks given by Mr. C M. Chaudhary.

186. Public Consultation on Environment and Social Management Framework (NGRBA Program), held at Allahabad, Uttar Pradesh

Minutes of Meeting

Date: 29th December 2010.

Time: 3:00 PM to 5:00 PM

Venue: Sadan Hall, Nagar Nigam, Allahabad, Uttar Pradesh

Attended by:

- State Nodal agency (Ganga Pollution Control Unit, U.P Jal Nigam): Mr. A K Mittal (General Manager)
- Consultancy team from TERI: Ms. Sonia Grover, Ms. Swati Dabral, Mr. C. G Hiremath
- Number of participants: 22 (Mayor, elected members of Nagar Palika Allahabad, representatives from press and concerned government officials, Signed list of participants attached as Annexure IV.

187. The public consultation meeting was flagged-off by Mr. A K Mittal who welcomed the participants and briefed them about the agenda of the meeting along with details of upcoming and proposed projects under NGRBA program. Further the meeting was carried forward by TERI's representatives, who presented the scope and objectives of the Environment and Social Management Framework and requested participants to share their concerns/suggestions with respect to the framework. A brief summary of the important points discussed during the meeting are mentioned below:

- A continuous and regular mechanism of creating awareness among community and school children's through street plays, public and religious gatherings (Mela), displaying banners, etc.
- Provision of proper sanitation facilities along with efficient operation and maintenance systems during religious occasions and other festivals.
- Community involvement needs to be ensured during the project initiation and implementation stage of the project.
- The implementation activities of the projects must be completed in time to avoid the problems of traffic diversions, public congestions, and commercial displacement especially during *MahaKumbhMela*.
- Promote reuse of treated wastewater for irrigation and gardening purposes.
- Mechanism for proper solid waste management along the banks of both river Ganga and Yamuna.
- Provision of wastewater treatment facility at Dhobi Ghat for caustic soda based effluents.
- Imposing strict regulation on upcoming new colonies to establish their own STPs.
- Ensure proper site selection for pumping stations along with efficient operation and maintenance of pumping stations in order to avoid backflow or clogging of sewers.

- Request to start sewer and drainage projects simultaneously and completed in time to avoid mixing of wastewater with drainage water.
- Ensure technically feasible solutions while designing the alignment of sewer lines and dimensions of the sewer to cater the needs of growing population.
- Request to maintain minimum size of the sewer more than 150mm to avoid clogging of sewers.
- Ensure sufficient distance/depth while aligning the sewer lines adjacent to the water supply lines to avoid contamination of drinking water.

188. The meeting was concluded followed by vote of thanks by Mr. A K Mittal

189. Public Consultation on the Environmental and Social Management Framework (ESMF) for the National Ganga River Basin Authority (NGRBA Program) held at Patna, Bihar

Minutes of Meeting

Date: 04/01/2011

Time: 03:00 pm to 5:00 pm

Venue: Conference hall, urban development office, Vikas Bhawan, Patna, Bihar.

Attended by:

- State nodal agency:
 - Dr. D.K. Shukla (Special Secretary, Urban Development and Housing Department, Government of Bihar)
 - Mr. A.K. Sharma (CGM, Bihar Urban Infrastructure Development Corporation Ltd. Bihar)
 - Mr. P.U. Asnani (Team leader, UTAST-SPUR, Bihar)
 - Mr. Satish Chand Agrawal (Senior Environment and Public Health Engineer, SPUR-UTAST, Bihar)
 - Mr. Sanjay Shakya (Infrastructure and Procurement specialist, SPUR- UTAST, Bihar)
 - Mr. Chand Rehmani (BUDA, Urban Development and Housing Deptt.)
- Consultancy team from TERI: Mr. Sunil Kumar, Mr. Avneesh Nayal
- Number of Participants: 26 Representatives from NGOs, elected members of Nagar Palika and concerned individuals from Patna and other districts of Bihar. Signed list of participants attached as Annexure IV.

190. The public consultation meeting was flagged-off by Mr. Satish Chand Agrawal (Senior Environment and public health engineer, SPUR-UTAST, Bihar), and Mr. P.U. Asnani (Team leader, UTAST-SPUR, Bihar) who welcomed the participants and briefed them about the agenda of the meeting.

191. Further, the meeting was carried forward by Mr. P.U. Asnani, who presented the details about the Environmental and Social Management Framework (ESMF), starting from the current status of river Ganga, future government plans, possible assistance by the World Bank, stakeholder participation during

the project and the overall significance of the ESMF. Various agencies involved in implementing the current programme were also explained in detail to the gathering.

192. The guidelines were translated to vernacular and made available to public and also all the documents related to NGRBA program have been uploaded onto the MoEF&CC/NMCG, department website.

193. Mr. P.U. Asnani and Mr. Satish Chand Agrawal also briefed the gathering about the upcoming projects and list of towns selected under the NGRBA program. Total 21 towns have been selected from 9 districts of the Bihar state.

194. The upcoming Projects Planned under NGRBA program in Bihar are:

- Sewage treatment plants including Dhobi Ghat and Community toilet
- Integrated Solid waste management
- Improvement of crematorium
- River front development

195. A number of sub-projects would be considered under the above-mentioned categories. Another important component considered under NGRBA program would be to create public awareness to check river-polluting activities

196. A brief summary of all the important points discussed during the meeting are mentioned below:

Social and organizational concerns/suggestions:

- Awareness about the program projects and sub-projects must be generated to a large extent in order to ensure implementation and effectiveness.
- For all projects, elected representatives of the state must lead the way and communicate efficiently with the public.
- Documents and messages delivered to the public must be made in simple language and easily comprehensible. This will ensure that they are made aware, will respond positively to their duties and will contribute to the implementation of projects.
- It is absolutely essential for good communication and transparency between the elected representatives (ward councilors, mayor) and government officials to ensure efficient execution of the projects.
- A higher level of cooperation and contribution from the State Pollution Control Board will be required.
- 'Livelihood links' that exist with the Ganga River and the related projects should be highlighted. For this, a task force or Ganga Panchayat should be constituted. These task force units would partake in Capacity Building of locals and training of Urban Local Bodies.
- Before implementation of projects, the location of projects must be consulted with the local people of the project-affected area.
- Local Institutional support could be taken for project planning and development.
- Encroachment of lands and construction of residential complex should not take place in the River Catchment areas.

Environmental and Technical concerns/suggestions:

- Solid Waste Management related projects must implement a door-to-door collection system in order to reduce the number of waste collection points. All efforts to be made to make the town a bin free city.
- Effluent discharge limits for slaughterhouses along the riverbanks should also be established. In addition, these slaughterhouses must be made modern and more environment-friendly. The State Pollution Control Board should strictly implement the Environment Protection Act particularly for slaughter houses discharging their waste in to river Ganga without treatment.
- Various check dams could be built on the tributaries of the river Ganga in order to achieve better flood and disaster management. In this way, formation of islands in the course of Ganga can also be stopped. In addition, small hydropower plants could also be setup.
- There are various 'Arsenic-zones' adjacent to the riverbanks that must be addressed.
- A master plan is to be developed for the entire Ganga River Basin using Remote Sensing and GIS under the NGRBA program.
- Integrated River Basin projects should also be developed under NGRBA program.
- The demarcation of 'Heritage Zones' must be done about 1-2km adjacent to the river bank area. These zones will be protected and could serve as recreational and scenic areas.
- Technical trainings should be provided to concerned officials and elected members for better implementation of the projects.

The SPUR-UTAST on behalf of Urban Development Department has submitted comments on ESMF (copy attached).

Finally the meeting was concluded by Mr. P.U. Asnani followed by vote of thanks.

197. Consultation with the SMCGs and EAs on the revised ESMF for Namami Gange Programme held at New Delhi on 04.08.2017.

Minutes of Meeting

Date: 04/08/2017

Time: 10:30 am to 1:30pm

Venue: Conference Room, National Mission for Clean Ganga, New Delhi

Attended by:

- Dr. Nikhil Ranjan, Monitoring and Evaluation Officer, SMCG,Bihar
- Shri R.B.Singh, Senior Procurement Specialist, SMCG,UP
- Shri BiplabDebnath, EE/KMDA, Govt of WestBengal
- Shri Kinkar Sarkar, EE/KMDA, Govt of WestBengal
- Shri Faizuallah Khan, Enforcement Coordinator, NMCG
- Shri K.K. Sapra, Under Secretary,NMCG,MoWR,Rd&GR
- Shri Vijay Yadav, Asst. Civil Engineer,NMCG

- Dr. Pravin Mutiyar, Director (T-III), NMCG
- Shri Mohd. Najeeb Ahsan, Sr. Social Management Specialist, NMCG
- Shri SaumyasibMukhopadhyay, Sr. Environmental Specialist, NMCG

198. A brief presentation of the revision of ESMF was given by the NMCG's Environmental and Social Experts. The provisions of revised land acquisition and R&R acts were discussed in length and new entitlement matrix was also explained. Further the provisions made in the revised ESMF for implementation of (i) Retro-financing of projects and (ii) Hybrid Annuity based PPP projects were discussed in length.

- For the Hybrid Annuity Based projects, it was agreed that at the DPR stage only Environment and Social Due Diligence Report (ESDDR) along with Environment and Social Management Action Plan (ESMAP) will be prepared.
- The ESDDR will cover the basis nature of the projects, a very brief description of the environment and present status along with screening checklist and an analysis of environmental and social issues associated with the project.
- The ESMAP to describe the future action plan to be taken during the detailed design stage by the Hybrid annuity operator like:
 - Various regulatory clearances (e.g. environmental clearance, forest clearance, NOC etc. as applicable)
 - Preparation of Environmental and Social Assessment(ESA)/EIA
 - Resettlement Action Plan (RAP), as applicable
 - other actions, and management measures to be implemented by the SPV
/ PPP Concessionaire / operator

199. 125 (A) the public consultation and disclosure process will continue during project implementation. The draft EIA/EMP/RAP etc. for the specific sub-projects will be discussed with the affected communities and the final documents will be placed on the websites of the NMCG and the SMCs. The copies of the EMP and RAP will also be placed at the offices of the executing agencies, district magistrate and contractor's office. The executive summary of the EIA and RAP will also be translated into local language and placed in the office of the Gram Panchayat of the affected villages.

End Notes

Definitions

The following definitions are used in the documents:

Cut-off date: In the cases of land acquisition affecting legal titleholders, the cut-off date would be the date of issuing the preliminary notice u/s 11(1) of the RFCTLARR Act, 2013. In cases where people lack title, the cut-off-date shall be the date of start of the Census survey undertaken by the project authority.

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.

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.

