

# Draft Resettlement Plan

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May 2012

IND: Kolkata Environmental Improvement  
Investment Program (Tranche 1) – Water Supply  
Subproject

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## **LIST OF ABBREVIATIONS**

AAI	— Airport Authority of India
ADB	— Asian Development Bank
AP	— Affected Person
C&P	— Consultation and Participation
CBO	— Community Based Organisation
CSTC	— Calcutta State Transport Corporation
CTC	— Calcutta Tramways Company
DH	— Diamond Harbour
DMA	— District Metered Area
DSC	— Design & Supervision Consultants
DWF	— Dry Weather Flows
EMP	— Environmental Management Plan
FGD	— Focus Group Discussions
GAP	— Gender Action Plan
GIS	— Geographic Information System
GOI	— Government of India
Govt.	— Government
GoWB	— Government of West Bengal
GRM	— Grievance Redress Mechanism
GRWW	— Garden Reach Water Works
HDPE	— High-Density Polyethylene
HH	— Household
IPP	— Indigenous Peoples Plan
KEIIP	— Kolkata Environment Improvement Investment Program
KEIP	— Kolkata Environment Improvement Project
Km	— Kilometer
KMA	— Kolkata Metropolitan Area
KMC	— Kolkata Municipal Corporation
KMDA	— Kolkata Metropolitan Development Authority
KOL	— Kolkata
LAA	— Land Acquisition Act
LHS	— Left Hand Side
M/F	— Male/Female
M/m	— meter
MLD	— Million Liter per day
MM	— Maheshtala Municipality
Mm/mm	— millimeter
NA	— Not applicable
NGO	— Non-Government Organizations
No.	— Number
NRRP	— National Rehabilitation and Resettlement Policy
NRW	— Non Revenue Water
OBC	— Other Backward Classes
PAF	— Project Affected Family
PAH	— Project Affected Households
PCB	— Pollution Control Board
PD	— Project Director
PDS	— Public Distribution System

PID	— Project Implementation Director
PMU	— Project Management Unit
Pumping Station	— Pumping Station
PST	— Pre-Settling Tanks
PWW	— Palta Water Works
R&R	— Resettlement & Rehabilitation
RHS	— Right Hand Side
ROW	— Right of Way
Rs.	— Rupees
S&D	— Sewerage & Drainage
SC	— Schedule Caste
SDU	— Social Development Unit
SIA	— Social Impact Assessment
SPS	— Safeguard Policy Statement
Sq.km.	— Square Kilometers
Sq.m	— Square Meters
ST	— Schedule Tribe
STP	— Sewage Treatment Plant
TV	— Television
UFW	— Unaccounted for Water
WBPCB	— West Bengal Pollution Control Board
WTP	— Water Treatment Plant

## EXECUTIVE SUMMARY

1. The city of Kolkata is the seventh largest metropolis in India, and had 4.5 million residents in 2011. The city's continuous improvement in the urban environment is necessary to continuously increase the labor productivity through better health status of the urban population, especially when it has been experiencing lower population growth. There have been, however, geographical disparities in access and quality of the water supply and sewerage services, because the Kolkata Municipal Corporation (KMC), an urban local body having a mandate to provide these services under the KMC Act (1980), has an aging water supply system, and has inadequate sewer coverage in the city's peripheral areas.

2. The Asian Development Bank (ADB) loans have assisted KMC in expansion of the sewerage coverage through the Kolkata Environmental Improvement Project<sup>1</sup> (KEIP) since 2000. The Kolkata Environmental Improvement Investment Program (the Investment Program) will help KMC not only continue sewer network expansion at a larger scale, but also gradually improve efficiency in water supply operations which enable KMC to generate operating surplus for capital investment in water supply and sewerage.

3. The investment program is a continuation of the KEIP. It is envisaged KMC will implement the investment program in three projects in phases. It considers that the first project under the investment program will be the second phase of the KEIP. Likewise, the second and the third projects under the investment program will be the third and fourth phases of the KEIP. The proposed investment activities under the investment program will include: (i) water supply including pumping and transmission system and (ii) sewerage and drainage (S&D) including dry weather flow (DWF) and storm water flow (SWF) pumping stations and sewage treatment plants (STPs). The investment program will be financed by a multitranches financing facility (MFF).

4. The proposed construction and operation of infrastructure will bring about improvement in environmental conditions in and around each project area under the investment program, but such improvement may be associated with some adverse impacts on the local inhabitants including loss of land, (temporary) loss of livelihood, etc. ADB requires the consideration of social safeguard issues in all aspects of the Bank's operations, and the requirements for involuntary resettlement are described in ADB's Safeguard Policy Statement (SPS), 2009.

5. This resettlement plan for Tranche 1 water supply subproject aims to (i) provide critical facts and significant findings; (ii) present the national and local legal and institutional framework within which the social impact assessment has been carried out; (iii) identify mitigation measures and any residual negative impacts that cannot be mitigated; (iv) describe the set of mitigation measures to be undertaken to avoid, reduce, mitigate, or compensate for any resettlement impacts; (v) describe the grievance redress mechanism for resolving complaints; (vi) describe the implementation arrangements, monitoring measures and reporting procedures.

6. There is no land acquisition required for the subproject as the components will be located in properties held by KMC and within public right of way (ROW) of existing roads. The

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<sup>1</sup> ADB. 2000. Report and Recommendation of the President to the Board of Directors: Proposed Loan to India for the Calcutta Environmental Improvement Project. Manila (Loan 1813-IND, \$250 million, approved on 15 November 2000). The project completion date is 30 June 2012.

surveys and assessments undertaken indicate that construction and location of facilities will not entail any severe resettlement impacts like i) land acquisition; ii) demolition of structures; or iii) physical displacement of people. Components located within the public ROW may have short-term impacts like limited access and livelihood disruption during the construction stage. Efforts have been made to further minimize these potential temporary impacts by adopting micro-tunnelling for laying of transmission mains.

7. Socio-economic surveys and rapid assessment of businesses/shops within the subproject impact area have been conducted. Based on the assessments an entitlement matrix has been developed to address the probable short term temporary impacts during construction phase. Businesses facing income loss due to disruption of access during construction phase will be compensated for lost income. Mobile hawkers and vendors will be assisted in moving to alternative locations during the period of construction and entitled to return once works are declared complete by the contractor. Compensation eligibility is limited by a cut-off date as set for this project on the day of the income survey prior to commencement of civil works.

8. The subproject's Grievance Redress Mechanism will provide the citizens with a platform for redress of their grievances and describes the informal and formal channels, time frame and mechanisms for resolving complaints about environmental performance.

## I. PROJECT DESCRIPTION

### A. Background

1. The city of Kolkata is the seventh largest metropolis in India, and had 4.5 million residents in 2011. It is the largest city in the state of West Bengal, and has been the biggest contributor to West Bengal's gross state domestic product, which was ranked at the sixth largest among all state in India in 2010. The city's continuous improvement in the urban environment is necessary to continuously increase the labor productivity through better health status of the urban population, especially when it has been experiencing lower population growth. There have been, however, geographical disparities in access and quality of the water supply and sewerage services, because the Kolkata Municipal Corporation (KMC), an urban local body having a mandate to provide these services under the KMC Act (1980), has an aging water supply system, and has inadequate sewer coverage in the city's peripheral areas.<sup>2</sup> The Asian Development Bank (ADB) loans have assisted KMC in expansion of the sewerage coverage through the Kolkata Environmental Improvement Project<sup>3</sup> (KEIP) since 2000. The Kolkata Environmental Improvement Investment Program will help KMC not only continue sewer network expansion at a larger scale, but also gradually improve efficiency in water supply operations which enable KMC to generate operating surplus for capital investment in water supply and sewerage.

2. The investment program is a continuation of the KEIP. It is envisaged that KMC will implement the investment program in three projects in phases. It considers that the first project under the investment program will be the second phase of the KEIP. Likewise, the second and the third projects under the investment program will be the third and fourth phases of the KEIP. The proposed investment activities under the investment program will include: (i) water supply including pumping and transmission system and (ii) sewerage and drainage (S&D) including dry weather flow (DWF) and storm water flow (SWF) pumping stations and sewage treatment plants (STPs). The investment program will be financed by a multitranche financing facility (MFF).

3. Tranche 1 S&D subproject and its components are to comply with relevant safeguard requirements in the loan agreement, the Government of India, the state government of West Bengal, and the ADB Safeguards Policy Statement (SPS), 2009. This resettlement plan for the water supply subproject under Tranche 1 aims to (i) provide critical facts and significant findings; (ii) present the national and local legal and institutional framework within which the social impact assessment has been carried out; (iii) identify mitigation measures and any residual negative impacts that cannot be mitigated; (iv) describe the set of mitigation measures to be undertaken to avoid, reduce, mitigate, or compensate for any resettlement impacts; (v) describe the grievance redress mechanism for resolving complaints; (vi) describe the implementation

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<sup>2</sup> The 1899 Calcutta Municipal Act defined the administrative domain of the municipal authority as covering 25 wards and 48.5 square kilometers. Many boundary changes followed, the latest one in January 1984 when Boroughs XI, XII, XIII, XIV and XV were annexed to KMC. These boroughs are popularly known as the "added areas".

<sup>3</sup> ADB. 2000. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to India for the Calcutta Environmental Improvement Project*. Manila (Loan 1813-IND, \$250 million, approved on 15 November 2000). The project completion date is 30 June 2012.

ADB 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Supplementary Loan to India for the Kolkata Environmental Improvement Project*. Manila (Loan 2293-IND: \$80 million, approved on 20 November 2006). The project completion date is 30 June 2012.



arrangements, monitoring measures and reporting procedures.

## **B. Project Components**

4. KMC aims to improve the service levels and decrease the system loss of water through the implementation of this subproject. An assessment of the subproject components and its impacts indicate that the anticipated positive impacts are long-term and sustainable and the benefits include: (i) improved service level of piped surface water supply; (ii) improved quality of water; (iii) reduction in diseases due to replacement of old pipes to stop contamination; (iv) increased scope and time to pursue economic activities; (v) decrease in expenditure on sourcing quality water and medical treatment; (vii) significant positive impact on women due to decrease in time allocation for sourcing water and care giving; and (vi) increase in valuation of property.

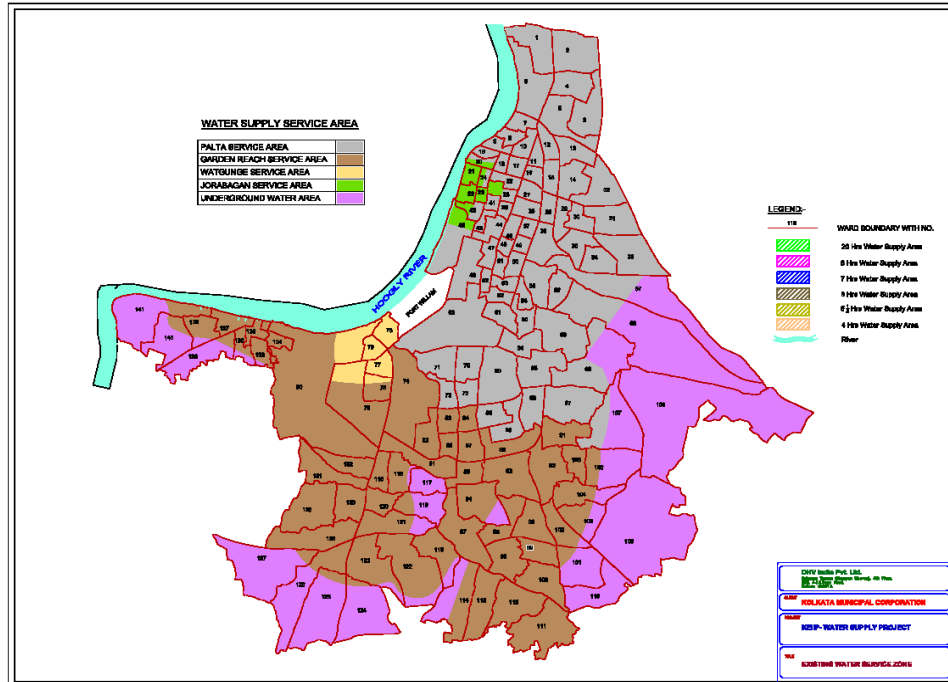
5. The subproject plans to establish and upgrade essential infrastructure and service levels to develop a comprehensively designed efficient water usage system. KMC proposes to develop the existing water supply system comprising the water treatment plant (WTP) and transmission lines at different points in Palta and Garden Reach along with systems to ensure water loss management / reduction in UFW. This subproject will also have poverty reduction impacts and benefits due to increased service levels of basic amenities. The improved water supply system will ensure (i) distribution of sufficient quantity of safe drinking quality water, maintaining scheduled timing and sustained duration of supply to consumers including all informal urban poor settlements; and reduction of losses and wastage while improving the efficiency of the existing KMC water distribution network.

6. The proposed water supply subproject includes (i) rehabilitation and refurbishment of the Palta water works, Garden Reach water works, and associated facilities; (ii) rehabilitation and augmentation of the transmission system; and (iii) reduction of unaccounted-for water (UFW). Construction work is likely to commence in July 2012 and will be completed in 72 months. These two water works together serve 129.95 sq km of the total area of 181 sq km under KMC area.

7. Palta water works serves an area of 62.75 sq km, benefiting an existing population of 2,178,788 and Garden Reach Water Works covers an area of 67.20 sq km benefiting an existing population of 1,452,102.

8. Description of the project component locations is below. Figure 1 shows the subproject area.

Figure 1: Water Supply Service Area



9. **Palta Water Works (PWW).** The subproject components for the existing Palta water works will be confined within the walled compound of the water works. An existing drain (approximately 1.5 km) will be rehabilitated to help drain out the supernatant from the sludge ponds. This drain runs externally along the boundary wall. The construction activities will have no resettlement impacts. Discussions reveal that people will be happy if the drain is rehabilitated, as maintenance of the structure will be taken care of.

10. **Garden Reach Water Works (GRWW).** The GRWW subproject components located outside the WTP premises are (i) laying of a 4.3-km transmission main from Garden Reach to Taratala valve station (ii) construction of a 300-m drain to convey the supernatant from the sludge ponds to the Santoshpur pumping station and (iii) sludge pond re-development. Temporary impacts on livelihood and access are envisaged during construction of these facilities. The other GRWW project activities are all located within the WTP premises and do not entail any resettlement impacts.

- (i) The construction of the 4.0 km transmission main having a diameter of 1500mm along the stretch from Garden Reach to Taratala Valve Station may have temporary impact on access and livelihood of the local communities mostly comprising of industries, local market areas, educational institutions and some residents who live on roads branching out on both sides of the road. However, engineering designs and techniques like micro tunnelling will ensure that these impacts will be minimized. Minor temporary disruption during micro tunneling will be further minimized by identifying pit locations which are not close to businesses or road intersections.
- (ii) The 300 m supernatant drain being constructed by open cut method will be located within the public ROW from the sludge pond to the Santoshpur Pumping Station. The drain will be constructed along the right (northern) alignment of the ROW, which may have temporary impact on access to 6 houses and 4 commercial establishments along this stretch of road. The drain will provide the

residents and shopkeepers of the area with an opportunity to connect their household drains to this pipeline, thereby enhancing the drainage service levels in the area.

- (iii) Redevelopment of the existing sludge pond involves removing of sediment to bring the pond back to its original design capacity and will not have any resettlement impact.

11. **Water Loss Management / Reduction of UFW (Unaccounted for Water).** The pilot for reduction of UFW will be carried out in KMC ward number 132. This study entails monitoring system loss by introducing meters and may entail replacement of existing pipelines over a length of 23 km with maximum 400mm diameter pipes where leakage is detected. The pipe replacement will be carried out by open cut method requiring a maximum width of 1 metre. This ward has a total population of 26,568 (2011 census). This is predominantly a residential area with a few small shops within the colonies. However, it is anticipated that there may be temporary disruption of water supply or access for the local people when the pipelines are refurbished.

**Table 1: Location of Subproject Components and Number of Beneficiaries**

Subproject Components	Location	Service Area/Population
<b>A. Palta Water Works</b>	Within Palta Water Works premises	The area covered is 62.75 sq km. Benefits an existing population of 2,178,788
(i) Renovation and refurbishment of WTP		
(a) Construction of 81.8 million liters per day (MLD) rapid gravity filter unit for the old 454.6 MLD WTP		
(b) Renovation and repair of 1 unit clarifloculator (75.7 MLD) of the old 454.6 MLD WTP		
(ii) Rehabilitation of Intake jetty (272.8 MLD)		
(iii) Cleaning of Pre-settling Tanks (PSTs)		
(a) Preparation of dumping yard for sludge from PSTs		
(b) Construction of infrastructure for sludge dumping		
(c) Cleaning of PSTs		
(d) Rehabilitation of the drain for sludge supernatant disposal system	Drain runs along the external side of the existing treatment plant boundary wall	
(iv) Supply and Installation of pumps and motors at Tallah Palta system		
(a) Replacement of worn out pumping unit		
<b>B. Garden Reach Water Works</b>	Within Garden Reach Water Works area	Coverage area is 67.20 sq km. Benefits an existing population of 1,452,102
(i) Rehabilitation of existing jetty at Garden Reach WTP intake system and sludge pond		
(a) Rehabilitation of old raw water intake system (273 MLD)		
(b) Laying of 1500 mm diameter mild steel (MS) pipe from intake to raw water pumping station (700 m)		
(c) Cleaning of existing raw water mains		
(ii) Redevelopment of sludge ponds, proper monitoring and quality control of effluent		
(a) Redevelopment of sludge pond - Monitoring and quality control system of supernatant		
(b) Construction of drainage disposal system of	Within public ROW	

<b>Subproject Components</b>	<b>Location</b>	<b>Service Area/Population</b>
supernatant from sludge pond pumping station by a 300-meter sewer line		
(iii) Supply and Installation of pumps and motors at Garden Reach WTP		
(a) Replacement of worn out pumping units		
(iv) Rehabilitation and augmentation of existing clear water transmission main system for Garden Reach Service zone.		
(a) Laying of clear water transmission 1500 mm trunk main between Garden Reach WTP and Taratala crossing (4.3 km)	Within public ROW between Taratala valve station and Garden Reach WTP	
<b>C. Water Loss management / Reduction of UFW</b>		Survey to reduce system loss and promote efficient water usage
(i) GIS and Mapping		
Mapping of water supply distribution system of the city		
(ii) NRW program in pilot wards in Garden Reach service zone	Ward No. 132. Within road ROW	
(a) Rezoning of the distribution system of Garden Reach service zone		
(b) Identification of District Metered Area (DMA)		
(c) Base line study on system loss in a pilot DMA		
(d) Monitoring of system loss by introducing water meters		
(e) Reduction of system loss by replacement of distribution pipes.	Ward No 132.	23 km stretch of road. Beneficiary population is 26,568

## II. SCOPE OF LAND ACQUISITION AND RESETTLEMENT

12. KMC understands that construction based improvements are always associated with some resettlement impacts which may be temporary or permanent in nature. Therefore, required assessments have been undertaken for early identification of these impacts to help identify solutions for mitigating these impacts to a maximum extent. Redesigning, change in site locations/alignments and adopting technology which helps minimize impact levels are some of the ways adapted to ensure minimal resettlement impacts. Efforts have been made especially to ensure that there is i) no land acquisition; ii) no demolition of structures; and iii) no displacement of people due to this project. However the following potential short-term temporary impacts may be anticipated during construction:

- (i) Livelihood: loss of customers visiting shops due to reduced access, difficulty in bringing in supplies to shops, shifting and/or reduced access for street vendors and hawkers, reduced space for daily markets that are set up along the road sides, reduced opportunity for local employment (tyre puncture repairs, etc)
- (ii) Accessibility: Pedestrians and vehicular traffic will face difficulty, decrease in access to shops and markets for local population, increase in travel time.
- (iii) Others: degradation of road, damage of other utilities during construction that may impact service levels temporarily

13. There is no land acquisition under the proposed subproject. The subproject components will be located in properties held by KMC and in public ROWs of existing roads. The engineering designs adopted ensure that routing of pipelines and mains within the public ROW's are through stretches where there are no structures. The impacts envisaged for construction works within the ROW are limited to the following: (i) limited mobility and access to business activities during construction, and (ii) temporary shifting of vendors and hawkers during construction works within the right of way (ROW) where open cut methods are used. These impacts will be further avoided and managed through good implementation of Environmental Management Plan (EMP)

14. **Landuse Pattern:** Table 2 provides information on different land uses and structures within the subproject area based on the survey and assessment conducted in March 2012 and strip maps developed during preliminary design stage (Annexes 1 to 4).

**Table 2: Land Use Pattern of the Subproject Locations**

Subproject Components	Location	Structures along the Road		
			LH	RH
<b>A. Palta Water Works</b>	Within Palta Water Works premises		N/A	N/A
(i) Renovation and refurbishment of WTP			N/A	N/A
(a) Construction of 81.8 million MLD rapid gravity filter unit for the old 454.6 MLD WTP				
(b) Renovation and repair of 1 unit clarifloculator (75.7 MLD) of the old 454.6 MLD WTP				
(ii) Rehabilitation of Intake jetty (272.8 MLD)			N/A	N/A
(iii) Cleaning of Pre-settling Tanks (PSTs)			N/A	N/A
(a) Preparation of dumping yard for sludge from PSTs				
(b) Construction of infrastructure for sludge dumping				
(c) Cleaning of PSTs				
(d) Rehabilitation of the drain for sludge supernatant disposal system	Drain runs along the external side of		N/A	N/A

Subproject Components	Location	Structures along the Road		
			LH	RH
	boundary wall of the existing treatment plant			
(iv) Supply and Installation of pumps and motors at Tallah Palta system			N/A	N/A
(a) Replacement of worn out pumping unit				
<b>B. Garden Reach Water Works</b>	Within Garden Reach Water Works area			
(i) Rehabilitation of existing jetty			N/A	N/A
(a) Rehabilitation of old raw water intake system (273 MLD)				
(b) Laying of 1500 mm diameter MS pipe from intake to raw water pumping station				
(c) Cleaning of existing raw water mains				
(ii) Redevelopment of sludge ponds, proper monitoring and quality control of effluent			N/A	N/A
(a) Redevelopment of sludge pond. Monitoring and quality control system of supernatant				
(b) Construction of drainage disposal system of supernatant from sludge pond pumping station by a 300-meter sewer line	Within road ROW	Temporary shops	57	2
		Permanent shops	10	
		Residence	-	6
		Business centre	-	2
		<b>Subtotal</b>	<b>67</b>	<b>10</b>
		<b>Total</b>	<b>77</b>	
(iii) Supply and Installation of pumps and motors at Garden Reach WTP			N/A	N/A
(a) Replacement of worn out pumping units				
(iv) Rehabilitation and augmentation of existing clear water transmission main system for Garden Reach Service zone.				
(a) Laying of 4.3 km trunk main between Garden Reach WTP and Taratala crossing	Within road ROW between Taratala valve station and Garden Reach WTP	Temporary shops	113	163
		Container godowns	2	-
		Residential colonies	-	1
		Temporary sheds	5	-
		Recreation/nature parks	2	-
		Utilities	1	2
		Bus depot	1	1
		Factories	7	25
		Warehouses	-	2
		Government offices	-	8
		Banks	2	3
		Petrol pumps	2	2
		Market areas	1	2
		Academic buildings	3	2
		<b>Subtotal</b>	<b>139</b>	<b>211</b>
-		<b>Total</b>	<b>350</b>	
<b>C. Water Loss Management / Reduction of UFW</b>	Within the ROW in ward 132.	Mostly residential area with a few small shops		
(i) GIS and Mapping				
Mapping of water supply distribution system of the city				

Subproject Components	Location	Structures along the Road		
			LH	RH
(ii) NRW program in pilot wards in Garden Reach service zone	Ward No. 132. Within road ROW			
(a) Rezoning of the distribution system of Garden Reach service zone				
(b) Identification of District Metered Area (DMA)				
(c) Base line study on system loss in a pilot DMA				
(d) Monitoring of system loss by introducing water meters				
(e) Reduction of system loss by replacement of distribution pipes.	Ward No 132.  Pipe replacement is expected to be carried out on 23 km stretch of road.			