Affected family means:

- (i) A family whose land or other immovable property has been acquired;
- (ii) a family which does not own any land but a member or members of such family may be agricultural labourers, tenants including any form of tenancy or holding of usufruct right, share-croppers or artisans or who may be working in the affected area for three years prior to the acquisition of the land, whose primary source of livelihood stand affected by the acquisition of land;
- (iii) the Scheduled Tribes and other traditional forest dweller who have lost any of their forest rights recognised under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006 due to acquisition of land
- (iv) family whose primary source of livelihood for three years prior to the acquisition of the land is dependent on forests or water bodies and includes gatherers of forest produce, hunters, fisher folk and boat-rent and such livelihood is affected due to acquisition of land;
- (v) a member of the family who has been assigned land by the State government or the Central Government under any of its schemes and such land is under acquisition;
- (vi) a family residing on any land in the urban areas for preceding three years or more prior to the acquisition of the land or whose primary source of livelihood for three years prior to the acquisition of the land is affected by the acquisition of such land.

Definition of Family: "family" includes a person, his or her spouse, minor children; minor brothers and minor sisters dependent on him: Provided that widows. Divorcees and women deserted by families shall be considered separate family.

Displaced Family: "displaced family" means any family, who on account of acquisition of land has to be relocated and resettled from the affected area to the resettlement area;

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.

Non-Title Holder: 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.

Or a person who is landless and has settled on publicly owned land without permission and has been occupying publicly owned building without authority prior to the cut-off date.

Below 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.

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;

Entitled Person: person adversely impacted by the project and is entitled to some kind of assistance as per the project entitlement framework

Titleholders (THs): Persons who possess legal documents in support of claims made towards ownership of structure or land are titleholder.

Sharecroppers: Persons who cultivate land of a titleholder on certain conditions

Land owner: "land owner" includes any person,-

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

Interested Person: "person interested" means-

- (i) all persons claiming an interest in compensation to be made on account of the acquisition of land under this Act;
- (ii) the Scheduled Tribes and other traditional forest dwellers, who have lost any forest rights recognised under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006;
- (iii) a person interested in an easement affecting the land;
- (iv) persons having tenancy rights under the relevant State laws including share- croppers by whatever name they may be called; and
- (v) any person whose primary source of livelihood is likely to be adversely affected;

ANNEXURES

Annexure I

Guidance on EIA of High impact category Sub-Project

(To be finalised by SMCG with inputs from NMCG/ MoWR, RD&GR as applicable)

Introduction

High impact category investments 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 and 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.

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 Guideline

- 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 has to be obtained by the SGRBA/contractor/relevant implementing actor.
- To assist the SMCG/ 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 SMCG and NMCG.

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 investments or investments.
- 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 and training, organizational 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 Guideline, baseline conditions, significant environmental impacts, salient points of the analysis of alternatives, salient mitigation and monitoring measures, and budget.
- Project Description-Concise description of the proposed project and its geographic, ecological, social and temporal context.
- Policy, Legal and Administrative Guideline - 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 and 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 Guideline 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 and 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 monsoons, etc.
- 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 and participation - due to be incurred during the construction and operational phases.

Annexure II

Generic Environmental Guidelines / Management Plan for Low impact category Investments

(To be finalised by SMCG with inputs from NMCG as applicable)

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
I. Sewerage and Sanitation Investments				
A. Design and Development Phase				
Land Acquisition **	Loss of tree cover	Undertake afforestation in nearby areas	ULB/ Project Implementing Agency	SMCG/ NMCG
Treated Water Disposal into nearby stream ***	Pollution of stream water and other water bodies receiving STP discharges due to reduction in efficiency or non working of STP	- Ensure efficient working condition. – Choice of treatment process, construction technique, equipment and skilled operation and supervision critical to maintain effluent quality compliance. - The treated water quality shall comply with the standards laid down by the state pollution control board for disposal onto the land, water body or for irrigation use.	ULB/ Project Implementing Agency	SMCG/ NMCG
Sludge Disposal***	Disposal of sludge leading to contamination of land and water.	Providing adequate and safe sludge disposal facilities	Design Consultant, ULB/ Project Implementing Agency	SMCG/ NMCG
Provision for Accidental leakages/ bursts **	Flooding of the nearby areas with untreated sewage in event of accidental leakages or bursts	The Design Consultants should design for bypass arrangements, to discharge untreated sewage.	Design Consultants and EA	SMCG/ ULB
	Low lying areas in the site, which can get flooded during monsoons	Provide proper drainage arrangements so that the water does not stagnate on the site	Design Consultants and EA	SMCG/ ULB
Location of STP*	Nuisance hazards to neighboring areas.	Careful planning and design of STP with adequate buffer zones. Future growth of the Surrounding areas shall be considered.	Design Consultants and EA	SMCG/ ULB
Developing sewage pumping station*	Noise and odour nuisance to surrounding areas.	- Select appropriate location away from sensitive locations such as schools and hospitals. - Provide sufficient buffer areas - Follow standard codes for selection pumps and other	Design Consultants and EA	SMCG/ ULB

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
		apparatus. Use less noise making and easy to operate equipment.		
<i>B. Construction Phase</i>				
<i>Excavation, cutting and filling operations***</i>	Soil and water contamination by improper disposal of construction and demolition waste.	Ensure immediate transportation of accumulated waste to an identified site.	Contractor/ Project Implementing Agency	SMCG/ ULBNMCG
	Damage to standing crops due to construction activities.	- Construction activities shall be planned so as not to damage any crops. In case if it is inevitable provide monetary compensation to the owners - Immediately transport accumulated construction waste to a site identified for the purpose.	Contractor / Project Implementing Agency	SMCG/ ULBNMCG
	Temporary flooding due to excavation during monsoons.	Provide suitable arrangements for drainage control.	Contractor / Project Implementing Agency	SMCG/ /NMCG
	Noise, vibration and dust from construction activities.	Use of less noise generating equipment for all activities, provision for personal protective equipment, ear muffs, etc. for construction; avoid construction activities during nights; and sprinkle water on site and remove excess matter from the site as soon as possible.	Contractor / Project Implementing Agency	SMCG/ /NMCG
	Safety hazards to labor.	Provide adequate safety precautions such as helmets, safety shoes, gloves, etc.	Contractor / Project Implementing Agency	SMCG/ / NMCG
Laying of sewer network *	Spillage of fuel and oil	Store tanks and drums for excess capacity; forbid pouring into soils or drains; enforce adequate equipment maintenance procedures	Contractor / Project Implementing Agency	SMCG/ / NMCG
	Noise and vibration disturbances to residents and businesses	Establish schedule and other specific restrictions; limit work to daylight hours as possible; use of less noise generating equipment, proper maintenance	Contractor / Project Implementing Agency	SMCG/ / NMCG
Laying of sewer network *	Dust generation	Water sprinkling, removal of excess materials, cleaning of sites upon completion of activities.	Contractor / Project Implementing Agency	SMCG/ / NMCG
	Reduced pedestrian and vehicle access to residences and	Establish work sequence and methods to minimize access disruption; provide	Contractor / Project Implementing	SMCG/ / NMCG

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	businesses	alternative safe access as possible; temporary bridges and crossings, detours and walkways.	Agency	
	Temporary water supply interruptions	Establish coordination procedures for cut-off; minimize time for replacement operations; and appropriate scheduling as necessary.	Contractor/ Project Implementing Agency	SMCG/ /NMCG
	Increased traffic inconvenience (emissions, congestions, longer travel times)	Use alternate traffic routing; ensure coordination with local authorities; routine control and maintenance of equipment.	Contractor/ Project Implementing Agency	SMCG/ and Traffic Police
Construction Camps*	Health impacts due to absence of housing and sanitation facilities in labour camps.	Provision of appropriate housing, water supply, and sanitation facilities.	Contractor / Project Implementing Agency	SMCG/ NMCG
	Impacts on surrounding environment due to improper drainage and solid waste management facilities in construction camps.	Provide proper temporary drainage and solid waste collection and disposal facilities at the construction site.	Contractor / Project Implementing Agency	SMCG/ /NMCG
C. Operation Phase				
Treatment and Disposal ***	Impairment of receiving water quality in surface/sub-surface source due to inadequate /inefficient Treatment. Contamination groundwater supplies due to leaching and impact on soil and agriculture	- Monitor the treated sewage/effluent quality and ensure compliance with PCB standards for effluent disposal into surface water bodies, on land or for the agricultural use. - The treated water quality shall comply with the standards laid down by the state pollution control board for disposal onto the land, water body or for irrigation use.	Operator/ EA	SMCG/ /NMCG
Treatment and Disposal ***	Problems arising due to bad odour, insects, polluted air, noise pollution, etc.	Provide buffer zones in the form of green belt around the STP; to be ensured during the design and development phase itself.	Operator/ EA	SMCG/ /NMCG
	Indiscriminate disposal of sludge leading to contamination of land and soil.	Prepares a sludge disposal plan and adheres to the same.	Operator/ EA	SMCG/ /NMCG
	Health and safety of workers due to the release of toxic gases	Ensure safe operation and maintenance practices are followed,	Operator/ EA	SMCG/ /NMCG

Activity	Potential Negative Impact/Concern	Mitigation Measures	Responsible Agency for Mitigation	Monitoring Agency
	and hazardous material.	and plans for emergencies are in place.		
	Reduced land values in nearby areas and aesthetics affected.	Adequate buffer zones during development and construction phase should mitigate the affect considerably.	EA	SMCG/ /NMCG

Note: *** denotes – Significant Impact; ** Denotes-Moderate Impacts and *- Minor Impact.

Annexure-IIA: Sample EMP for the Sewage Treatment Plant

Activity	Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
Sewerage and Sanitation Investments					
A. Design and Development Phase					
Sewage Treatment plant	Treated water disposal into nearby stream	Pollution of received water body (river) or land due to inefficient treatment or non- operation of STP	Temporary	- The treated water quality shall comply with the prescribed standards of the bid document and other applicable conditions of consent to establish issued by the state pollution control board. - Selection of best available sewage treatment technology with High BOD removal efficiency. - Ensuring development and compliance to standard operation and maintenance practices. - Provision of effective screening at inlet of STP for removal of grit, fine plastics and other suspended solids - Provision of effective separation and controlled disposal of digested sludge - Provision effective disinfection before discharge of treated water for irrigation or to river	DBO Operator
	STP Breakdown	Discharge of untreated sewage leading river pollution.	Temporary	Provision of adequate holding capacity adequate for storage of sewage to prevent flow of untreated sewage to river.	DBO Operator
	Flooding of STP area	Rain water may flood the STP area in absence of adequate provision of diverting rain water flow towards STP from periphery area.	Temporary	Suitable drainage provision shall be made to divert the rain water likely to be accumulated from peripheral catchment area of STP, to natural drainage stream or area.	DBO Operator
	Sludge disposal	Disposal of sludge leading to contamination of land and water.	Permanent	- Efficient Sludge dewatering with minimum land involvement shall be adopted. - Provision shall be made for intermittent	DBO Operator

Activity	Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
				storage of digested sludge at STP site. • Digested Sludge from a waste treatment plant may constitute a hazardous and nonhazardous waste, therefore periodic testing of Sludge to assess the content of hazardous chemical should be identified (as per MOUD manual 2016) before its final disposal at the identified dumping site of MC. Dumping shall be done when the authorized land fill site is not available nearby to project region. • The digested sludge shall be utilised as manure or disposed to suitable site as approved by DBO engineer. If disposal is made for landfill, the site shall be located away from habitation, and water bodies and shall be pre-approved by concerned authorities like Municipal corporation, Pollution Control Board or urban development authority.	
Provision for safety of workers and safe operation of STPs	• Accidents leading to injury or death of workers (Fall of workers from Height, Fall into deep water tanks, Short Circuiting) • Accidental slip, trip and fall in walk ways or work areas • Fire • Exposure to toxic gas such as chlorine		Permanent	• Ensure adequate provision of Handrails on both sides of walkways close to deeper tanks and STPs need to be ensured; • All electric switches (including unit specific on-off switches installed at respective units) and panels should have adequate protection from rain water to prevent short-circuiting • Proper earthing with installation of earth circuit breakers shall be made • Walkways designs shall be made with proper Slope to avoid accumulation of rain water. Material handling and storage shall be so designed that walk way surface remains free	DBO Operator

Activity	Potential Impact/Concern	Negative	Duration	of	Mitigation Measures	Responsible agency
Sewage Pumping Station					from wet or oil surface situation to prevent slips, trip fall accidents. • Provision of interlock system to either stop STP or divert untreated effluent to holding tanks in case of short circuiting, or mall functioning of STP • Prepare emergency preparedness plan including identification of assembly area incase of fire	
	Location of STP	• Noise/Odour/fly nuisance hazards to neighbouring areas. • Cutting of Trees	Permanent		• Ensure minimum noise generation at pump station in STP; • Minimize Tree cutting if involved. • Tree plantation of at least two row around the periphery of STP site and landscaping to prevent spread of bad odour with large canopy/ broad leaves trees like Sesum, Neem, Bargad, Teak, Sal,etc. • Accumulated sludge and solid waste to be clearedwithin24hoursandsprayingofsuitable herbicides on accumulated sludge/solid waste to reduce odour.	DBO Operator
	Pumping of sewage to STP	• Noise and odour nuisance hazards to neighboring areas. • Cutting of Trees	Permanent		• Ensure minimum noise generation at pump station in SPS by use of less noise generating equipment meeting prescribed noise standards as applicable and enclosed generators. • Minimize Tree cutting if involved. • Tree plantation of at least two row around the periphery of SPS site and lands caping to prevent • Accumulated sludge and solid waste to be • Cleared at short intervals and spraying of	DBO Operator

Activity	Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
				suitable herbicides on accumulated sludge/solid waste to reduce odour • Provision • switching off equipment when not in use	
B. Construction phase					
Sewage treatment plant and Sewage pumping station	Excavation	Loss of topsoil due to excavation activities.	Temporary	• Excavation shall be planned in such a manner that such that no damage occurs to existing structures. • Top soil should be separately stockpiled and utilized for green belt development landscaping after completion of work	DBO Operator
		Construction waste	Temporary	• All the associated construction waste should be properly managed by storing and disposing off at suitable refusal sites approved by DBO engineer.	DBO Operator
		Nuisance due to domestic solid waste disposal	Temporary	• Provide two bins for recyclable and non-recyclable wastes. • Ensure that recyclable and non-recyclable wastes are collected in segregated manner in these bins before disposal. Recyclable material should be sold. Non-recyclable material should be disposed to designated land fill area of the city. • Provide adequate sanitation facility for workers at construction sites.	DBO Operator
		Dust Generation due to construction activities	Temporary	• Excavated material transported by trucks will be covered and/or wetted to prevent dust nuisance. • Suppressing dust generation by spraying water on stockpiles and unpaved movement areas • Water sprinkling over excavated areas, unpaved movement areas and stockpiles.	DBO Operator

Activity	Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
				• Transportation of loose construction material through covered trucks. • Use dust curtains (polysheets/ sheets) around the construction area for containing dust spread. • Construction equipment must comply with pollution norms and carry Pollution under Control certificate.	
	Temporary flooding due to uneven dumping of construction waste		Temporary	• The construction waste material should be stored on the higher areas of the site and or areas where water may accumulate creating flooding like situation	DBO Operator
	Temporary flooding due to uneven dumping of construction waste		Temporary	• The construction waste material should be stored on the higher areas of the site and or areas where water may accumulate creating flooding like situation	DBO Operator
	Spillage of fuel and oil		Temporary	• Care to be taken to store fuel and oil (if required) at a place away from any drainage channel/nalla preferably to be stored in drums mounted on a concrete paved platform with slop draining to small spills collection pit.	DBO Operator
	Noise and vibration disturbances to residents and businesses		Temporary	• Construction activities to be carried out in day time with prior intimation to local residents and shopkeepers. • Use of low noise and vibrating equipment (such as enclosed generators with mufflers, instruments with built in vibration dampening and improved exhaust), to meet standards as prescribed by CPCB¹⁰. • Provision of protective equipment (PPE) like ear	DBO Operator

¹⁰ <http://moef.gov.in/citizen/specinfo/noise.html>

Activity		Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
General: safety during construction	Safety and Health Hazard	Safety hazards to labours and public	Temporary		- muffs and plugs for construction workers.. - Provision of noise barriers as feasible in inhabited areas, particularly near sensitive zones like hospitals, schools etc. - DG set to be fitted acoustic enclosure.	DBO Operator
					- Comply with the Occupational health and Safety act of India - Ensure that the contact details of the police or security company and ambulance services nearby to the site. - Ensure that the handling of equipment and materials is supervised and adequately instructed. - Follow safe practices for working at height or confined area or underground working for safety of workers - Erect warning signs/ tapes and temporary barriers and/or danger tape, marking flags, lights and flagmen around the exposed Construction works warn the public and traffic flow of the inherent dangers - Provide adequate PPE to workers such as helmets, safety shoes, gloves, dust masks, gumboots, etc. to Workers - Provide handrails on both sides of walkways close to deeper tanks and STPs need to be ensured; - Smaller on and off switches at STP units to be installed with protection from rain water to minimize electrical short circuit; - Monthly reporting of all accidents and immediate reporting to DBO engineer and owner.	
Construction camps (if	Sanitation	Nuisance due to absence of facility of sanitation and solid waste	Temporary		Labour camp if provided, must have adequate provision of shelter, water supply, sanitation and	DBO Operator

Activity		Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
adopted)					solid waste management	
C. Operation phase						
Sewage treatment plant and Sewage pumping station	Treatment and Disposal of Treated Water and Sludge	River, land or ground water pollution due to discharge of untreated or partially treated sewage due to inadequate or inefficient STP operations.		Permanent	• Monitor the treated sewage quality and ensure compliance with PCB standards for effluent disposal into surface water bodies, on land or for the agricultural use. • Follow standard operating procedures for operation and maintenance. • Undertake periodic audit as per these Procedures. • Comply with all applicable condition of consent to operate • Quarterly monitoring of influent sewage, treated sewage, upstream and downstream point of treated sewage disposal point to river	DBO Operator
				Problems arising due to bad odour, insects, polluted air,	• Maintain the green belt as per provision of design to prevent spread of bad odour with large canopy/ broad leaves trees like Sesum, Neem, Bargad, Teak, Sal, etc. • Accumulated sludge and solid waste to be Cleared within 24 hours and spraying of suitable herbicides on accumulated sludge/solid waste to reduce odour. • Quarterly monitoring of Ambient Air Quality with respect to PM10, PM2.5, Sox and NOx, CO and Odour at three locations (at STP site, minimum 500 m away from STP site in up-wind and down-wind direction of STP area.	DBO Operator
				Increase in Ambient Noise Level and discomfort to neighbouring people	• Proper handling and regular maintenance of operating machines including pumps, generators, air diffusers,etc. • Quarterly Monitoring of Ambient Noise level to check compliance to standards.	DBO Operator

Activity		Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
					Quarterly monitoring of ambient noise levels (day and night) at same locations as of ambient air monitoring	
		Indiscriminate disposal of sludge leading to contamination of land and soil.		Temporary	- Prepares sludge disposal plan as per desire stage provisions and guidelines and adhere to the same. - Ensure proper functioning of STP for digestion of sludge and ensure adequate functioning of dewatering units for efficient functioning of system	DBO Operator
		River, land or ground water pollution due to discharge of untreated or partially treated sewage due to inadequate or inefficient STP operations.		Temporary	- Ensure compliance with PCB standards for effluent disposal into surface water bodies, on land or for the agricultural use. - Follow standard operating procedures for operation and maintenance. - Undertake periodic audit as per these procedures. - Comply with all applicable condition of consent to operate	DBO Operator
Sewage Pumping Station	Waste Handling	Bad odour, Health hazard and public nuisance		Temporary	- Provision for regular clearance of sludge and solid waste to minimize odor nuisance - Ensure maintenance of Green belt as planned - Periodic disposal of accumulated sludge/solid waste to designated land fill sites of the city.	DBO Operator
General Safety	Workers exposure to hazardous materials/ situations	Serious/health/ safety hazards		Temporary	- Ensure availability of PPE for maintenance workers. - Follow safety measures and Emergency preparedness plan evolved at design stage	DBO Operator

Annexure-IIA: Sample EMP for the Sewerage Network

Activity	Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
Sewerage and Sanitation Investments					
A. Design and Development Phase					
Sewerage Network (Trunk Sewer Line)	Accidental leakages/ bursts	- Due to accidental burst or leakage of sewers, flooding of the nearby areas - Backlogging due to unexpected heavy flowrates	Temporary	- Designing sewers with adequate capacity and flow velocity - Provision for Regular inspection and maintenance of the sewers - Preparation of safety and Emergency Preparedness plan	DBO Operator
Sewage Pumping Station	Location of Sewage Pumping Station and Pumping of sewage from District C to STP	- Noise and odour nuisance hazards to neighboring areas. - Cutting of Trees	Permanent	- Ensure minimum noise generation at pump station in SPS by use of less noise generating equipment meeting prescribed noise standards as applicable and enclosed generators. - Minimize Tree cutting if involved. - Tree plantation of atleast two row around the periphery of SPS site and landscaping to prevent spread of bad odour with large canopy/ broad leaves trees like Sesum, Neem, Bargad, Teak, Sal,etc. - Accumulated sludge and solid waste to be cleared at short Intervals and spraying of suitable herbicides on accumulated sludge/solid waste to reduce dour.	DBO Operator
				Provision for regular maintenance and switching off equipment when not in use;	
B. Construction phase					

Activity		Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
Sewerage (laying of sewers) and Sewage Pumping station	Excavation, cutting, back filling, compaction and construction operations	Damage to underground utilities like water, gas line, electricity and telephone conduits, etc. due to construction activities.		Temporary	Identify existing underground other utility structures, lines through available records and in consultation with concerned authorities and plan construction activities accordingly to minimize damage to such utilities. These underground utilities encountered in excavating trenches carefully shall be supported, maintained and protected from damage or interruption of service until backfillis complete and settlement has taken place.	DBO Operator
		Accidents/ damages due to erosion/ sliding of vertical sides of excavated trenches while places the pipes		Temporary	- Maintaining the excavation by Shoring trench sides by placing sheeting, timber shores, trenchjacks, bracing, piles, or other materials - Exposed surface shall be resurfaced andstabilized. Exposed surface will be resurfaced and stabilized by making the sloping sides of trench to the angle of repose at which the soil will remain safely at rest.	DBO Operator
		Generation of substantial debris, top soil and muck during construction		Temporary	- Top soil shall be preserved and maybe used for agricultural purpose or development of city parks. - Soil and debris may be managed for planned land filling and landscaping; - Debris may be suitably stored to filling back the excavated areas after placing the trunk sewer lines.	DBO Operator
		Dust Generation (Air Pollution) due to excavation, cutting, back filling and compaction operations		Temporary	- Water sprinkling over excavated areas, unpaved movement areas and stockpiles. - Transportation of loose construction material through covered trucks.	DBO Operator
					- Use dust curtains (polysheets/ sheets) around the construction area for containing dust spread at SPS building construction site. - Construction equipment must comply with pollution norms and carry Pollution Under Control certificate.	