15. The potential temporary impacts will be minimized by adapting micro-tunnelling for laying of pipes. Micro tunnelling mitigates problems of access to a large extent thereby ensuring decreased impact on livelihood by the subproject. Micro tunnelling pits will be made at intervals of approximately 150-250m which may have temporary impact on livelihood and access. Therefore, the pits will be located at positions where it doesn't disrupt access to the various structures and businesses to help minimize short term impacts to a large extent.

16. The subproject components under PWW will not result in any permanent or short term resettlement impacts due to location of the components. In the case of GRWW the following subproject components located within the public ROW might potentially have temporary or short term impacts as follows,

- (i) **Transmission Line.** It is anticipated that the laying of pipes for the 4.3 km transmission main on the Taratala-Garden Reach road located in Ward Number 80 of Borough IX of KMC may have short term temporary impacts on livelihood and accessibility for the local communities during the construction period. The Garden Reach – Taratala Main road where the clear water transmission trunk main will be laid is a major road with pockets of dense commercial activity. It consists of two lanes in each direction with a total 10 to 12 metres carriageway on each side. Rapid assessments indicate that around 350 structures line this stretch of the road. Along with a large number of temporary sheds in the market areas there are a large number of factories, ware houses and godowns. These require the movement of large sized vehicles to transport materials. The engineering designs adopted will ensure that routing of pipelines and mains within the ROW are through stretches where there are no structures.
- (ii) **Drainage for Supernatant.** The 300 metres stretch between Garden Reach Sludge pond and Santoshpur Pumping Station is lined by 6 houses and 4 commercial establishments along the right (northern) side of the road and 67 petty shops on the left (southern) side of the road. The construction of the 300-m supernatant drain will be carried out within the road ROW by open cut method along the northern alignment in stretches of 20 m at a time. The location of the pipeline within the ROW will be constructed along the right (northern) side of the road to ensure that there is no loss in livelihood opportunity for the 67 petty shops along the left alignment. Pedestrian access will not be hindered; therefore no impacts on businesses are envisaged. The road is 8-10 metres

wide. During construction it will be ensured that a pathway is left for access to the houses and commercial establishments. The contractors are also required to maintain access to shops to avoid and limit the disturbance to the extent possible, and mitigation measures are incorporated into their contracts and monitored by the construction supervision consultants.

- (iii) **Water Loss Management / Reduction of UFW.** In Ward No. 132 which is the UFW component location the roads are narrow and range from 3.5 to 6 metres in sections. Primarily a residential colony it also has some small shops. This study entails monitoring system loss by introducing meters and may entail replacement of existing pipelines over a length of 23 km with maximum 400mm diameter pipes where leakage is detected. The pipe replacement will be carried out by open cut method requiring a maximum width of 1 metre. This ward has a total population of 26,568 (2011 census). Pedestrian access will not be affected during construction works even in the narrowest road. However, it is anticipated that there may be temporary disruption of water supply or access for the local people when the pipelines are refurbished. Mobile hawkers and vendors if any, including those with stalls and temporary structures, will be assisted by contractors in moving to alternative locations during the brief period of construction and allowed to return once the area is declared complete of construction.

17. **Anticipated Social Impacts:** Table 3 below indicates the category of anticipated impacts, based on site visits, transect walks and confirmation of project engineers.

**Table 3: Anticipated Social Impacts – Water Supply Project**

Project Components	Involuntary Resettlement Impacts	Mitigation Measures
<b>A. Palta Water Works</b>		
(i) Renovation and refurbishment of WTP	None (within walled compound)	N/A
(a) Construction of 81.8 MLD rapid gravity filter unit for the old 454.6 MLD WTP		
(b) Renovation and repair of 1 unit clarifloculator (75.7 MLD) of the old 454.6 MLD WTP		
(ii) Rehabilitation of Intake jetty (272.8 MLD)	None (within walled compound)	
(iii) Cleaning of Pre-settling Tanks (PSTs)	None (within walled compound)	
(a) Preparation of dumping yard for sludge from PSTs		
(b) Construction of infrastructure for sludge dumping		
(c) Cleaning of PSTs		
(d) Rehabilitation of drain for proper disposal system of supernatant	None (drain runs along the external side of boundary wall and within ROW)	
(iv) Supply and Installation of pumps and motors at Tallah Palta system	None (within walled compound)	
(a) Replacement of worn out pumping unit		
<b>B. Garden Reach Water Works</b>		
(i) Rehabilitation of existing jetty	None (within walled compound)	



Project Components	Involuntary Resettlement Impacts	Mitigation Measures
(a) Rehabilitation of old raw water intake system (273 MLD)		
(b) Laying of 1500 mm diameter mild steel (MS) pipe from intake to raw water pumping station		
(c) Cleaning of existing raw water mains		
(ii) Redevelopment of sludge ponds, proper monitoring and quality control of effluent	None (within walled compound)	
(a) Redevelopment of sludge pond Monitoring and quality control system of supernatant		
(b) Construction of drainage disposal system of supernatant from sludge pond pumping station by a 300-meter sewer line	<p>- Within road ROW but potential short-term temporary impacts on 6 houses and 4 commercial establishments due to the open cut method</p> <p>- May have to reroute vehicular traffic at different stages of the construction activity</p> <p>- Impact on commuters who use this stretch to access other parts of the city</p>	<p>The local community will be provided 1 day advance notice regarding construction activities, including duration and type of disruption.</p> <p>Timely information sharing and coordination amongst agencies during implementation of the subproject.</p> <p>Techniques and design will ensure existing utilities are not affected or care is taken to ensure that services are restored at the earliest through proper co-ordination with relevant agencies.</p> <p>Alternate access routes will be provided and vehicular traffic will be rerouted.</p> <p>Contractors will be required to provide advance road signage indicating the road detour and alternative routes and sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.</p>
(iii) Supply and Installation of pumps and motors at Garden Reach WTP	None (within walled compound)	
(a) Replacement of worn out pumping units		
(iv) Rehabilitation and augmentation of existing clear water transmission main system for Garden Reach Service zone.		
(a) Laying of 4.3 km transmission main between Garden Reach WTP and Taratala crossing	- Minor potential for temporary impact on access and livelihood opportunities at locations directly near micro-tunneling pits.	<p>Use micro-tunnelling for pipe laying to reduce the overall impact of pipe laying works. Careful selection of location of micro-tunnelling pits and alignment to minimize impacts</p> <p>During construction it will be ensured that a pathway is left for access to the houses and commercial establishments.</p> <p>The contractors will also be required to maintain access to shops to avoid and limit the disturbance to the extent possible.</p> <p>Mitigation measures will incorporated into</p>

Project Components	Involuntary Resettlement Impacts	Mitigation Measures
		<p>contracts and monitored by the construction supervision consultants.</p> <p>Mobile hawkers and vendors if any, including those with stalls and temporary structures, will be assisted by contractors in moving to alternative locations during the brief period of construction and allowed to return once the area is declared complete of construction.</p>
C. Water Loss Management / Reduction of UFW	<p>- Within ROW but no significant impacts are envisaged.</p> <p>- may cause temporary disruption in water supply if pipes are replaced.</p>	<p>The local community will be provided 1 day advance notice regarding construction activities, including duration and type of disruption.</p> <p>Timely information sharing and coordination amongst agencies during implementation of the subproject.</p> <p>Techniques and design will ensure existing utilities are not affected or care is taken to ensure that services are restored at the earliest through proper co-ordination with relevant agencies.</p> <p>Alternate access routes will be provided and vehicular traffic will be rerouted.</p> <p>Contractors will be required to provide advance road signage indicating the road detour and alternative routes and sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.</p>

18. **Mitigation Measures:** The following mitigation measures are proposed in the subproject's Environmental Management Plan to avoid and/or reduce the impacts during linear pipe works:

- (i) Provide at least 1-week advanced notice to community along the construction stretch. Distribute information on project and grievance redress mechanism;
- (ii) Maintain access to avoid disturbance to residents and businesses by providing planks and leaving spaces for businesses and residents to maintain access;
- (iii) Manage traffic flows as per traffic management plan prepared by the contractor in coordination with local authorities and communities;
- (iv) Limit amount of time of open trenches and complete works quickly where lots of businesses are located;
- (v) Avoid full street closure to extent possible;
- (vi) Contractors to provide employment opportunity to the affected people where possible; and
- (vii) Contractors to assist vendors and hawkers in shifting to alternative location

19. The engineering designs adopted will ensure that routing of pipelines and mains within the ROW are through stretches where there are no structures, thereby having on impact on access and livelihood opportunity for the local community. However, if in the unlikely event

during construction it is found that construction activities is causing loss of income and livelihood to any businesses they would be entitled to livelihood assistance. In order to determine the scale of temporary impacts during the construction phase and to come up with a budget for compensation, a rapid sample survey of businesses was undertaken in April 2012, to determine the daily income from different types of hawkers and businesses in the different project component locations.

### A. Business Survey

20. Table 4 provides the sample size surveyed within selected proposed alignments for each of the project locations within the public ROW. Different categories such as large, medium and small were chosen randomly.

**Table 4: Sampling for Business Survey**

Type of survey	Ward No/Location	Numbers	Final Sampling	
<b>A. Garden Reach to Taratala</b>				
Strip map indicates 350 structures along this stretch.	Structures that are found along both sides of the main road.	40 numbers	Shops within market area (Jinjira bazaar)	5
			Street hawkers	5
			Shops & street vendors within ROW (illegal)	10
			Shops outside the market areas	20
			<b>Total</b>	<b>40</b>
<b>B. UFW areas</b>				
Ward no. 132	Predominantly residential area. With some small shops.	35 numbers	Shops and street vendors within ROW - 15	15
			street hawkers - 10	10
			permanent shops - 5	5
			Other businesses -5	5
			<b>Total</b>	<b>35</b>

### B. Daily Income Estimates for Businesses in the Subproject Locations.

21. **Transmission Main between Garden Reach – Taratala.** There is a large market at Jinjira Bazaar. For the purpose of this study shops have been categorized as (i) shops that operate within the public ROW; (ii) shops that are located within the Jinjira Market area along the ROW; and (iii) shops located in other stretches of the 4.3 km road. The average daily profit of the shops was found to be Rs.235.00. Potential temporary impacts on livelihood and access to these businesses will be mitigated through engineering designs that will ensure routing of pipelines and mains within the ROW are through stretches where there are no structures and adapting micro tunnelling for laying of pipelines. The microtunnelling pits will also be located at positions where it will not disrupt access to the various businesses and structures.

22. Type of shops surveyed within the ROW is listed in **Table 5**. Surveys reveal that these are businesses run from temporary structures consisting of small tables or plastic sheets/mats for displaying wares, placed inside a small stall built with four bamboo poles and a sheet for shade. Being very small businesses they are mostly managed by the owners themselves.

**Table 5: Shops That Operate Within ROW**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	Brace Bridge	Tea shop	Owner		150
2	Brace Bridge	Vegetable seller	Owner		100
3	Jinjira Bazar	Scrap shop	Owner		300

4	Brace Bridge	Tyre Shop	Owner		200
5	Hemanto Basu Road	Bedding store	Owner	1	200
6	Brace Bridge	Toy seller	Owner		150
7	Brace Bridge	Vegetable seller	Owner		200
8	Jinjira Bazar	Cane juice seller	Owner		200
9	Jinjira Bazar	Juice seller/Hawker	Owner	1	300
10	Brace Bridge	Fruit seller	Owner		150

23. The Jinjira market is a large market with semi-permanent and permanent shops. The market has many access points and caters the needs of the local community. As is seen from **Table 6**, a variety of businesses are carried out within the area.

**Table 6: Shops within Jinjira Market Area**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	Jananayak Hemanta BraceBridge kol 88	Fruit Seller	Owner		150
2	Hemanto Basu Road KOL88	Business-Saloon	Owner	3	1000
3	Jananayak Hemanta Basu Market KOL 88	Stationary goods	Owner		200
4	Jinjira Bazar	Fast food counter	Owner	4	300
5	Jinjira Bazar	Electronics	Owner	1	200

24. Survey of businesses along the 4.3 km stretch of road between Garden reach and Taratala indicate that most of the shops are vehicle repair shops or eateries. They are mostly permanent and semi-permanent structures and are located well within the property line.