Activity	Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
	Noise and vibration disturbances to residents and businesses		Temporary	- Construction activities to be carried out in day time with prior intimation to local residents and shopkeepers. - Construction work near schools and colleges to be carried out during vacations and work near hospitals to be completed on priority basis (in shorter time period with alternate provision of traffic, accessibility of exit/entry gates etc.). - Use of low noise and vibrating equipment meeting Prescribed noise standards. - Provision of protective equipment (PPE) like ear muffs and plugs for construction workers.. - Provision of noise barriers in inhabited areas, particularly near sensitive zones like hospitals, schools etc. - DG set to be fitted acoustic enclosure.	DBO Operator
	Temporary flooding due to excavation during monsoons or blockage of surface drains		Temporary	- Stockpiled areas to be bordered by berms; - Stockpiles to be done in high areas to avoid flow in storm water run-off channels and erosion;	DBO Operator
	Increased traffic inconvenience (emissions, congestions, longer travel times, blockage of access)		Temporary	- Alternate traffic routing must be adopted in consultation with concerned traffic police authorities. Proper traffic planning be made for narrow lane areas. - Work should to be completed on priority near business and Market place to minimize business loss.	DBO Operator
				- Care should be taken to minimize congestion and negative impacts at schools and hospitals. Safe access shall be maintained to these places during construction. - Provide temporary crossing/ bridges as may be required to facilitate normal life and business	

Activity	Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
	Settlement of backfilled area after construction		Temporary	- The backfilling material shall be free from petroleum products, slag, cinders, ash or other material. - Backfilling activity shall be completed within five days of laying of sewer. - Proper compaction as per the soil condition and retain the original level of alignment and grade.	DBO Operator
	Spillage of fuel and oil		Temporary	Care to be taken to store fuel and oil (if required) at a place away from any drainage channel/nalla preferably to be stored in drums mounted on a concrete paved platform with slop draining to small spills collection pit.	DBO Operator
	Nuisance due to solid waste disposal		Temporary	- Provide two bins for recyclable and non-recyclable wastes. - Ensure that recyclable and non-recyclable wastes are collected in segregated manner in these bins before disposal. Recyclable material should be sold. Non-recyclable material should be disposed for designated land fill area of the city. - Provide adequate sanitation facility for workers at construction sites.	DBO Operator

Activity		Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
General: safety during construction	Accidents	Safety hazards to labours and public		Temporary	- Comply with the Occupational health and Safety act of India - Ensure that the contact details of the police or security company and ambulance services nearby to the site. - Ensure that the handling of equipment and materials is supervised and adequately instructed. - Erect warning signs/ tapes and temporary barriers and/or danger tape, marking flags, lights and flagmen around the exposed construction works warn the public and traffic flow of the inherent dangers. - Provide adequate safety precautions such as helmets, safety shoes, gloves, dust masks, gumboots, etc. to workers Monthly reporting of all accidents and immediate reporting to DBO engineer and owner.	DBO Operator
	C. Operation phase					
Sewer line	Leakage/ overflows	Water pollution and possibility of mixing with water supply line		Temporary	Regular monitoring of sewer line and manholes for visible leakages/overflows. Immediate repair shall be carried out to plug the leakages. Restore these were and other utility services if damaged due to leakages.	DBO Operator
Sewage Pumping Station	Waste Handling	Bad odour, Health hazard and public nuisance		Temporary	- Provision for regular clearance of sludge and solid waste to minimize odor nuisance - Ensure maintenance of Green belt as planned Periodic disposal of accumulated sludge/solid waste to disposal site as approved by DBO engineer.	DBO Operator

Activity		Potential Impact/Concern	Negative	Duration of impact	Mitigation Measures	Responsible agency
Sewage Cleaning Equipment	Extracted Sewage Sludge handling and cleaning equipment maintenance waste handling	Bad odour, Health hazard and public nuisance and possible land contaminations		Temporary	• Ensure that extracted sewage sludge collected during sewers cleaning are disposed to disposal site as approved by DBO engineer. • Sewage solids shall not be disposed on road sides or non-Designated areas. • Equipment cleaning waste shall be disposed to public sewer or STP inlet for treatment • Waste oil if any generated shall be separately collected. It shall be sold to authorized waste oil recyclers.	DBO Operator
General Safety	Workers exposure to toxic gases in sewers and hazardous materials during sewer maintenance work	• Serious/health/ safety hazards • The toxic gases are likely to contract communicable diseases from exposure to pathogens present in the sewage.		Temporary	• During cleaning/ maintenance operation, the sewer line will be adequately vented to ensure that no toxic or hazardous gases are present in the line. • Ensure availability of PPE for maintenance workers. • Follow safety and Emergency Preparedness plan prepared at design stage Monthly reporting of all accidents and immediate reporting to DBO engineer and owner.	DBO Operator

Annexure III

Roles and Responsibilities of Social Development Specialists

LEVELS	ROLES and RESPONSIBILITIES
NMCG Social Development Officer	• Finalize ESMF; • 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 implementation of RAP;
SMCG/ – Social Development Officer	• Co-ordinate with district administration and NGO responsible for implementation of ESMF/RAP; • 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/ RAP; Liaison with district administration for dovetailing of government schemes for Income Restoration Schemes • Monitor physical and financial progress of implementation of RAP, • Participate in the project level meetings • 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, Tribal people and gender actions
Project Level – Executing Agency (EA)	• Disclosure of RAP and entitlements and also ensure that copies are made available to the PAPs; • Oversee land availability and coordinate with local revenue official for land acquisition
LEVELS	ROLES and RESPONSIBILITIES

	• Dissemination of Project Information at various stages of project as envisaged in the ESMF/RAP • Ensure community involvement in every stage of the subproject • Documentation and disclosure of consultations • Shall be first level of grievance redressal and will guide PAPs further to redress their grievances • Ensure disbursement 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 • Will prepare monthly progress report and quarterly process documentation report
Social Specialist of Supervision Consultants	• Ensure social screening of investments; • Implement the agreed social mitigation measures; • Ensure compliance of national and other applicable laws and Acts pertaining to social, • Sensitize and help build capacity of the EA officials towards the implementation of the ESMF provisions. • Assist Environment and Social Development Officer of EA in preparing monthly progress and quarterly process documentation reports
NGO	• Conduct the verification for the affected families and update the census and socio-economic data • Develop rapport with PAFs and between PAFs and EA • 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

Annex IV

Sample Terms of Reference for Environmental and Social Audit of Namami Gange Program Investments

1. Background:

The National Ganga River Basin Authority with an objective to ensure no entry of polluted water into the River Ganga is supporting number of pollution prevention and river conservation activities in the five basin states of UP, Bihar, Jharkhand, West Bengal and Uttaranchal.

Namami Gange program believes that each of its investments will improve living standards and the environment of the River in and around project locations. Namami Gange program is committed to implementing these activities in an environmentally sound, socially acceptable way. This has reflected its environmental and social commitments through its Environmental and Social Management Framework (ESMF). All investments financed by Namami Gange program should be in consonance with its ESMF.

2. Objectives:

- To audit the conformity of environmental and social categorisation of investments approved by the Namami Gange during the Financial Year _____, with respect to the categorisation prescribed in the ESMF of Namami Gange program
- To audit the compliance of the environmental and social aspects of approved investments, which are under implementation.

3. Outline of the tasks to be carried out: The, following tasks are to be carried out:

(a) To Audit the Environmental and Social Categorisation of Approved Investments:

The audit process will check the conformity of environmental and social categorisation of investments approved by the Namami Gange with respect to environmental and social categorization in the ESMF of Namami Gange program (i.e.) whether the Environmental and Social categorisation specified for the approved investments are in conformity with environmental and social categorisation specified in the ESMF.

(b) Auditing the compliance of the Approved Investments:

The audit process will check the compliance of environmental and social aspects during construction, operation and maintenance of investments approved by Namami Gange program, across all categories and different sub-project locations. Adequacy of the ESMP (including RAP, where relevant)

Audit the adequacy of the ESMP (including RAP, where relevant) and recommend practicable measures to include/improve the management measures and the agency responsible for carrying out the measures, wherever found inadequate. The best practices and possible environmental and social enhancement measures with respect to the audited investments will be documented.

(c) Reporting

To review the status report submitted by the project Management consultant on the implementation of

ESMP (including RAP, where relevant) and the process adopted by design consultants in identification and mitigation measures while preparing the DPRs. To report on the adequacy and timely submission of the Quarterly Progress Reports including the process involved in addressing the risk management.

(d) Audit Report

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

4. Final outputs (i.e., Reports, drawings etc.). That will be required of the Consultant;

- Environmental and Social Audit Reports indicating conformity of investments approved by Namami Gange, relating to the financial year __, with ESMF Framework.
- Environmental and Social Audit report indicating the conformity to agreed standards during construction, operation and maintenance of the approved investments.

Annex V

Comparative Analysis of Right to Fair Compensation and Transparency in LAR&R (RFCTLAR&R) Act 2013 and World Bank Policy 4.12, Involuntary Resettlement and 4.11 Indigenous People.

Serial No.	Topics/Issues/Areas	World Bank OP4.12	RFCTLAR&R	Gaps and impacts
1	Application of LA	Direct economic and social impacts that both result from Bank-assisted investment projects. Applies to all components of the project that result in involuntary resettlement, regardless of the source of financing.	Section 2 Applicable to projects where government acquires land for its own use, hold and control, including PSU and for public purpose; for PPP where ownership of land continues to vest with govt; private companies where 80% of land owners ¹¹ have given consent or 70% in case of PPP.	Currently not applicable to National Highways but will be applicable to state highways and rural roads. This is likely to create conflicts that state governments may face for meting out differential treatment to their citizen's for similar types of infrastructure i.e. roads.
	Principle of avoidance	Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project design	Alternatives to be considered as Act in chapter II, point # 4 (d) says "extent of land proposed for acquisition is the absolute bare minimum needed for the project; and (e) says land acquisition at an alternate palce has been considered and found not feasible.	RFCTLARR to prevail
	Linkages with other projects		No such provision	
2.	Application of R&R	Same as above	In addition to the above, Section 2(3) land purchased by private company as prescribed by Govt. or when part acquired by govt	
3.	Affected area	Involuntary take of land resulting in loss of shelter, loss of assets or access to assets, loss of income sources or means of livelihood	Section3(b): Area notified for 'acquisition'	
4.	Family	All adversely affected people whether have formal legal rights or do not have formal legal rights on land	Section 3(m) includes person, his and her spouse, minor children, minor brothers and sisters dependent. Widows, divorcees, abandoned women will be considered as separate family.	-

¹¹ Land Owner – whose land and immovable property acquired and land assigned by state or central govt under any scheme (Section 3 c (i) and (v))

Serial No.	Topics/Issues/Areas	World Bank OP4.12	RFCTLAR&R	Gaps and impacts
5.	Affected family for eligibility		Section 3 (a): whose land and other immovable property acquired. (b) & (e): Family residing in affected area such as labourers, tenants, dependent on forest and water bodies, etc whose primary source of livelihood is affected due to acquisition (c) Scheduled tribes and other forest dwellers whose rights recognized under the Forest Dwellers Act 2006. (f) Family assigned land by state or central government under any schemes	This provision leaves scope for interpretation and some of the issues remain unanswered especially in context of urban areas when people use public land for shelter and livelihood and is not acquired but transferred from one agency to another. Will they be recognized as “affected family”?
			(g) Family residing on any land in urban area that will be acquired or primary source of livelihood affected by acquisition.	
6.	Cut-Off date	Date established by the borrower and acceptable to the Bank. In practice it is the date of census.	Section 3 c (ii), (iv) (vi): Families residing for preceding 3 yrs or more prior to “acquisition of land”.	In urban setting, it may be difficult for the families to provide proof of their residence on such land.
7.	Non-application of Chapter II	Stand-alone SIA for all investments	Section 6(2): Irrigation projects where EIA is required under other laws, provisions of SIA not applicable.	
	Consultation – Phase I during preparation	Consultation a continuous process during planning and implementation	Section 4(1) date issued for <i>first consultation</i> with PRIs, Urban local bodies, Municipalities, etc to carry out SIA. Section 5: Public hearing of SIA in affected area. Provide adequate publicity of date and time.	-
8.	Time duration to prepare SIA and SIMP	Draft Social Assessment, Resettlement Action Plan and or Social Management Framework prepared before appraisal.	Section 4 (2): within six months from the date of its commencement.	-
9.	Disclosure – Stage I	To be disclosed before appraisal and 120 days before board date.	Section 6(1): Translated in local language available in PRI institutions and local urban government bodies; district administrative offices and websites of concerned. Government agency.	-
10.	Formation of Expert Group to	Appraised by Bank staff	Section 7(1): Constitute a multi-disciplinary Expert Group include members of decentralized govt Institutes (PRIs, ULBs).	The Act does not stipulate the time for the formation of the group.
	appraise SIA and SIMP			
11.	Time stipulated for	Before the decision meeting for	Section 7(4): Submit its report within two months from	-

Serial No.	Topics/Issues/Areas	World Bank OP4.12	RFCTLAR&R	Gaps and impacts
	Group to submit its report	appraisal	<i>the date of its constitution</i>	
12.	Scope of work of the Expert group	Social Assessment, resettlement action Plan reviewed and appraised by Bank staff and approved by Regional safeguard advisor	Section 7 (4)(a&b): assess whether it serves any public purpose or not; if social costs outweigh potential benefits then should be abandoned; Section 7 (5) (a&b): if serves public purpose, then it has considered minimum land acquisition, and alternate options to minimize displacement; potential benefits outweigh social costs	-
13.	Consultation – Phase II during appraisal	In practice consultation workshops are organized in project affected areas at district and state level.	Section 2 (2): Prior consent of 80% and 70% of land owners in PPP and where private company has approached the govt. to acquire balance land has been obtained,	-
14.	Disclosure – Stage II	Information dissemination through the planning and implementation	Section 7 (6): recommendations of expert group under 7(4&5) to be made public in local language in district and block administrative office and PRIs	-
15.	Minimize impact on multi- cropland	Select feasible design that has minimal adverse impact.	Section 10: In case multi-crop land is to be acquired under exceptional circumstances, the area to be acquired cannot exceed aggregate of land of all projects in district or state. The area to be acquired cannot exceed the total net sown area of the district or state.	-
			Wasteland equivalent to twice the area acquired will be developed.	
16.	Information dissemination of preliminary notice	Continuous part of the preparation and participation	Section 11 (1), (2) & (3): Notice published in local language and meetings called of gram sabahs, municipalities to provide full information about the purpose of the project, summary of SIA and particulars of administrator appointed for R&R' summary of R&R scheme	-
17.	Updating land records	To be part of RAP	Section 11 (5): Once established that the land is required for public purpose, accordingly notice to be issued under section 19 following which land records to be updated within two months	-
18.	Census and preparation of R&R schemes	To be part of RAP	Section 16 (1) (2): carry out census of affected people and their assets to be affected, livelihood loss and common property to be affected; R&R scheme including time line	-

Serial No.	Topics/Issues/Areas	World Bank OP4.12	RFCTLAR&R	Gaps and impacts
			for implementation.	
19.	Information dissemination and Public hearing - Stage III	Consultation throughout the process is mandatory	Section 16(4)&(5): mandatory to disseminate information on R&R scheme including resettlement area and organize public hearing on the Draft R&R scheme in each Gram Sabha, Municipality and consultations in Scheduled area as required under PESA.	-
20.	Approval of R&R Scheme		Section 17 & 18: Draft R&R Scheme to be finalized after addressing objections raised during public hearing and approved.	-
21.	Final declaration of R&R Scheme	Approved RAP including budgetary provisions to implement it	Section 19 (2): Only after the requiring body has deposited the money will the govt. issue the notice along with 19(1) .	-
22.	Time period stipulated.	Included in RAP - Time line synchronized with Government's procedures or adopts innovative methods to reduce the time which is based operated on the principles of participation and transparency.	Section 19 (2): the entire process to update land records, disseminate information, preliminary survey, census, hearing of objections, preparation of R&R schemes and approval, deposit of money must complete within 12 months from the date on which section 11, the preliminary notice issued. Section 19 (7): If the final declaration not made within 12 months of section 11 (1), the process will lapse, except under special circumstances.	-
23.	Preparation of land acquisition plans		Section 20: Land marked, measured for preparation of acquisition plans.	-
24.	Hearing of claims		Section 21(1) (2): Notices issued indicating govt's intension to take possession of land, and claims on compensation and R&R can be made not less than one month and not more than six month from the date of issue of section 21(1).	-
25.	Time period stipulated for declaring the award		Section 25: It is required to announce the award within 12months of issue of Section 19 (final declaration to acquire land, approved R&R scheme) after completing land acquisition plans, hearing of objection, settling individual claims for declaration of the award. If award	There is still some ambiguity. Does it imply that notice issued under Section 11 to carry out SIA too will lapse?
		Included in RAP.	not made within the stipulated time, the entire proceedings will lapse.	
26.	LA Act 1984		Section 24: where award is not declared under section	-

Serial No.	Topics/Issues/Areas	World Bank OP4.12	RFCTLAR&R	Gaps and impacts
	deem to lapse and RFCTLAR&R is applicable		11, or where made five years ago but land not taken in possession or where award declared but money not deposited in the account of majority of beneficiary.	
27.	Methodology for determining market value for land	Full replacement Cost	Section 26 and First Schedule: Recognizes 3 methods and whichever is higher will be considered which will be multiplied by a factor given in Schedule First; compensation given earlier will not be considered; if rates not available floor price can be set; steps to be taken to update the market value.	-
28.	Valuation of structures	Full Replacement cost	Section 29 (1) without deducting the depreciated value.	-
29.	Solatum and interest		Section 30(1) 100% of the compensation amount Section 30(3): 12% per annum on the market rate from the date of notification of SIA to the date of ward or land taken over	-
30.	R&R Award	Total cost included in RAP to resettle and rehabilitate the affected persons and assist in their efforts to improve their livelihoods and standards of living or at least to restore	Section 31, Second Schedule: A family as a unit will receive R&R grant over and above the compensation and those who are not entitled to compensation. Second Schedule: Homeless entitled to constructed house, land for land in irrigation projects in lieu of compensation, in case of acquisition for urbanization	-
		them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher	20% of developed land reserved for owners at a prices equal to compensation' jobs or one time payment or annuity for 20 years' subsistence grant, transportation, land and house registered on joint name husband and wife, etc	
31	Transparency		Section 37(1): Information of each individual family including loss, compensation awarded, etc will be available on the website.	-
38.	Possession of land	Taking of land and related assets may take place only after compensation has been paid and, where applicable, resettlement sites and moving allowances have been provided to the displaced	Section 38(1): Land will be taken over by the government within three months of compensation and 6 months of R&R benefits disbursed; infrastructure facilities at resettlement sites will be completed within 18 months from the date of award made under section 30 for compensation; in case of irrigation and hydel projects R&R	-

Serial No.	Topics/Issues/Areas	World Bank OP4.12	RFCTLAR&R	Gaps and impacts
		persons.	completed six months prior to submergence.	
39.	Multiple displacement		Section 39: Additional compensation equivalent to compensation determined will be paid to displaced	This section does not cover those who may not be physically displaced but lose land over a period of time for multiple projects, expansion works or periodic widening of roads, etc. and may be left with marginal holding or landless.
31.	Acquisition for emergency purpose	Not permeable in bank funded projects	Section 40 (5): 75% additional compensation will be paid over and above the compensation amount	-
32.	Prior consent before acquisition and alienation	Mandatory to carry out Free, Prior, Informed Consultation with Indigenous people.	Section 41(3) Mandatory to get consent from Gram sabah, Panchayat, Autonomous Councils in Scheduled areas.	-
33.	Development plans for SC and ST	Indigenous Peoples' Development plan required along with RAP. Land for land for is an option across all sectors.	Section 41: Separate development plans to be prepared, settle land rights before acquisition; provision of for alternate fuel fodder, non-timber produce on forest land to be developed within 5 years; 1/3 rd compensation amount to be paid as first installment and rest at the time of taking possession; ST to be resettled within Scheduled area; land free of cost for community purpose; land alienation will be null and void and ST and SC considered for R&R benefits; fishing rights restored in irrigation and hydel projects; if wish to settle outside the district additional benefits to be provided in monetary terms; all rights enjoyed under other laws will continue. Second Schedule: additional provisions for SC&ST for land for land in irrigation projects, additional sum over and above the subsistence grant,	-
34.	Institutional arrangement	Institutional arrangement must be agreed upon and included in RAP, IPDP.	Section 43-45: Appointment of administrator, R&R Commissioner, when more than 100 acres of land is to be acquired, R&R Committee will be formed at project level, social audit to be carried out by Gram Sabha and Municipalities.	-
35.	Change of land use		Section 46(4): Land will not be transferred to the requisitioning authority till R&R is not complied with in full	-
36	Monitoring and	Indicators and monitoring	Section 48-50: Set up National and State level Monitoring	-