**Table 7: Shops Located Along the ROW**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	Marine Engineering College	Hotel	Owner		25
2	Marine Engineering College	Tyre Shop	Owner		50
3	Marine Engineering College	Hotel	Owner	2	200
4	Gate Company	Two wheeler shop	Owner	2	250
5	C.S.T.C Garage	Cycle shop	Owner		50
6	C.S.T.C Garage	Saloon	Owner		50
7	C.S.T.C Garage More	Pan shop	Owner		50
8	ICICI Bank,Bracebridge,D.Road	Four wheeler Garage	Owner	3	200
9	ICICI Bank,Bracebridge,D.Road	Four wheeler Garage	Owner	2	200
10	C.S.T.C Garage More	Tea shop	Owner		50
11	288 Upen Banerjee Road KOL-88	Medical shop	Tenant	2	700
12	289 Upen Banerjee Road KOL-88	Clock repairing shop	Tenant		150
13	204 Upen Banerjee Road KOL-88	Tea leaves Shop	Tenant		700
14	Upen Banerjee Road 307 KOL-88	Garments	Tenant		300
15	Jinjira Bazar	Sweet Shop	Owner		500
16	Brace Bridge	Garage	Owner	2	300
17	Upen Banerjee Road 288 KOL-88	School stationary	Tenant		200
18	Jinjira Bazar	Mutton Shop	Owner	1	200
19	Jinjira Bazar	Hotel	Owner		100
20	Jinjira Bazar	Chicken shop	Owner		150

25. **UFW Area (Ward No. 132).** For the purpose of this study shops have been categorized as, i) shops that operate within the public ROW and ii) shops located in other stretches. The average daily profit of the shops was found to be Rs. 231.80.

26. Type of shops surveyed within the ROW is listed in **Table 8**. Surveys reveal that these are businesses run from temporary structures consisting of small tables or plastic sheets/mats for displaying wares, placed inside a small stall built using bamboo poles and a sheet for shade. Shops like the fruit, vegetable, meat, pan, tea and tiffin shops are located within the temporary markets set up in the morning and evening hours. Being very small businesses they are mostly managed by the owners themselves.

**Table 8: Shops Within the ROW**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	Pathakpara	Fish vendor	Owner		200
2	Pathak Para	Fruit shop	Owner		150
3	Behala Thana	Auto agency /lubricants	Owner		500
4	Behala Thana	Meat Shop	Owner	2	400
5	Haldar para	Cigarette shop	Owner		100
6	Panchanan Tala	Pan shop	Owner		150
7	Pathak Para	Iron sheet	Owner		200
8	Haldar para	Leather Shop	Tenant		200
9	Pathak Para	Tea seller	Owner		150
10	Haldar para	Tea Shop	Owner		100
11	Haldar para	Tiffin shop	Owner	1	150
12	Ajanta cinema hall	Tiffin shop	Owner	1	200
13	Panchanan Tala	Cosmetic shop	Owner		100
14	Panchanan Tala	Tiffin shop	Owner		100
15	Panchanan Tala	Tiffin shop	Owner		100

27. Ward no. 132 is primarily a residential area. Shops are located on the main roads and within the residential area. These shops cater to the needs of the local residents.

**Table 9: Shops in the UFW Area (Ward No. 132)**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	Balananda Hospital	Cloth centre	Owner		175
2	Bazar Kolkata	Snacks and cold drinks shop	Owner	1	350
3	Haldar para	Readymade garments center	Owner		70
4	Near Bazar Kolkata	Garment and gift item	Owner		300
5	Ajanta cinema hall	Colour paint shop	Owner	2	400
6	D.H.Road, Panchanantala	Readymade garments	Owner		100
7	Ajanta Cinema	Permanent Restaurant & Cofee bar	Tenant	3	500
8	Ajanta Cinema Hall	Permanent lottery centre	Owner	1	200
9	Haldar para	Hardware	Owner		450
10	Haldar para	Tour travels	Owner		450

### C. Daily Income Estimates for Hawkers

28. **Transmission Main between Garden Reach – Taratala.** 5 hawkers were surveyed and the average daily income after deducting investment for wares was found to be Rs. 200/day. Most of them operate from wooden carts and move from area to area selling their wares.

**Table 10: Income of Hawkers (Garden Reach – Taratala)**

S.N.	Location	Type of Merchandise	Frequency of Occupying This Site	Full/Half Day	Permanent/ Temporary/ Mobile	Daily Profit	Mode Used To Sell Wares
1	Jinjira Bazar	Icecream vendor	Daily	Full day	Mobile	150	Tin cart
2	Jinjira Bazar	Lemon juice seller	Daily	Full day	Mobile	400	Wooden cart
3	Brace Bridge	Fruit seller	Daily	Half Day	Mobile	150	Wooden cart
4	Jinjira Bazar	Fruit seller	Daily	Full day	Mobile	200	Wooden cart
5	Jinjira Bazar	Pickle vendor	Daily	Half Day	Mobile	100	Wooden cart

29. **UFW Area (Ward No. 132).** 10 hawkers were surveyed and the average daily income after deducting investment for wares was found to be Rs. 140/day. In this area it was seen that some of the street side vendors are permanently located here. They sell their wares on carts or wooden platforms which can be easily shifted to another location during construction.

**Table 11: Income of Hawkers (UFW Area)**

S.N.	Location	Type of Merchandise	Site Occupy Frequency	Full/Half Day	Permanent/ Temporary/ Mobile	Daily Profit	Means of Selling the Product (Vehicle)
1	Panchanan Tala	Flower seller	2-3 days/week	Half Day	Mobile	150	Plastic Mat
2	Haldar para	Fruit shop	Daily	Full Day	Mobile	150	Wooden van
3	Pathakpara	Fruit Vender	Daily	Half Day	Permanent	100	Basket
4	D.H.Road, Pathakpara	Fruit Seller	Daily	Half Day	Mobile	50	Basket
5	D.H.Road, Panchanantala	Vegetable vendor	Daily	Half Day	Mobile	50	Wood,plastic
6	D.H.Road, Pathakpara	Coconut Vendor	Daily	Half Day	Mobile	150	Cycle
7	Behala Thana, kali mondir	Fried snacks	Daily	Half Day	Permanent	225	Wooden van
8	Ajanta cinema hall	Cane juice seller	Daily	Half Day	Mobile	125	Wooden cart
9	Belananda hospital,	Paper and Magazine seller	Daily	Half Day	Permanent	175	Metal van
10	Panchanan Tala	Flower seller	Daily	Full Day	Permanent	225	Wooden platform

### III. SOCIO ECONOMIC INFORMATION AND PROFILE

#### A. Socio-economic Profile of KMC Area

30. Kolkata is a sprawling metropolis. The larger Kolkata Metropolitan Area (KMA) covers an area of 1,851 sq km and according to the Census had a total population in year 2001 of 14,720,000 people, which implies an average density of 7,950 persons per square km. In terms of population the Kolkata Metropolitan Area belongs to the world's top ten megacities. Administratively the urban area of the Kolkata Metropolitan Area is subdivided in 3 municipal corporations, 38 municipalities, and a large number of smaller administrative units called Panchayat Samities.

31. KMC is the centre of the metropolis and covers a total area of 187 sq km which is just over 10% of the metropolitan area. The KMC area has grown over the years by annexation of suburban areas. The 1899 Calcutta Municipal Act defined the administrative domain of the municipal authority as covering 25 wards and 48.5sq km. Many boundary changes followed, the latest one in January 1984 when Boroughs XI, XII, XIII, XIV and XV were annexed to the KMC. These boroughs are popularly known as the “added areas”.

32. The present population of KMC area is 4.48 million (2011 census) living in 141 wards (181 sq km). The slum population is around 1.46 million (2001 census). Kolkata has a floating population of around 3 million due to commuters in the city for various business activities and service sectors from neighbouring municipalities and suburban areas. Population density per sq km is 24,783. It is estimated that there are 972,264 HHs in the municipal area with the average household size being around 5.

33. About three fifths of the total urban population of West Bengal state is lives in Kolkata, due to the concentration of big, medium and small industrial units and the employment opportunities for skilled, semi skilled and unskilled workers in service, industrial and informal sectors in and around Kolkata. People from urban slums are involved in a range of occupations which are mostly concerned with providing services to the urban middle and upper classes; they work in small businesses and some work in the organized sector.

## B Socioeconomic Profile of Area Impacted by the Subproject

34. Palta Water Works covers an area of 62.75 sq km and serves a population of 2,178,788 through piped surface water supply. Garden Reach Water Works serves an area of 67.20 sq km with a population of 1,452,102. It is imperative to note that wards benefiting from this subproject are not necessarily the ones who are impacted by the implementation activities of this project.

**Table 12: Wards served by PWW and GRWW**

	Palta Water Works	Garden Reach Water Works
Ward Nos served	1-20, 25-73, 85, 86, 107	74, 77-84, 87-106, 111-116, 118-141
Total	72	59

35. The tables below provide socio-economic details of the municipal wards served by each of these WTP's.

**Table 13: Demographic Data of Wards Benefiting from PWW and GRWW (2001 Census)**

Water Works	Population		Total Population	Slum Population	Total Households	Scheduled Tribes	Scheduled Castes
	Male	Female					
PWW	1,238,344	1,066,978	2,305,407	1,041,238	467,950	4,739	132,201
GRWW	958,749	918,699	1,877,478	379,384	433,551	4,365	109,994

**Table 14: Socio-Economic Details of Wards Benefiting From PWW and GRWW (2001 Census)**

Water Works	Literacy		Total Literacy	Workers		Total Workers	Non Workers		Total Non Workers
	M	F		M	F		M	F	
PWW	1,031,743	738,558	1,770,301	836,280	135,556	971,836	544,312	938,779	1,483,091
GRWW	784,834	645,526	1,430,360	527,145	115,888	643,033	445,507	770,287	1,215,794

36. **GRWW.** As stated previously two components of GRWW will be carried out within the ROW of existing roads. Construction works for these two components are located not only

within area under KMC but also in Maheshtala Municipality.

**Table 15: Wards Impacted By Construction Activities in GRWW**

	<b>Garden Reach - Taratala Transmission</b>	<b>Drain for Supernatant From Sludge Pond to Santoshpur Pumping Station</b>
Wards where components will be located	80 - KMC  10 – Maheshtala Municipality (MM)	10 – Maheshtala Municipality (MM)

### C. Project Affected People

37. Subproject components located within the WTP premises will not impact the general public. However, components located within the public ROW of existing roads may have temporary impacts on access and livelihood for

- (i) Residents
- (ii) Commuters (residents, students, workers, business men, street hawkers etc.)
- (iii) Commercial/ Business enterprises/ local market areas

38. Ward No. 80 has a total population of 30,648 living in 6593 HHs while Ward No. 10 of Maheshtala Municipality has a total population of 13,932 in 2698 HHs. For the purpose of this study, sample socio-economic surveys were conducted in Garden Reach Area (location for transmission main and drainage for sludge pond) and in Ward no. 132 (location for UFW).

#### i. Garden Reach Area

39. **Social Profile.** The average family size of the surveyed population is found to be 4 per family. The total population of the surveyed HHs is found to be 222. The table below indicates that the major population group of the HHs surveyed lies between the ages 31-50 at 34.23% followed by the 19-30 age group at 27.48%. Literacy levels indicate that 30.88% are undergraduates, while 16.13% are graduates. 4.61 % are postgraduates and none have any professional degree. 217 (97.7%) of the total population of 298 are adults.

**Table 16: Gender Wise Age Profile of Affected Population (Garden Reach Area)**

Age Group	Male		Female		Total	
	No.	%	No.	%	No.	%
1-5	2	1.52	2	2.22	4	1.80
6-14	9	6.82	4	4.44	13	5.86
15-18	15	11.36	3	3.33	18	8.11
19-30	37	28.03	24	26.67	61	27.48
31-50	42	31.82	34	37.78	76	34.23
Above 50	27	20.45	23	25.56	50	22.52

40. 94.5% of the surveyed HHs are Hindus. The rest were found to be Muslim HH's. 54.5% of the HHs are joint families, while only 3.6% are single member HH's.