Serial No.	Topics/Issues/Areas	World Bank OP4.12	RFCTLAR&R	Gaps and impacts
	Evaluation	system included in RAP and IPDP	Committee to review and monitor progress	
37.	Authority to settle claims		Section 51-74: the Authority will be set up settle any legal disputes that arise from acquisition and R&R, the aggrieved party can move to the high court thereafter.	-
38.	Exempt from tax and fee		Section 96: Compensation and agreements will not be liable to tax	-
39.	No change in status of land acquired		Section 99: Once the land is acquired for a particular purpose, its purpose cannot be changed	-
40.	Return of unutilized land		Section 101: If the acquired land remains unutilized for 5 years, then it will be returned to original owner, heir or included in land bank	-
41.	Distribution of increased value of land transferred		Section102: 40% of appreciated value of acquired land will be distributed to owners provided no development has taken place.	-

Annex VI Salient Features of Hybrid Annuity Model

The salient features of Hybrid Annuity Model are:

- a. **Bidding and Concessionaire:** The selection of the developer will be through a competitive bidding. Bidders could be single companies or a consortium of companies having experience in the construction and operation of waste water treatment plants. The successful bidder will incorporate a Special Purpose Vehicle (SPV) under Companies Act 2013 – the concessionaire with whom a concession agreement is entered by the Project Executing Agency and National Mission for Clean Ganga (NMCG). State Government will nominate a suitable Project Executing Agency (PEA) in consultation with NMCG. In Uttarakhand, while the State Government has nominated Uttarakhand Jal Nigam as PEA for Haridwar Projects, Uttar Pradesh Jal Nigam has been nominated as PEA by the Uttar Pradesh State Government for Varanasi project.
- b. **Bid parameter:** Project life cycle cost which is sum of the quoted bid project cost (capital cost) plus the Operations and Maintenance (O&M) cost for the entire operations period is the bid parameter. Bid is awarded to the developer quoting lowest project life cycle cost. In the O & M cost, electricity cost is provided as a pass through.
- c. **Cash Construction Support:** 40% of the bid project cost shall be payable to the concessionaire in four/five equal installments linked to physical progress of the project. Concessionaire shall have to initially bear the balance 60% of the project cost through a combination of debt and equity.
- d. **Escalation clause in the project cost:** Project cost shall be inflation indexed (through a Price Index Multiple) (PIM), which is the weighted average of Wholesale Price Index (WPI) and Consumer Price Index (CPI) (IW) in the ratio of 70:30. The bid project cost adjusted for variation between the price index occurring between the reference index preceding the bid date and reference index date immediately preceding the appointed date shall be deemed to be the bid project cost at commencement of construction. Bid project cost shall be changed to variation in PIM on monthly basis till the achievement of commercial operations date (COD).
- e. **Stable cash flow of annuity payments:** Quarterly annuity payments shall be made to the concessionaire by NMCG/Executing Agency on completion of the project for the balance 60% of the final bid project cost. Along with the annuity payments, interest shall be paid on reducing balance of final construction cost. Interest rate for the same shall be Bank rate + 3 %.
- f. **Performance linked payment:** One important feature of this model is that both the Annuity and O & M payments are linked to the performance of the STP. Payments are subject to the achievement of Key Performance Indicators (KPIs) – pre determined treated effluent quality parameters such as BOD, COD, pH, Coliform level etc.
- g. **Assured O&M payouts:** O&M payments shall be made to the concessionaire along with the annuity, in accordance with the amount quoted by the bidder and the same will be inflation indexed. Concessionaire shall remain responsible for the maintenance of the project till the end of the concession period.
- h. **Concession Period:** Though the period is project specific, in normal course it could be 15 years excluding the construction period.
- i. **Reduces sponsor's risk for funding equity commitment:** Hybrid Annuity model entails lower sponsor contribution during construction period considering 40% construction support from NMCG and hence mitigate the funding risk to an extent. Furthermore, provision of mobilization advances is also expected to provide some support to concessionaire in the initial phase of construction. It also paves way for

relatively easy achievement of financial closure, because lenders are less reluctant to fund annuity projects and to top it up with lower funding requirement.

In this model the risk of revenue generation is not with the Concessionaire. However the performance risk will be with the Concessionaire as the Annuity and O & M payments will be subject to an acceptable level of performance of the assets measured in terms of prescribed output water quality standards (Key performance indicators).

Hybrid Annuity model builds the stake of the operator for the entire project period as their capital gets linked to the performance. The model insulates the implementing agency/state from time & cost over runs and issues arising due to improper & sub optimal design as the developer/operator is responsible for the entire development & operation of the plant.

Important steps in PPP project implementation are following:

- a. Project Conceptualization.
- b. Preliminary Report.
- c. Appointment of Transaction advisor.
- d. Detailed Feasibility Report
- e. Tender Documentation
- f. RFP & Selection process
- g. Selection of Concessionaire
- h. Signing of the Concession agreement
- i. Financial Closure
- j. Appointment of Project Engineer.
- k. Appointed date
- l. Work Commencement & Commissioning
- m. Operation & Maintenance
- n. Transfer to ULB/Local Agency

Role of Transaction Advisor: Engaging a suitable Transaction Advisor (TA) for the project is crucial for the success of the project. NMCG has already prequalified/empaneled 16 firms/consortiums as Transaction Advisors. Project Executing Agencies can choose to receive the services of a suitable TA through a competitive price bidding process. NMCG can offer necessary support in preparation of a Request for Proposal for inviting price quotations from the empaneled TAs or else Project Executing Agencies can choose to engage International Finance Corporation (IFC), a sister concern of World Bank as the TA for the project through single source procurement if it is permissible as per their rules. Broad scope of work for the TA is as follows:

- a. Collection, compilation and analysis of relevant technical/financial data relating to all costs and revenues if any,
- b. Evaluation of the strategic objectives of the NMCG and/or State level Project Executing Agencies in relation to the Project and advising on the commercial and capital structuring, especially with reference to Applicable Laws,
- c. Review cost estimates contained in the Detailed Project Report(if available),
- d. Prepare a reasonable estimation of the likely cost of the project,

- e. Assisting NMCG and/or State level Project Executing Agencies in identification of project risks and in allocation of the same in an efficient and economic manner,
- f. Identification and quantification of estimated financial impact of the Project on Government resources by developing a Financial Model,
- g. Advising on tax-related issues arising out of the Project structuring,
- h. Prepare the draft Concession Agreement,
- i. Preparation of a consolidated list of approvals/consents/clearances required from Government Instrumentalities,
- j. Assist in preparation of Bid documents including the relevant Schedules of the Concession Agreement,
- k. Assisting the NMCG and/or State level Project Executing Agencies in the entire bidding process up to the signing of the concession agreement, and
- l. Providing Assistance during Financial Closure.

ADDENDUM-I

Addendum to Environmental and Social Management Framework of Namami Gange Programme (April 2017)

Environmental and Social Safeguards Management in PPP Projects

This addendum document shall be read in conjunction with Environmental and Social Management Framework (ESMF) for Namami Gange Program 2011(revised in December 2016)

A. Financing Projects under PPP Model:

1. Under the NGRBA framework ,National Mission for Clean Ganga(NMCG)shall financeonlycommerciallyviableprojectsunderPPPmodel.Viableprojects may also include those projects that will become viable after receiving viability gap funding under a government scheme.
2. In order to be eligible for funding through NGRBA framework under Namami Gange program, in PPP mode:
 - a) The project will be developed (i.e. designed, financed, built and operated for a specific term) by a private sector entity selected under a Private-Public Partnership (PPP) concept through annuity or Hybrid annuity or any contractual arrangement between a public entity and a private company whereby risks from design, construction, and/or operations, and/or financing are fully or partially transferred to the private company.
 - b) A Special Purpose Vehicle (SPV) will be formed and will assign overriding priority to PPP projects that are implemented by private sector entities, selected through a competitive bidding process.
3. This addendum outlines the framework and procedures to be followed for managing environmental and social safeguard issues in PPP projects that may be implemented through NGRBA framework under Namami Gange Program.

B. Environmental and Social Safeguards Management for PPP Projects under

4. All sub-projects and activities to be developed and operated under PPP mode following NGRBA Framework shall carry out an Environmental and Social Due-Diligence (ESDD) of the respective sub-project. The ESDD shall be prepared by the Executing Agency (EA) as part of the feasibility / Detailed Project Report (DPR) and shall be based on (i) field investigations of all the proposed sub-project facilities and (ii) formal consultations with the stake holders.
 5. The ESDD shall comprise of (i) a description of the sub-project and its components (ii) an environmental and social profile of the sub-project areas and the proposed project facilities (iii) an Environmental and Social Screening and categorization of the sub-project as outlined in Section 4.3 of Environmental and Social Management Framework of NGRBA / Namami Gange Program (iv) an analysis of environmental and social issues associated with the project and (v) Environmental and Social Management Action Plan (ESMAP) outlining various regulatory clearances, preparation of Environmental and Social Assessment (ESA) Resettlement Action Plan(RAP), other actions, and management measures to be implemented by the SPV / PPP Concessionaire / operator and various other participating agencies in line with the requirements of ESMF for a particular safeguard category of subproject.