**Table No 17: Social Group of Affected Households (Garden Reach Area)**

Item	Description	Number	% of Total
Religious Group	Hindu	52	94.5
	Christian		
	Muslim	3	5.5
	Other		
Family Type	Joint	30	54.5



	Nuclear	23	41.8
	Individual	2	3.6

41. **Social Classification.** 71% of the respondents are found to belong to the general class, 3.6% belong to schedule tribe (ST) category. However, it has been found that the scheduled tribe families are totally mainstreamed. 96.3% of the household have electricity and 89% have access to PDS facility.

**Table No 18: Social Status of Affected Households (Garden Reach Area)**

Social Group	Number	Electrified	Ration Card
General	39	37	39
SC	12	12	8
ST	2	2	2
OBC	2	2	0

42. **Occupational Status.** The survey reveals that 65.5% of adult women in the sample HHs are housewives. 12.56 % of the adult population is students. 43% of the adult population is engaged in some form of economic activity. 19.3% are traders and 1.9% are in government service. 15.94% were unemployed at the time of survey. 82 men (68.3%) and 7 women (8%) are engaged in some form of economic activity.

**Table 19 : Gender Wise Occupation Profile of Affected Adult Population (Garden Reach Area)**

Occupation (Primary)	Male		Female		Total	
	No.	%	No.	%	No.	%
Dropout	2	1.67	0	0.00	2	0.97
Student	18	15.00	8	9.20	26	12.56
Housewife	0	0.00	57	65.52	57	27.54
Unemployed	18	15.00	15	17.24	33	15.94
Domestic Help	2	1.67	1	1.15	3	1.45
Wage Labour	16	13.33	1	1.15	17	8.21
Trader	37	30.83	3	3.45	40	19.32
Govt. Job	4	3.33	0	0.00	4	1.93
Private Job	21	17.50	0	0.00	21	10.14
Others	2	1.67	2	2.30	4	1.93
<b>Total</b>	<b>120</b>	<b>100</b>	<b>87</b>	<b>100</b>	<b>207</b>	<b>100</b>

43. **Income Sources.** Data reveals that most of the families are dependant on primary source of income. The profile of jobs range from being domestic helps to wage laborers to trading, government jobs and also private jobs. As stated earlier 65.52% of the women are housewives. There are no women wage laborers in this area.

44. **Household Income and Expenditure.** The survey reveals that amongst the economically engaged population 50% of men earn an average of Rs. 75,000/annum. The average income of the surveyed HHs is found to be Rs.176, 222. 66.7% spend more than Rs.30,000 on food per annum.

**Table 20: Primary Income Levels of Affected Population (Garden Reach Area)**

Income (Yearly)	Male	%	Female	%
< 10000	0	0	0	0.00
10000-20000	1	1.19	0	0.00
20000-30000	6	7.14	0	0.00
30000-50000	20	23.81	2	33.33
50000-100000	42	50.00	3	50.00
100000-200000	12	14.29	1	16.67
> 200000	3	3.57	0	0.00

<b>Total</b>	<b>84</b>	<b>100</b>	<b>6</b>	<b>100</b>
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**Table 21: Per cent Expenditure Pattern/Month of Affected Households  
(Garden Reach Area)**

Range	Food %	Health %	Rent %	Addiction <sup>5</sup> %	Electric charges %	Supplementary Water %	Sanitation %	Education %	Travel %	Others %
100-500	0	0	0	0	0	2.2	35.6	0	0	0
500-1000	0	0	0	6.7	0	0	4.4	0	4.4	4.4
1000-2000	0	0	0	0	6.7	0	4.4	2.2	17.8	6.7
2000-3000	0	15.6	0	0	6.7	6.7	11.1	4.4	13.3	2.2
3000-5000	4.4	11.1	8.9	4.4	22.2	2.2	0	4.4	17.8	4.4
5000-10000	0	33.3	11.1	0	33.3	0	0	17.8	17.8	20
10000-20000	0	17.8	11.1	4.4	13.3	0	0	8.9	8.9	15.6
20000-30000	22.2	2.2	6.7	0	0	0	0	15.6	0	0
> 30000	66.7	4.4	0	0	0	0	0	0	0	2.2
No response	6.7	15.6	62.2	84.4	17.8	88.9	44.4	46.7	20	44.4

45. **Gender Considerations.** The project is expected to benefit women. In addition to the measures provided for addressing the gender concerns of the affected HHs, the Resettlement Plan (resettlement plan) will be implemented in consonance with the Gender Action Plan (GAP) for the project.

46. **Women Headed Households.** There are 4 women headed HHs amongst the surveyed population.

47. **Literacy.** While all women are found have some level of literacy it is found that the level of education achieved is higher amongst men than women. There is still some difference in the literacy between male and female.

**Table 22: Gender Wise Education Level Among Affected Population (Garden Reach Area)**

Literacy Level	Male		Female		Total	
	No.	%	No.	%	No.	%
Illiterate	0	0.00	2	2.30	9	4.15
Pre-Primary	7	5.83	12	13.79	19	8.76
Primary	12	10.00	9	10.34	24	11.06
Middle	26	21.67	24	27.59	50	23.04
Intermediate	45	37.50	22	25.29	67	30.88
Graduation	23	19.17	12	13.79	35	16.13
Post Graduation	6	5.00	4	4.60	10	4.61
Professional	0	0.00	0	0.00	0	0.00
No Schooling	1	0.83	2	2.30	3	1.38
<b>Total</b>	<b>120</b>	<b>100</b>	<b>87</b>	<b>100</b>	<b>217</b>	<b>100</b>

48. **Economic Activity.** 65.5% of the women are housewives amongst the surveyed HHs. Only 8 % women are involved in the income earning activities compared to 68% of the male members. It has been reported that in addition to the economic activities outside the home, women are extensively involved in household activities like cooking and cleaning, washing clothes, child care, care of elderly etc.

49. **Decision Making.** The respondents were also asked about the involvement of women in

<sup>5</sup> Alcoholism

decision making of household matters and it was found that women were involved in the decision making of almost all household matters. 63% of the HHs reported that most decisions are taken by both spouses.

**Table 23: Status of Women (Garden Reach Area)**

	Adult Male	Wife	Both
1. Which school is best for your child	12	3	20
2. Should you change address; move to a new residence	17	2	35
3. What type of employment the women should take up	25	2	27
4. How do they utilize their individual income in running the family	20	2	31
5. In what community activity (if any) is wife involved	11	4	32
6. How to discipline children	5	8	23

50. **Gender Division of Housework.** During the survey, the respondents were also asked about the gender division of household work. The following table clearly indicates that most of the household chores are left to the women. The men help in chores like shopping, teaching children etc.

**Table 24: Division of Household Work (Garden Reach Area)**

Household work	Member	Level of Participation (%)			
		Never	Often	Seldom	Sometimes
Cleaning the House	Husband	60.47	-	37.21	2.33
	Wife	2.50	90.00	2.50	5.00
	Son/s (if aged 12 or above)	58.54	-	24.39	17.07
	Daughter/s (if aged 12 or above)	-	11.11	38.89	50.00
	Others (Females)	-	100.00	-	-
Preparing food and cooking meals	Husband	86.05	-	9.30	4.65
	Wife	2.00	88.00	2.00	8.00
	Son/s (if aged 12 or above)	70.73	-	29.27	-
	Daughter/s (if aged 12 or above)	5.56	11.11	33.33	50.00
	Others (Females)	-	80.00	-	20.00
Shopping for food and other household needs	Husband	13.64	15.91	38.64	31.82
	Wife	17.39	45.65	8.70	28.26
	Son/s (if aged 12 or above)	-	30.95	23.81	45.24
	Daughter/s (if aged 12 or above)	23.08	-	46.15	30.77
	Others (Females)	21.43	14.29	14.29	50.00
Babysitting/ looking after young children, feeds, bathes, and put them to bed	Husband	60.00	-	20.00	20.00
	Wife	-	100.00	-	-
	Son/s (if aged 12 or above)	40.00	-	40.00	20.00
	Daughter/s (if aged 12 or above)	-	-	-	-
	Others (Females)	16.67	83.33	-	-
Helping school aged children with their studies	Husband	40.00	6.67	40.00	13.33
	Wife	44.44	38.89	5.56	11.11
	Son/s (if aged 12 or above)	50.00	30.00	-	20.00
	Daughter/s (if aged 12 or above)	40.00	-	40.00	20.00
	Others (Females)	28.57	14.29	-	57.14
Take care of the sick members of the HH	Husband	19.57	4.35	43.48	32.61
	Wife	8.00	78.00	4.00	10.00
	Son/s (if aged 12 or above)	9.30	11.63	39.53	39.53
	Daughter/s (if aged 12 or above)	16.67	5.56	27.78	50.00
	Others (females)	-	57.14	-	42.86
Repairs/attends to broken electrical items	Husband	69.57	4.35	26.09	-
	Wife	94.00	6.00	-	-
	Son/s (if aged 12 or above)	38.64	4.55	43.18	13.64
	Daughter/s (if aged 12 or above)	88.24	-	11.76	-
	Others (Males)	100.00	-	-	-
Repairs attends to plumbing	Husband	100.00	-	-	-

Household work	Member	Level of Participation (%)			
		Never	Often	Seldom	Sometimes
related problems	Wife	100.00	-	-	-
	Son/s (if aged 12 or above)	100.00	-	-	-
	Daughter/s (if aged 12 or above)	100.00	-	-	-
	Others (Females)	100.00	-	-	-

## ii. UFW area

51. The pilot for reduction of UFW will be carried out in KMC ward number 132, which has a total population of 26,568 living in 6,796 HHs. The estimated slum population in the area is 4,002. 145 HHs were surveyed.

52. **Social Profile.** The average family size of the surveyed population is found to be 3.5 per family. The total population of the surveyed HHs is found to be 510. The table below indicates that the major population group of the HHs lies between the ages 31-50 at 40.78% followed by the 19-30 age group at 23.53%. Literacy levels indicate that 28% are undergraduates, while 26% are graduates. 8 % are postgraduates and 6% have a professional degree. 427 (83.7%) of the total population of 510 are adults.

**Table 25: Gender Wise Age Profile of Affected Population (UFW Area)**

Age Group	Male		Female		Total	
	No	%	No	%	No	%
1-5	5	1.78	3	1.31	8	1.57
6-14	23	8.19	11	4.80	34	6.67
15-18	23	8.19	19	8.30	42	8.24
19-30	74	26.33	46	20.09	120	23.53
31-50	100	35.59	108	47.16	208	40.78
Above 50	56	19.93	42	18.34	98	19.22
<b>Total</b>	<b>281</b>	<b>100</b>	<b>229</b>	<b>100</b>	<b>510</b>	<b>100</b>

53. 100% of the surveyed HHs are Hindus. 55.9% of the HHs are nuclear families, followed by joint families at 40.7%

**Table 26: Social Group of the Affected Households (UFW Area)**

Item	Description	Number	% of Total
Religious Group	Hindu	145	100.00
	Christian		
	Muslim	0	
Family Type	Joint	59	40.7
	Nuclear	81	55.9
	Individual	5	3.4

54. **Social Classification.** 89.6% of the respondents are found to belong to the general class, 3.4% belong to schedule tribe (ST) category. However, it has been found that the scheduled tribe families are totally mainstreamed. 90.3% of the household have electricity and 96.5% have access to PDS facility.

**Table 27: Social Status of Affected Population (UFW Area)**

Social Group	Number	Electrified	Ration Card
General	130	118	126
SC	8	7	9
ST	5	4	3
OBC	2	2	2

55. **Occupational Status.** The survey reveals that 72.8% of adult women in the sample HHs are housewives. 7.5 % of the adult population is students. 47.3% of the adult population is engaged in some form of economic activity. 14.3% are traders and 4.9% are in government service. 11.2% were unemployed at the time of survey. 184 men (65%) and 18 women (9.4%) are engaged in some form of economic activity.