6. The State Mission for Clean Ganga (SMCG) will primarily be responsible for the preparation of ESDD and ESMAP and overall management of their implementation.
7. The ESDD along with ESMAP shall be submitted to NMCG along with the DPR for appraisal. Upon receipt of the ESDDR, NMCG will review the project categorization as per the ESMF, applicable regulatory clearance requirements and the ESMAP. Their view will follow the process outlined in the Section 4 of the ESMF, including the approval of The World Bank.
8. The ESDD and ESMAP upon approval and prior to the initiation of the PPP bid process, shall be disclosed locally in the website of EA, SPMCG, NMCG and in the info-shop of the World Bank.
9. The ESMAP shall be included in the PPP bid document, clearly outlining the responsibility for various safeguard management actions including the preparation of ESA RAP for the sub-project in line with its safeguard requirements outlined in section 4 of the ESMF.
10. During the implementation, the selected SPV / PPP concessionaire / operator/ prepare a design specific detailed ESMP/EIA/SIA/RAP report (as applicable) as per the ESMF and obtain approval of NMCG and The World Bank before the technical closure of the subproject and starting the construction work. All necessary environmental clearance¹², regulatory clearances and land clearances shall be obtained as per the applicable regulations of Government of India and the State Government before the commencement of construction works.
11. The ESMP/EIA/SIA/RAP reports shall be prepared by the SPV in line with the guidelines provided in the ESMF and shall be disclosed locally in the websites of EA , SMCG, NMCG and also in the info shop of The World Bank.
12. The SPV / PPP concessionaire / operator shall be responsible for the implementation of final ESMP/EIA/SIA/RAP and their recommendations. The EA for the sub-project will supervise the implementation and NMCG with the help of SMCG will monitor the all of the safeguard actions. This responsibility allocation and institutional arrangements for the sub-project shall be clearly spelled out in the bid document.

C. Safeguard Compliance Monitoring and Reporting for PPP Projects

13. Projects financed by NMCG on PPP mode will be periodically monitored by the Lender's Independent Engineer (LIE) or similar technical agency and the quarterly reports (including the compliance to ESMAP) shall be shared with the SMCG and NMCG. The following procedures related to safeguards compliance monitoring & reporting will apply.
 - i) The PPP Partner/SPV will submit monthly Environmental and Social Compliance Monitoring Report (ESCMR) to LIE. EA and SMCG for various project activities/actions agreed as per the ESMAP/ESMP/EIA/SIA/RAP reports. A sample format for the compliance monitoring for a sewerage project is given in **Annexure1**.
 - ii) The LIE will review the ESCMR, conduct field inspections and submit the report to SMCG along with

¹² For the present portfolio of projects under NGRBA programme, currently only Regional Solid Waste Management projects may attract Environmental Clearance. However, time to time the clearance requirement may also be applicable to other projects as well as per the amendments of EIA notifications.

recommended follow up actions.

- iii) Environment and Social Safeguard Specialists of SMCG/EA will also conduct quarterly / monthly compliance monitoring of the projects through site visits based on ESCMR and LIE's recommendations. In absence of necessary specialists, such safeguard monitoring is to be done by the concerned safeguard specialists of PMC appointed by SMCG.
- iv) Safeguard specialists of NMCG will also to make quarterly visits to projects site to ensure compliance to the agreed ESMAP and other safeguard documents as prepared by SPV along with LIE report. Indicative checklists of the documents that are required to be checked during the site visits of SMCG/EA/NMCG are given in **Annexure-2**.
- v) An annual audit of all PPP projects will be conducted by the NMCG along with other sub-projects in line with the provisions of the ESMF.

Annexure 1: Sample Format for Periodic Environmental Monitoring Report

1. EMP for XXXX Sub-Project

1.1. Introduction –XXX Town

The components taken up for XXX are detailed in the following Table.

Package	Sub Project	Physical Completion (%)	Date of Award	Date of Completion
HRR-1	Providing Under Ground Drainage system to XXXCity Municipal Council			
	UGD Network (Total –.)			
	Manhole (Total - Nos.)			
	House Service Connections (Total – Nos.)			
	Wet well (No,)			
	Sewage Treatment Plant -			

The status of Environmental Management Plan (EMP) for the month of March, 2015 are presented in the following sections

1.2. Permissions/Consents/Clearances/Approvals:

Particulars	Sub Project	SPCB	Railways	PWD	Utility shifting	Forest	Minor Irrigation	Irrigation*
Consent/Clearances/ Permissions/Approval Status (Date of Clearance and completion status)	UGD & STP	CFE obtained Onxxxx	Cleared on)	Cleared on	Cleared	NA	NA	NA

Note: For details refer Monthly Progress Report March, 2015.; NA-Not Applicable;

1.3. Field Visits & Training Conducted

FieldVisit	Date	Sites Visited	Persons Met	Remarks

1.4. Compliance to EMP

Particulars	Sub Project	Complied	Compliance to EMP
Pre-Construction Phase	Sewerage System & STP	✓	Details on EMP are made part of Contractor Agreement Page No. xx (Contract Agreement dated xxx)
Construction Phase	Sewerage & STP	✓	Details on EMP are made part of Contractor Agreement Page No.xxxx1. Contractor complying with EMP are monitored by the Site Engineer and xxxx on daily basis (Provided in Annexure 1)
Monitoring Requirements &Spe	Sewerage System & STP	✓	Details on EMP is made part of Contractor Agreement Page No.xxxx Informed the Contractor to comply the same

Particulars	Sub Project	Complied	Compliance to EMP
cifications			

Insert Construction Stage EMP (in Annexure) table here and provide compliance status, and Recommendations for each EMP measures

1.5. Redress of Grievances

Sub Project	Registers Maintained	No. of Grievances received in the month	Action Taken
Sewerage System & STP	√	Xx	

1.6. Labour Registration

The contractor has submitted the renewed labour license with a validity period of one year from xxxxx (Annexure x of EMP Report,).

1.7. Summary and Conclusions

EMP monitoring being done daily (seeAnnexure1) on the critical issues and following improvements / positive developments are observed. Various issues are detailed out in Annexure8).

Sl	Details	Compliance Status
1	Labour License	Complied – Renewed upto xxx
2	Project Information Board	Complied at STP
3	Grievance Register	Complied
4	Identification of dumping land for surplus earth	Complied
5	In order to avoid drain blockages, removing of left out excavated material to be cleared on urgent basis	Complied,

However, the following issues need to be addressed.

Sl	Issues/Deviations	Compliance status last visit	Corrective Actions	Compliance status during this month
1	Safety measures, Helmets, Gum boots, First Aid Kits, barricading etc. needs to be provided at all locations			
2	Name of contact person with phone number to be included in project information board.			
3	Labours staying in the STP Camp Site. Presently there is no toilet and no bathing facility			
4.	Accessibility for Public			
5	Maintaining safe slope at work site and avoid collapsing of soil/ avoid accidents			
6.	Drain Cleaning			
7	Soil Sinking stretches/Soil collapse			
8	Pipeline trenches and Manhole construction pit kept open since 10 to 15 days in xxx place			
9	Precautions for Opening Manhole			

Attachment 1: Photographs

Annexure 2: Checklist of Documents to be checked during the site inspection

1. Environmental Impact Assessment(EIA) and Environmental Management Plan (EMP) reports/ ESIA Study/ Initial Environmental Examination Study Report
2. Copy of various clearances like (Environmental Clearance, forest clearance and NOC)from various authorities like MoEF&CC, SPCB,other state level regulatory authorities etc. and , RAP and SMP as applicable and grievance register.
3. HSE Manual/Plan prepared for the project, if any
4. Detailed Project Report(DPR)
5. Proposed Institutional arrangement (Project Site Organogram) in place for implementation and monitoring of EMP;
6. Annual EMP Budget and its expenditure status
7. Disaster Management Plan (DMP),as applicable
8. Onsite and offsite Emergency Preparedness Plan, as applicable
9. Any other Miscellaneous study done for project regarding Environmental safeguards Aspects

APPENDIX D MINUTES OF MEETING WITH FISHERMEN GROUP MEMBERS, DISTRICT MAGISTRATE, HOWRAH AND OTHER STAKEHOLDERS

West Bengal State NGRBA Program Management Group (SPMG)
Urban Development & Municipal Affairs Department,
Government of West Bengal
“Unnayan Bhawan”, 3rd Floor, Block - A, DJ - 11, Sector - II,
Salt Lake City, Kolkata - 700 091

Memo No. 2286-NGRBA/SPMG/ HAM Project -591/2020

Dated : 19-Aug,20

From : Program Director,
West Bengal State NGRBA Program Management Group (SPMG).

To : The Director General, NMCG,
National Mission for Clean Ganga,
Government of India,
Ministry of Water Resources, River Development and Ganga Rejuvenation,
1st Floor, Major Dhyani Chand National Stadium,
India Gate, New Delhi-110002.

Sub : LRF issue for HAM Project of Howrah, Bally, Kamarhati and Baranagar.

Sir,

This is for your information that a committee was constituted by the UD&MA Dept, Govt of WB to resolve the issue of ‘Livelihood Restoration Framework (LRF) Kona, Bally STP site’ which has been entrusted to WABAG for implementation. Two meetings were held under Chairmanship of the District Magistrate, Howrah involving representation from WBSMG, KMDA, WABAG and NMCG on 28th of July 2020 and 4th of August, 20 respectively. Representatives of the fishermen groups engaged in fish farming activities with temporary lease for one / two years in the waste stabilization ponds were also invited for personal hearing. The meetings were conducted through online video conference.

The minute of the two meetings along with a written declaration obtained from the fish farming groups as submitted by the District Magistrate, Howrah is forwarded herewith for consideration and taking necessary action.

Enclo : As stated above

Yours faithfully,


.....
Program Director, SPMG
Government of West Bengal

Memo No. 2286/1(7)-NGRBA/SPMG/ HAM Project -591/2020

Dated : 19-Aug,20

Copy forwarded for favour of kind information to:

- 1) The Principal Secretary
U.D. & M.A. Deptt., Govt. of West Bengal.
- 2) The Chief Engineer GAP, KMDA.
- 3) Sr. Environment Specialist, NMCG.
- 4) SCE, SPMG.
- 5) Environment Specialist, SPMG.
- 6) Mr. Subhro Chatterjee, General Manager, VA TECH WABAG.
- 7) Mr. Sunil Kr. Ganguly, Project Manager, Ganga STP,
VA TECH WABAG.


.....
Program Director, SPMG
Government of West Bengal

**Minutes of the meeting of the constituted Committee on finalization of
Livelihood Restoration Framework (LRF) at Kona, Bally-STP sites
held on 4th Aug, 20 at 12 noon**

Members present :

1. District Magistrate, Howrah - Chairperson of the Committee
2. Joint Secretary (Works), KMDA - Member
3. Chief Engineer, GAP Sector, KMDA - Member
4. Sri Saumaysib Mukhopadhyay
Sr. Environment Specialist, NMCG - Member
5. Sri Sunil Ganguly, representative from WABAG - Member

Invitee Member :

1. District Land & Land Reforms Officer, Howrah
2. Sub-Divisional Officer, Howrah
3. Block Development Officer, Bally-Jagacha
4. Executive Engineer, GAP Sector, KMDA
5. Representative from Maa Kali fishermen group
6. Representative from Jay Maa Ganga fishermen group
7. Representative from Maa Tara fishermen group
8. Representative from Jivan Jeebika fishermen group

Meeting of the constituted Committee for finalization of the issue of 'Livelihood Restoration Framework (LRF)' at Kona, Bally STP sites, conducted today on 4th August, 20 at 12noon under the Chairmanship of DM, Howrah through 'Google Meet' online video conference following the decision of the earlier meeting held on 28th July, 20. All the members of the constituted committee were present in the meeting along with the representatives of the four fishermen groups engaged in pisciculture activities in the WSPs with other relevant invitee members.

The Chairman welcomed all the members and briefly discussed about the project proposal and the purpose in reference to earlier discussion of the meeting held. Representatives of all the fishermen groups earlier engaged in fish farming activities in the said WSPs along with the Block Development Officer present in Bali Jagacha block office followed and participated in the discussion process.

After the brief description with the said fishermen groups the following matters came out during the discussion process with the fishermen.

1. The fishermen groups were mostly informal groups without having any registration under any act and were engaged in the fish farming activities in the said WSPs nearly for two years with annual lease agreement with Bali Jagacha Panchyat Samity during 2017-18.

2. The agreement was discontinued in the year 2018 and the waterbody had already been handed over to the KMDA in 2019.
3. The groups have no legal right over the ponds and associated land properties which solely belongs to KMDA and it has taken over full possession without any dispute.
4. The fishermen were earlier engaged in different other profession/occupation for their livelihood and have been settled in other different occupation/profession by this time.
5. They are well aware of the upcoming Government project and welcome the same without any objection and agreed to cooperate with the executing agencies in all respect.

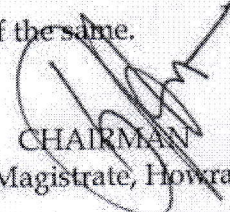
The District Magistrate and Chairman once again narrated the points that came out during discussion and confirmed the hearing proceedings.

The Joint Secretary(Works), KMDA opined that since the agreements with the fishermen groups were terminated within 2018 and land and water bodies have already been handed over to KMDA and when all the fishermen belonging to four fishermen groups have already reverted back to their original profession/and settled somehow by this time and when they have submitted in writing that there lies no legal issue pending and no claim or objection in regard to the land and waterbodies and no agreement with Panchayet Samity or with any other Govt. entities presently exist then there should not be any other issue in respect to their settlement and restoration of livelihood and the matter needs to be finally closed.

The Sr. Environmental Specialist, NMCG and the representatives from WABAG and all other members agreed with the proposal and it was unanimously decided that the whole proceedings of the two meetings held in this regard will be shared with WABAG and NMCG to modify the LRF incorporated into the DPR following the discussion of this meeting for necessary action accordingly.

Any future claim regarding livelihood restoration arising out of this project site would be scrutinized as per the parameters and conditions laid down by donor agency in this regard after due verification of the claims and if found justified, it would be sent to the UD Department, Govt. of West Bengal and KMDA for necessary action as per the law.

Having no other issue for discussion the meeting thus ended with a vote of thanks to and from Chair with expectation that further process of implementation of the said project would be followed accordingly in the interest of quick execution of the same.

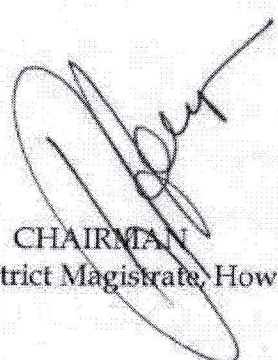

CHAIRMAN
& District Magistrate, Howrah

No.... 2036/1(11)/LR

Dated: 14.8.2020

Copy of the proceedings of the meeting forwarded for information to :

1. The Principal Secretary, UD&MA Deptt., GoWB.
2. The Chief Executive Officer, KMDA.
3. The Chairman of the constituted Committee.
4. Sri Sanjay Mukherjee, Jt. Secretary, KMDA & APD, WBSPMG.
5. Sri Bhaskar Sengupta, Chief Engineer, GAP Sector, KMDA.
6. Sri Saumyasib Mukhopadhyay, Sr. Environment Specialist, NMCG
7. The DLLRO, Howrah.
8. The SDO, Howrah.
9. The BDO, Bally-Jagacha
10. The Executive Engineer, GAP Sector, KMDA
11. Sri Sunil Ganguly, representative of WABAG/ERF


CHAIRMAN
& District Magistrate, Howrah

Proceedings of the meeting of constituted Committee on Livelihood Restoration Framework(LRF) at Kona, Bally STP sites held on 28th July,20 at 11am

Members present :

District Magistrate ,Howrah,Chairperson of the committee
Jt. Secretary (works),KMDA , Member of the committee
Chief Engineer ,GAP Sector ,KMDA ,Member of the committee
Sr. Environmental Specialist , NMCG,Member of the committee
Mr. Sunil Ganguly, representative from WABAG,Member of the committee

Invitee member :

District Land and Land Reforms Officer, Howrah, Invitee member
Additional Chief Engineer,GAP,KMDA,Invitee member
SDO, Howrah Sadar, Invitee Member
BDO, Bali -Jagacha,Invitee member

Following the order of the Principal Secretary, UD & MA Deptt., Govt. of West Bengal, a meeting of the newly constituted committee for finalizing the issue relating to Livelihood Restoration Framework (LRF) at Kona, Bally STP sites undertaken by KMDA for execution has been held today under the chairmanship of the District Magistrate, Howrah through 'Google meet' the online video conferencing platform wherein all the members of the constituted Committee and other some concerned Govt officers specially invited for the purpose remained present.

At the onset of the meeting, Chief Engineer(GAP), KMDA briefly discussed about the project proposal and the scope of the work for information to all the members concerned. Then the issue of Livelihood Restoration of the erstwhile fishermen engaged in pisciculture activity in the WSP attached to Bally STP came up where some fishermen used to cultivate fish for some time past using the Waste Stabilization ponds taken on lease from the Panchayat Samity as reported.

Representative from WABAG stated that during their survey it was informed that 4 informal unregistered group were engaged in fish farming activities with lease agreement but they were not aware of the terms and conditions, tenure of lease agreement or about any other legal rights etc.

The BDO, Bally-Jagacha stated in details about the situation of land and the lease conditions of the fishermen cooperatives with the PanchayetSamity for information to all concerned. He informed the members present that the WSPs were utilized for fish farming with the permission of erstwhile KMWSA authority by granting annual lease agreement to the fishermen groups only for the year 2017-18 to prevent the mis- utilization of the huge water bodies anyway, and after

October,18 lease agreement discontinued since the proposal for renovation of the STPs was being considered by KMDA by the time and the property was again handed over to erstwhile KMWSA in September,19 and all the persons had reverted to their different earlier occupation/profession by the time. Hence any legal claim over the property seemed not tenable

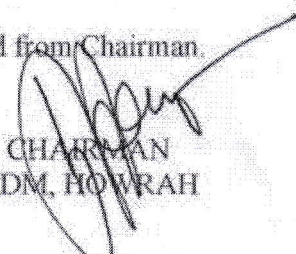
The DM, Howrah also intimated that recently a meeting was conducted with the representatives of the fishermen groups wherein the upcoming project was discussed and the representatives present welcomed the proposal with assurance to cooperate with the Govt. agency in all respect for furtherance of the execution of the project. They also admitted that they have no legal claim or any other stake over the KMDA properties and therefore no legal issues in respect of livelihood restoration framework exist. He also informed that the meeting has been video-graphed and it can be shared if necessary.

The Joint Secretary, KMDA stated that since there is no legal right and claim over the pond and other properties and the lease agreement was done only for one year and the same also have been discontinued in 2018 and when all the fishermen involved in pisciculture have already been engaged somehow in other different profession /occupation by this time, there should not have any issue pending in this respect and the pond and other land properties can be handed over to the Agency free from all encumbrances for taking up with the project and its early execution.

Sr. Environmental Specialist present in the meeting also agreed with the view of the other committee members and said that the matter should be settled early in the interest of the implementation of the project.

Representative from the WABAG also agreed with the proposal and after threadbare discussion it is finally decided that a further meeting through video conference with the representatives of the fishermen group will be convened very shortly to give an opportunity to hear from them in this issue and the recorded proceedings of the meeting along with minutes of the meeting would be forwarded to the NMCG for consideration to close the chapter finally to proceed with the further execution process.

Being no other agenda, the meeting ended with a vote of thanks to and from Chairman.


CHAIRMAN
& DM, HOWRAH

কোনো চকপাড়াতে যে পুকুর লিফ্ট দেওয়া হয়েছিল
সেখানে STP করার জন্য বিশেষ সভা —

স্থান — কালীভূগাছা পঞ্চায়েত সমিতি

তারিখ — ৪/৮/২০২০

আমরা অস্থানে কালী দ্বারা প্রভাচিত
না ইইয়া এই মর্মে ঘোষণা করিতেছি যে, কোনো
STP STP তে যে পুকুর লিফ্ট নিয়া ছিল
২০০৭-২০০৮ সালের জন্য, তাহার মেয়াদ শেষ
হইয়া গিয়েছে। আমরা আর ওখানে কোনো
সিঙ্ক ডামের সাথে যুক্ত নই। আমরা যে মার
মত অন্য কোনো নিযুক্ত আছি। ওখানে সে
বড় প্রকল্পের প্রবন্ধ শুনিয়াছি তাই ত্রুটি হোক
সেটাই চাই।

1. Sanjay Mandal - 4/8/20

2. Subrat Koley 4.8.20 (Ma Ramra)

3. ~~Sanjay Mandal~~ 4.8.20 (Ma Tara Firing)

4. Sanjay Mandal (Jibem Jibeka)

তাঃ - ০৪.০৮.২০২০

আজকের মিটিং - এ উপস্থিত লিড নেতৃত্ব
স্বাক্ষরগুলির কর্মকর্তারা -

আকালী মিয়ারী - ১) কর্মকর্তা - সুজিত জীল
সহায় - গোবিন্দ সাহা

জৈন সাগর মিয়ারী - ২) কর্মকর্তা - ইন্দ্রজিত দেবদাস
সহায় - রাস্তা পান্ডে

স্বাতারা মিয়ারী প্রিন্স - ৩) কর্মকর্তা - বাবু মোনা পতিত
সহায় - দীপক মন্ডল

জীবন জীবিকা - ৪) কর্মকর্তা - বাপ্পা মন্ডলের
সহায় মোক উপস্থিত
স্বাক্ষর মন্ডল

ERM has over 160 offices across the following countries and territories worldwide

Argentina	New Zealand
Australia	Panama
Belgium	Peru
Brazil	Poland
Canada	Portugal
China	Puerto Rico
Colombia	Romania
France	Russia
Germany	Singapore
Hong Kong	South Africa
Hungary	South Korea
India	Spain
Indonesia	Sweden
Ireland	Taiwan
Italy	Thailand
Japan	UAE
Kazakhstan	UK
Kenya	US
Malaysia	Vietnam
Mexico	
The Netherlands	

ERM India Private Limited

4th Floor, Building 10A,
DLF Cyber City,
Gurgaon – 122002 | India

T: +91 124 4170 300

www.erm.com