**Table 28: Gender Wise Occupation Profile of Affected Adult Population (UFW Area)**

SI No.	Occupation (Primary)	Male		Female		Total	
		No	%	No	%	No	%
1	Dropout	1	0.4	3	1.6	4	0.9
2	Student	19	8.1	13	6.8	32	7.5
3	Housewife	0	0.0	139	72.8	139	32.6
4	Unemployed	31	13.1	17	8.9	48	11.2
5	Renting House	1	0.4	1	0.5	2	0.5
6	Domestic help	1	0.4	2	1.0	3	0.7
7	Wage labour	12	5.1	0	0.0	12	2.8
8	Rickshaw puller	2	0.8	0	0.0	2	0.5
9	Trader	61	25.8	0	0.0	61	14.3
10	Govt. job	17	7.2	4	2.1	21	4.9
11	Private Job	51	21.6	4	2.1	55	12.9
12	Others	40	16.9	8	4.2	48	11.2
<b>Total</b>		<b>236</b>	<b>100</b>	<b>191</b>	<b>100</b>	<b>427</b>	<b>100</b>

56. **Income Sources.** Data reveals that most of the families are dependant on primary source of income. The profile of jobs range from being domestic helps to wage laborers to trading, government jobs and also private jobs. As stated earlier 74% of the women are housewives. There are no women wage laborers in this area.

57. **Household Income and Expenditure:** The survey reveals that amongst the economically engaged population 67% of men earn an average of Rs. 75,000/annum. The average income of the surveyed HHs is found to be Rs.272,759. 72.4% spend more than Rs.30,000 on food per annum.

**Table 29: Primary Income Levels of Affected Population (UFW Area)**

Income (Yearly)	Male	%	Female	%
< 10000	0	0.0	0	0.0
10000 - 20000	0	0.0	1	5.3
20000 - 30000	9	4.9	3	15.8
30000 - 50000	33	17.8	2	10.5
50000 - 100000	67	36.2	2	10.5
100000 - 200000	28	15.1	6	31.6
> 200000	48	25.9	5	26.3

**Table 30: % Expenditure Pattern of Affected Households (UFW Area)**

Range	Food	Health	Rent	Addiction	Electric charges	Supplementary Water	Sanitation	Education	Travel	Others
< 100	0	0	0	0	0	0	0	0	0	0
100-500	0	2.1	0.7	1.4	2.8	2.1	10.3	0	2.1	0.7
500-1000	0	2.1	0	4.8	2.8	0	9	1.4	2.1	6.2
1000-2000	0	1.4	1.4	5.5	4.1	0	15.2	4.8	11	6.2
2000-3000	0.7	6.9	6.2	3.4	22.8	3.4	9.7	6.2	7.6	1.4
3000-5000	0.7	10.3	12.4	5.5	16.6	0	2.8	3.4	14.5	6.2
5000-10000	4.1	21.4	8.3	2.1	35.2	0	0	15.2	21.4	16.6
10000-20000	3.4	10.3	1.4	1.4	9	0.7	0.7	14.5	13.8	18.6
20000-30000	17.2	5.5	1.4	0.7	1.4	0	0	4.1	5.5	4.8

> 30000	72.4	2.1	1.4	0	1.4	0.7	0.7	5.5	4.8	7.6
No response	1.4	37.9	66.9	75.2	4.1	93.1	51.7	44.8	17.2	31.7

58. **Gender Considerations.** The project is expected to benefit women. In addition to the measures provided for addressing the gender concerns of the affected HHs, the Resettlement Plan (resettlement plan) will be implemented in consonance with the Gender Action Plan (GAP) for the project.

59. **Women Headed Households.** There are 2 women headed HHs amongst the surveyed population.

60. **Literacy.** While all women are found have some level of literacy it is found that the level of education achieved is higher amongst men than women. There is still some difference in the literacy between male and female.

**Table 31: Gender-Wise Age Education Level among Affected Adult Population (UFW Area)**

Literacy Level	Male		Female		Total	
	No	%	No	%	No	%
Illiterate	6	3	4	2	10	2
Pre-Primary	4	2	6	3	10	2
Primary	15	6	32	17	47	11
Middle	34	14	37	19	71	17
Intermediate	71	30	50	26	121	28
Graduation	61	26	48	25	109	26
Post Graduation	25	11	8	4	33	8
Professional	20	8	6	3	26	6
<b>Total</b>	<b>236</b>	<b>100</b>	<b>191</b>	<b>100</b>	<b>427</b>	<b>100</b>

61. **Economic Activity.** 72.8% of the women are housewives amongst the surveyed HHs. Only 9.4% women are involved in the income earning activities compared to 67% of the male members. It has been reported that in addition to the economic activities outside the home, women are extensively involved in household activities like cooking and cleaning, washing clothes, child care, care of elderly etc.

62. **Decision Making.** The respondents were also asked about the involvement of women in decision making of household matters and it was found that women were involved in the decision making of almost all household matters. 71% of the HHs reported that most decisions are taken by both spouses.

**Table 32: Status of Women (UFW Area)**

	Adult Male	Wife	Both
1. Which school is best for your child	7	13	48
2. Should you change address; move to a new residence	33	7	104
3. What type of employment the women should take up	57	11	73
4. How do they utilize their individual income in running the family	32	8	102
5. In what community activity (if any) is wife involved	29	10	100
6. How to discipline children	4	8	60

63. **Gender Division of Housework.** During the survey, the respondents were also asked about the gender division of household work. The following table clearly indicates that most of the household chores are left to the women. The men help in chores like shopping, teaching children etc.

**Table 33: Division of Household Work - % Level of Participation (UFW Area)**

Household Work	Member	Never	Often	Seldom	Sometimes
Cleaning the House	Husband	35.8	0	58.3	5.8
	Wife	1.5	81.1	9.8	7.6
	Son/s (if aged 12 or above)	26.1	10.1	50.7	13.0
	Daughter/s (if aged 12 or above)	3.7	40.7	25.9	29.6
	Others (Females)	3.0	84.8	9.1	3.0
Preparing food and cooking meals	Husband	53.2	0.0	42.2	4.6
	Wife	0.8	85.5	8.4	5.3
	Son/s (if aged 12 or above)	60.3	6.3	28.6	4.8
	Daughter/s (if aged 12 or above)	0.0	38.5	34.6	26.9
	Others (Females)	3.0	81.8	6.1	9.1
Shopping for food and other household needs	Husband	3.7	27.6	37.3	31.3
	Wife	7.0	46.9	28.1	18.0
	Son/s (if aged 12 or above)	1.3	32.1	20.5	46.2
	Daughter/s (if aged 12 or above)	8.0	8.0	56.0	28.0
	Others (Females)	3.1	43.8	21.9	31.3
Babysitting/ looking after young children, feeds, bathes, and put then to bed	Husband	29.4	0.0	64.7	5.9
	Wife	6.3	81.3	6.3	6.3
	Son/s (if aged 12 or above)	20.0	20.0	40.0	20.0
	Daughter/s (if aged 12 or above)	0.0	100.0	0.0	0.0
	Others (Females)	0.0	100.0	0.0	0.0
Helping school aged children with their studies	Husband	15.6	9.4	65.6	9.4
	Wife	17.6	55.9	14.7	11.8
	Son/s (if aged 12 or above)	44.4	11.1	22.2	22.2
	Daughter/s (if aged 12 or above)	0.0	100.0	0.0	0.0
	Others (Females)	0.0	50.0	0.0	50.0
Take care of the sick members of the HH	Husband	7.1	4.4	57.5	31.0
	Wife	3.1	82.4	6.9	7.6
	Son/s (if aged 12 or above)	2.8	5.6	40.3	51.4
	Daughter/s (if aged 12 or above)	7.4	44.4	22.2	25.9
	Others (females)	6.5	77.4	6.5	9.7
Repairs/attends to broken electrical items	Husband	62.2	0.0	29.4	8.4
	Wife	79.8	19.4	0.8	0.0
	Son/s (if aged 12 or above)	30.6	1.4	63.9	4.2
	Daughter/s (if aged 12 or above)	100.0	0.0	0.0	0.0
	Others (Males)	100.0	0.0	0.0	0.0
Repairs attends to plumbing related problems	Husband	98.4	0.0	1.6	0.0
	Wife	100.0	0.0	0.0	0.0
	Son/s (if aged 12 or above)	96.8	0.0	1.6	1.6
	Daughter/s (if aged 12 or above)	100.0	0.0	0.0	0.0
	Others (Females)	100.0	0.0	0.0	0.0

64. This is a water supply project which is expected to enhance the service levels in the the project areas. In Garden reach area (refer table....) it is seen that 12.1 5 HH's spend an average of Rs.2500 per annum for supplementary water, while 80% spend an average of Rs.2000-30,000 per annum on health. 4.4% of the surveyed households spend more than Rs.30,000 per annum on health. While all illnesses are not attributable to water quality, improved quality and enhanced service levels is expected to reduce the burden on care giver who is mostly the woman in the household.

#### **D. Impact to Vulnerable Persons<sup>6</sup>**

65. While this subproject is not a targeted poverty intervention program it will have poverty reduction impacts and benefits through increased service levels of basic amenities. It is expected that an improved Water Supply system will help improve the overall conditions of hygiene resulting in improved health situation and reduce time and expenses spent on sourcing water. This will further help reduce burden of expenditure on health, time spent on care giving as well as provide more time to pursue economic activities. This project will especially be of benefit to women who spend considerable amount of time in handling their household chores, looking after children and family as well as pursue some economic activity to help strengthen and contribute to the household's financial status. Educational standards will also get a boost with children leading healthier lives and being able to attend school regularly.

#### **E. Impact on Indigenous Peoples**

66. The subproject impact area is a highly urbanized area and statistics show that less than 10,000 people belonging to scheduled tribes ST's are found within KMC. None of the proposed subproject components are located on land belonging to scheduled tribes. Also scheduled tribes resident in Kolkata speak the same language as the majority of the population, do not have traditional rights and/or access to land resources and do not follow any distinct cultural practices. One can safely conclude that the Scheduled Tribe population in KMC area is assimilated in mainstream society. There are practically no indigenous people in the subproject component locations therefore no impacts are envisaged.

Rapid assessments and surveys conducted also indicate that there very few scheduled tribe households in the project area and they have been assimilated in mainstream society.

### **IV. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION**

#### **A. Stakeholders**

67. The stakeholders identified for this subproject are:

- (i) Primary
  - Local community (residents, educational institutions, commercial and business) impacted due to utilities being built in their habitation or areas of usage
  - Community (residents, commercial and business) benefiting from the subproject
  - Transit/ commuting population using the area for accessing place of work, residence or recreation
  - Public transport departments/ companies ( private and government operated)
  - KMC and other state government departments, Public Health Engineering (PHE), waterworks, telecommunication, electricity, poverty alleviation, etc)
  - Project Management Unit (PMU)

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<sup>6</sup> Persons belonging to below poverty line (BPL) category, or those who maybe reduced to BPL category due to the sub project impact, women from slums, women headed households, aged persons



- GoWB,
  - Gol
  - ADB
- (ii) Secondary
- Representatives of community based organizations, civil society groups
  - Police Department
  - NGO's
  - Builders

## **B. Public Consultations**

68. The following methodologies will be used for carrying out public consultation:

- (i) Local communities, Individuals affected, traders and local shopkeepers who may be directly affected to be given priority while conducting public consultation.
- (ii) Walk-through informal group consultations along the proposed water transmission line stretch.
- (iii) The local communities to be informed through public consultation with briefing on project interventions including its benefits.
- (iv) The social concerns and suggestions made by the participants to be listed out, discussed and suggestions to be noted for consideration during implementation.

69. Formal consultations have been carried out with Mayor and engineers of KMC on 5.8.2011 and 18.11.2011 to prioritize and finalize items of work to be taken under the Program. These were supplemented by series of informal discussions by the PMC engineering Consultants with Chief Engineers of KMC and Director General (Projects), PMU mainly on understanding current situation and optimum design to be adopted in order to attain the objectives of taking up the work items.

70. Consultations have been held throughout the planning and design stage with KMC officials, PMU, ADB and state government departments like Pollution Control Board (PCB). Walk through informal discussions have been held with the local community along the proposed transmission stretch to assess the kind of impacts.

## **C. Future Consultations**

71. The public consultation and disclosure program will remain a continuous process throughout the subproject implementation and shall include the following:

### **i. Consultation during Detailed Design Stage**

72. Focus-group discussions with affected persons and other stakeholders to hear their views and concerns, so that these can be addressed in subproject design wherever necessary. These discussions will be documented providing the following specific information like, (i) date on which discussion was held; (ii) list of names of people attending the discussion, and (iii) summary of discussions and concerns raised. Regular updates on the subproject will kept available at the PMU office of KMC.

73. KMC will conduct information dissemination sessions at project location sites and

solicit the help of the local community leaders/prominent citizens to encourage the participation of the people to discuss various social issues.

74. The Project Management Unit (PMU), with assistance of Design and Supervision Consultants (DSC) will conduct information dissemination sessions in the subproject area. During resettlement plan implementation PMU and DSC will organize public meetings and will apprise the communities about the progress on the implementation of EMP in the subproject works.

#### **ii. Consultation during Construction Stage**

75. Public meetings with affected communities (if any) to discuss and plan work programs and allow issues to be raised and addressed once construction has started; and

76. Smaller-scale meetings to discuss and plan construction work with local communities to reduce disturbance and other impacts, and provide a mechanism through which stakeholders can participate in subproject monitoring and evaluation;

77. A summary of the proposed Consultations is given in Appendix 6. Some of the scheduled consultations may be combined in to a single composite consultation if the situation so demands.

#### **D. Project Disclosure**

78. A communications strategy is of vital importance in terms of accommodating traffic during road closure. Local communities will be continuously consulted regarding location of construction camps, access and hauling routes and other likely disturbances during construction. The road closure together with the proposed detours will be communicated via advertising, pamphlets, radio broadcasts, road signage's, etc.

79. One public information campaign via newspaper/radio/TV is proposed to explain the subproject details to a wider population. Public disclosure meetings at key project stages to inform the public of progress and future plans.

80. For the benefit of the community a summary of the resettlement plan will be translated in the local language and made available at the offices of KMC, PMU and DSC. Hard copies of the English version of the resettlement plan will be accessible to citizens as a means to disclose the document and at the same time creating wider public awareness. Electronic version of the resettlement plan will be placed in the official website of the KEIP and the official website of ADB after approval of the resettlement plan by Government and ADB. The PMU will issue Notification on the start date of implementation of the Water supply subproject in the investment program web site ahead of the implementation works.

**Table 34: Consultation and Participation**

Activity	Target Stakeholders	Type of Participation	Objectives of the C&P Activity	Responsible Unit/ Persons	Time Frame	Cost Estimate INR
1 Project Orientation Workshop for government officials (especially KMC & West Bengal Pollution Control Board officials, officers, and staff on the Investment program (half day)	50 government officials and staff per Project orientation workshop consisting of representatives from the officials and staff, especially the Municipal Corporations; and private contractors	Information sharing  Consultation  Shared responsibility  Shared decision making	<ul style="list-style-type: none"> <li>To introduce the Project</li> <li>To demonstrate the link between improved S&amp;D and sewerage infrastructure and good health, women's empowerment, and environmental conservation (Note: Seminar topics and contents to be gender-sensitive, socially inclusive, and raise environmental and social awareness).</li> <li>To present Safeguards and Social Frameworks and Plans and disclosure requirements.</li> <li>To discuss roles and accountabilities of various government units.</li> <li>To discuss issues related to use of government lands /property for the Project, environmental risks.</li> <li>To mitigate potential problems e.g., citizens' use of government lands and property that will be lost to the Project such as hawking rights on streets, temporary occupation of public facilities, construction material storage on public facilities, environmental risks especially aquatic ecology of Hooghly river, compilation and agreement on recommendations</li> </ul>	PMU with assistance from Project Team	Year 1: One Project orientation workshop	Project Orientation Workshop for officials = 50,000
1 Project Orientation Seminar for household heads on the investment program (half day)  1 Project Orientation Seminar for women only on	100 community members, preferably, household heads, with at least 30 women participating  At least 50 women community members per Project Orientation Seminar	Information sharing  Consultation  Shared decision making	<ul style="list-style-type: none"> <li>To introduce the Project, highlighting its importance and benefits to the community</li> <li>To demonstrate the link between improved S&amp;D and sewerage infrastructure and good health, women's empowerment and environmental conservation. (Note: Seminar topics and contents to be gender-sensitive, socially inclusive, and raise environmental/ social awareness).</li> <li>To present safeguards and</li> </ul>	PMU with assistance from Project Team	Years 1:	Project Orientation Seminar households = 50,000  Project Orientation Seminar for women = 25,000

Activity	Target Stakeholders	Type of Participation	Objectives of the C&P Activity	Responsible Unit/ Persons	Time Frame	Cost Estimate INR
the investment program (half day)			social frameworks and plans. <ul style="list-style-type: none"> <li>• Compilation of concerns and views related to S&amp;D and sewerage.</li> <li>• Compilation and agreements on recommendations</li> </ul>			
One Consultation workshop (half day) with temporarily affected persons	50 hawkers/ vendors, and small shopkeepers affected per subproject	Information sharing Consultation	<ul style="list-style-type: none"> <li>• To introduce the Project.</li> <li>• To demonstrate the link between improved water supply and sewerage infrastructure and good health, women's empowerment and environmental conservation and social protection.</li> <li>• To show possible livelihood/business opportunities/alternatives. (Note: Seminar topics and contents to be gender-sensitive, socially inclusive, and raise environmental awareness).</li> <li>• To present social and resettlement framework and draft social and resettlement plans.</li> <li>• To mitigate potential resistance to the Project Compilation of recommendations and agreements on remedial measures</li> </ul>	PMU with assistance from Project Team	Year 1: One consultation workshop	Consultation Workshop = 75,000
One Consultation workshop with the academe, NGOs, and other civil society organizations (1 whole day)	50 representatives of the academic field, NGOs, and other civil society organizations	Information sharing/knowledge generation.  Consultation  Shared responsibility	<ul style="list-style-type: none"> <li>• To introduce the Project.</li> <li>• To demonstrate the link between improved S&amp;D and sewerage infrastructure and good health, women's empowerment, and environmental conservation and social protection.</li> <li>• To show possible livelihood/business opportunities/alternatives. (Note: Seminar topics and contents to be gender-sensitive, socially inclusive, and raise environmental awareness)</li> <li>• Compilation of views on proposed conservation and mitigation measures.</li> <li>• To mitigate potential resistance</li> </ul>	PMU with assistance from Project Team	Year 1: One consultation workshop	Consultation Workshop = 50,000 Travel of participants = 25,000

Activity	Target Stakeholders	Type of Participation	Objectives of the C&P Activity	Responsible Unit/ Persons	Time Frame	Cost Estimate INR
			to the Project. <ul style="list-style-type: none"> <li>To discuss possible roles as watchdogs of the Project's implementation.</li> <li>To gather other relevant recommendation</li> </ul>			
Strategic and Action Planning Workshop  1 half day for Councilors and KMC officials & engineers  1 half day for ADB Project Team	Councilors, KMC and KMC officials & engineers	Information sharing  Shared responsibility.  Shared decision making control	<ul style="list-style-type: none"> <li>To develop strategic and action plans in accordance with the Project road map.</li> <li>To review compliance with social safeguards, environment, and gender frameworks and plans.</li> <li>To discuss progress in implementation, including problems encountered and means to mitigate/address them.</li> <li>To regularly report on the progress of implementation.</li> </ul>	PMU with assistance from Project Team	Annually	Councilors meetings 50,000 X 5 years = 250,000  Project Team monitoring meetings: 15000 X 4 years = 60,000
Participatory Monitoring Meetings (half day) (for community watchdogs)	20 representatives (50% women) from the community and civil society (representatives of CBOs, NGOs, ward committees, poor/slum communities, private sector)	Information sharing.  Shared responsibility	<ul style="list-style-type: none"> <li>Discussion of issues and concerns during Project implementation.</li> <li>To discuss and recommend measures to mitigate/ address the problems.</li> <li>To monitor progress of Project implementation</li> </ul>	PMU with assistance from Project Team	Participatory Monitoring Meetings: Semi-annually	15000 X 2 meetings X 4 years = 120,000
<b>Total Cost</b>						<b>705,000</b>

## V. GRIEVANCE REDRESS MECHANISM

81. A grievance redress mechanism (GRM) will be established to receive, evaluate and facilitate the resolution of affected people's concerns, complaints, and grievances about the social and environmental performance at the level of the project. The GRM is aimed to provide a trusted way to voice and resolve concerns linked to the project, and to be an effective way to address affected people's concerns. The Grievance Redress Process will be discussed with the stakeholders at the disclosure workshop for the project proposed in Kolkata

82. **Common Grievance Redress Mechanism.** A common grievance redress mechanism (GRM) will be in place for social, environmental or any other project related grievances.

83. **Grievance Redress Process.** PMU will maintain a Complaint Cell headed by a designated Grievance Officer at its office. The Grievance Registration/Suggestion Form (Annex 5 will be available at the Complaints Cell and in Borough Offices and will also be downloadable from the KEIP website.

84. Grievances/suggestions of affected persons can be dropped in suggestion boxes or conveyed through phone or mail. Affected Persons will also be able to register grievances - social, environmental or other, personally at the Complaint Cell and at Borough offices of KMC. The Grievance Officer and designated official at the Boroughs will be able to correctly interpret/record verbal grievances of non-literate persons and those received over telephone. The Complaint Cell will also serve as Public Information Centers, where, apart from grievance registration, information on the project components social and environmental safeguards can be provided.

85. The Grievance Officer will resolve simple issues and in case of complicated issues, consult/seek the assistance of the Environment/Social Coordinator of the PMU. Grievances not redressed through this process within one month of registration will be brought to the notice of the Project Director, KEIP. The draft Grievance Redress Process will be discussed with the stakeholders at the proposed disclosure workshop.

86. Periodic community meetings with affected communities to understand their concerns and help them through the process of grievance redress (including translation from local dialect/language, recording and registering grievances of non-literate affected persons and explaining the process of grievance redress) will be conducted if required.

87. **Consultation Arrangements.** This will include (i) group meetings and discussions with affected persons, to be announced in advance and conducted at the time of day agreed on with affected persons (based on their availability) and conducted to address general/common grievances; and (ii) availability of Environment/Social Coordinator of PMU on a fixed day as required for one-to-one consultations. Non-literate affected persons/ vulnerable affected persons will be assisted to understand the grievance redress process, to register complaints and with follow-up actions at different stages in the process.

88. **Record-keeping.** Records will be kept by PMU of all grievances received including contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were in effect, and final outcome.

89. **Information Dissemination Methods of the GRM.** Grievances received and responses provided will be documented and reported back to the affected. The number of grievances

recorded and resolved and the outcomes will be displayed/disclosed in the offices of the different Boroughs of KMC and web. The phone numbers and office address of the Grievance Officer will be displayed at the construction site

90. **Periodic Review and Documentation of Lessons Learned.** PMU will periodically review the functioning of the GRM and effectiveness of the mechanism, especially on the project's ability to prevent and address grievances.

91. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication and reporting / information dissemination) will be borne by PMU.

## VI. POLICY AND LEGAL FRAMEWORK

92. The resettlement plan is designed to deal with the limited impacts during the construction stage. The project policy and framework strategy is based on the applicable legal and policy frameworks at the national and state level and as per ADB SPS 2009 requirements. The applicable acts and policies with detailed policy review and comparison is provided below.

**Table 35: Summary of Applicable Policies and Legal Framework**

Policy/Legal Framework	Relevance
Government Policy: National Level - Land Acquisition Act (LAA), 1894 (as amended)	The LAA provides a framework for facilitating private land acquisition for public purposes in India by the state government. LAA ensures that no person is deprived of land except under LAA and entitles affected persons to a hearing before acquisition. Under the LAA (1894) compensation is paid only to the legal titleholders and does not provide any compensation package to the non-title holders like encroachers, squatters etc.
National Rehabilitation and Resettlement Policy (NRRP), Ministry of Rural Development, Government of India, 2007	The NRRP stipulates the minimum facilities to be ensured for persons displaced due to the acquisition of land for public purposes. The objectives of the Policy are: <ul style="list-style-type: none"> <li>a. to minimize displacement and to identify non-displacing or least displacing alternatives;</li> <li>b. to plan resettlement and rehabilitation of project affected families (PAFs) or project affected households (PAHs), including tribal and vulnerable households;</li> <li>c. to provide improved standard of living to PAFs or PAHs; and</li> <li>d. to facilitate a harmonious relationship between the requiring body and PAFs</li> </ul> <p>Though NRRP, 2007 is applicable to projects where over 400 PAFs are displaced, the basic principles can be applied to resettlement and rehabilitation of PAFs regardless of the number affected. NRRP's provisions are intended to mitigate adverse impacts on PAFs; it has specific provisions for vulnerable or poor groups and weaker segments of society.</p>
National Policy for Urban Street Vendors 2004	Street vendors are most vulnerable to forced eviction and denial of basic right to livelihood. It causes severe long-term hardship, impoverishment and other damage including loss of dignity. Therefore, no street vendor will be forcefully evicted. They will be relocated with adequate temporary rehabilitation, only where the land is needed for a public purpose of urgent need. No hawker/ street vendor should be arbitrarily evicted in the name of 'beautification' of the cityscape. The beautification and clean up programs undertaken by the states or towns should actively involve street vendors in a positive way as a part of the beautification programme.
Government Policy: State Level	Although there is no specific separate land acquisition and/or rehabilitation/resettlement act that could be enacted till date by the Government of West Bengal (land being on concurrent list of the Indian Constitution), there are several West Bengal specific amendments that have been made to the LAA of 1894. This has been done mainly to add details to the land acquisition procedures in West Bengal including payment of compensation and establishing <i>especially the right of bargadars</i> (share-croppers).
ADB Policy: ADB's Safeguard Policy Statement, 2009	ADB's involuntary resettlement policy is to avoid resettlement wherever possible; to minimize involuntary resettlement by exploring project and design alternatives; to

Policy/Legal Framework	Relevance
	<p>enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre project levels and to improve the standards of living of the displaced poor and other vulnerable groups.</p> <p>The IR safeguards covers physical displacement ( relocation, loss of shelter or land) and economic displacement (loss of land, assets, access to assets, income sources or means of livelihoods) as a result of involuntary acquisition of land or involuntary restriction on land use or on access to legally designated parks or protected areas. It covers them whether such losses and involuntary restrictions are full or partial, temporary or permanent.</p> <p>The three important elements of the involuntary resettlement policy are (i) compensation to replace lost assets, livelihood, and income; (ii) assistance for relocation, including provision of relocation sites with appropriate facilities and services; and (iii) assistance for rehabilitation to achieve at least the same level of well-being with the project beneficiaries.</p>

93. Based on the above, the core involuntary resettlement principles applicable for this resettlement plan are: (i) land acquisition and other involuntary resettlement impacts will be avoided or minimized by exploring all viable alternative project designs; (ii) where unavoidable time bound resettlement plans for temporary impacts will be prepared and affected persons will be assisted as per entitlement matrix and resettlement plan; (iii) consultations and information disclosure will be carried out with affected persons, local communities and other stakeholders as required during the project period; (iv) vulnerable groups will be identified and their concerns addressed as per the entitlement matrix; (v) provision of income restoration activities and temporary rehabilitation activities; and (vi) disclose resettlement plan, including documentation of the consultation process in a timely manner, in an accessible place and form in languages understandable to affected persons and other stakeholders, (vii) addressing grievances as per the GRM outlined, (viii) assistances to be provided prior to beginning of construction, and (ix) monitor and assess resettlement outcomes and impact to see whether the objectives of the resettlement plan have

## VII. ENTITLEMENTS, ASSISTANCE AND BENEFITS

### A. Eligibility

94. ADB's criteria for screening and categorization of projects for involuntary resettlement will be adopted for the projects.

- (i) **Category A:** 200 or more people will be severely affected (physically displaced from housing or losing 10% or more of their productive/income-generating assets).
- (ii) **Category B:** Less significant impacts than Category A.
- (iii) **Category C:** No person will be affected.

95. Impacts are temporary in nature and anticipated only during construction stage. Permanent impacts due to land loss are restricted to procuring land of other government departments meant for public purpose. Efforts have been made during the preparation of the engineering design to avoid acquisition of land and other assets and to reduce negative socio-economic impact. Economic displacement resulting from partial closure of roads during construction is avoidable and manageable through good implementation of the EMP (see para 20 of resettlement plan) to limit, to the extent possible, the disruption of any business activity. Therefore, no impact on income and livelihood opportunities is anticipated. Therefore this subproject has been categorized as category 'B'.



96. However, during construction stage if income or livelihood opportunity of any business is affected due to project activities these will be identified through a business survey. These businesses will be eligible for livelihood assistance. Those eligible for support will be provided assistance as detailed in the entitlement matrix.

97. Compensation eligibility is limited by a cut-off date as set for this project on the day of the beginning of the income survey prior to commencement of the civil works. The Social Development Unit (SDU) will identify in collaboration with contractor the road sections where the construction activities will hinder access resulting in income loss for permanent business structures, an income survey of businesses along the relevant sections will be carried out. The first day of this survey will serve as the cut-off date. All businesses identified on the cut-off date will be entitled to compensation for their lost income based on the tax record or, in its absence, comparable rates from registered businesses of the same type with tax records, or for shops not qualifying under these categories (hawkers, vendors, etc.), the option of using the actual income based on survey followed by a verification of the income data based on comparable incomes in the project area.

98. Hawkers or businesses who settle in the affected areas after the cut-off date will not be eligible for compensation. They however will be given sufficient advance notice (at least 1 week) request to vacate premises and dismantle affected structures prior to subproject implementation. Contractors will provide shifting assistance to any vendors needing help.

## **B. Entitlements**

99. The Entitlement Matrix (Table 36) provides a detailed description of specific compensation measures and assistance applicable to each category of affected person in accordance with the ADB policies. In addition to temporary impacts during construction, the entitlement matrix also covers damages to structures during construction.

**Table 36: Entitlement Matrix**

Type of Loss	Entitlement Unit	Description of Entitlement and Implementation Procedures	Remarks	Responsibility
<b>1. Damages Caused During Construction</b>				
1.1 Government and private structures	1. Titleholder 2. Tenant 3. Informal settlers on government land	Where damages occur to private, community, or government property as a result of construction works, the cost of restoring to at least their original condition will be the responsibility of the contractor as part of their contract.	Extreme care should be taken by the contractors to avoid damaging any properties during construction. Compensation for the losses will be borne by the contractor	Contractor/PMU/DSC
<b>2. Community Facilities and Resources</b>				
2.1 Loss of Community structures	Local community	Restoration of affected community buildings and structures to at least previous condition, or replacement in areas identified in consultation with affected communities and relevant authorities	Extreme care should be taken by the contractors to avoid damaging any properties during construction. Compensation for the losses will be borne by the contractor. Community structures include service roads, inner roads, temples, footpaths/trails, culverts, water points.	Contractor/PMU /DSC
2.2 Loss of drinking water, sanitation and other utilities like telephone lines, cable lines etc	Residents and businesses	Immediate replacement and restoration of these utilities	The time gap between the construction of new system and transfer from the old system should be minimized. Alternative sources of water should be made available during the construction period.	Contractor/PMU/DSC
<b>3. Loss of income</b>				
3.1 Loss of business	1. Titleholder 2. licensed and non-licensed vendors	Sufficient advance notice (at least 1 week prior to construction) will be given to businesses that may be impacted by construction activities. An income survey will be conducted of businesses located on road sections where livelihood opportunities of businesses may be affected due to loss of access. 1. Businesses are not entitled to any compensation or assistance if access is possible for pedestrians and/or vehicles during	An income survey prior to construction will serve as the cut-off date. Survey will be conducted for structures that maybe impacted due to loss of access	DSC/PMU

		<p>construction stage.</p> <p>2. Businesses are entitled to compensation for each day of income loss due to loss of access (full or partial, permanent or temporary)<sup>7</sup></p> <p>All businesses identified under the above mentioned category 2, in the project-impacted areas (sections ready for construction) on the cut-off date<sup>8</sup> will be entitled to compensation for their lost income based on the following criteria: (i) tax record or, in its absence, comparable rates from registered businesses of the same type with tax records, and (ii) for shops (licensed/illegal) not qualifying under the above criteria, the option of using the actual income based on survey followed by a verification of the income data based on comparable incomes in the project area.</p>		
		<p>Mobile hawkers and vendors will be assisted by contractors in moving to alternative locations during the period of construction.</p> <p>Hawkers or businesses who settle in the affected areas after the cut-off date will not be eligible for assistance. They, however will be given sufficient advance notice (at least 1 week), and requested to vacate premises and dismantle affected structures prior to project implementation.</p>	Assistance mechanism to be part of construction contract	Contractor
3.2 Vulnerable persons	Female-headed households, and below poverty line HHs	Vulnerable persons entitled to preferential employment (unskilled labour) under the project.	Vulnerable persons to be identified during income survey and the list given to PMU and contractor	Contractor/DSC/PMU
<b>4. Structures</b>				
4.1 Permanent structures	Permanent structures or stalls that belong to licensed and non-licensed vendors, and titled and non-titled households.	Advanced notice of at least 2 weeks will be given. Rights to salvage materials from structure. Where permanent structures (e.g cement or concrete structures) whose materials cannot be salvaged are affected, compensation will be provided based on replacement value determined by latest schedule of rates	Engineering designs indicate that no permanent structures will be affected. However, during construction if any such structure is affected, these will have to be identified and replacement value to be	PMU/DSC

<sup>7</sup> Economic displacement will be avoided through implementation of EMP

<sup>8</sup> First day of the income survey being conducted in a particular section.

		Assistance in shifting to nearby location.	assessed.	
4.2 Temporary loss of structures in right of way	Temporary or semi-permanent structures or stalls that belong to licensed and non-licensed vendors, and titled and non-titled households.	Advanced notice of at least 2 weeks will be given. Rights to salvage materials from structure. Assistance in shifting to nearby location. Allowed to return to original site after completion of construction works	Temporary shifting for 5-7 days during period of construction. PMU and contractor will identify alternative site and help in shifting.	Contractor/DSC/PMU

### C. Determination of Compensation

100. **Income.** Businesses will be compensated for income loss if any due to loss of access (full/partial, permanent /temporary). The SDU will identify in collaboration with contractor the road sections where the construction activities will hinder access resulting in income loss for permanent business structures, an income survey of businesses along the relevant sections will be carried out. All affected businesses identified in the subproject-impacted areas (sections ready for construction) on the cut-off date will be entitled to compensation for their lost income based on the tax record or, in its absence, comparable rates from registered businesses of the same type with tax records, or for shops not qualifying under these categories (hawkers, vendors, etc.), the option of using the actual income based on survey followed by a verification of the income data based on comparable incomes in the subproject area.

101. **Compensation Procedures.** Paying compensation to the temporarily affected persons will take the following steps:

- (i) **Step 1.** Conduct public awareness and information dissemination prior to construction works.
- (ii) **Step 2.** The SDU to identify in collaboration with contractor the road sections where the construction activities will hinder access (full/partial, permanent /temporary), to any permanent business structures resulting in income loss and the estimated period of such disturbance. Two types of disturbance anticipated from construction activities on roads: (i) partial disturbance, where there is no vehicular access but pedestrian access is maintained or (ii) full disturbance, where there is no vehicular and no pedestrian access.
- (iii) **Step 3.** The R&R expert is to then (a) conduct an income survey<sup>9</sup> of shops identified for income loss, (b) update the Resettlement Plan (identifying income and potential loss based on actual income losses), and (c) send the updated Resettlement Plan to ADB for review and approval after detailed designs are complete.
- (iv) **Step 4.** After ADB approval of the revised Resettlement Plan, the SDU will distribute identity cards with compensation amount to the affected persons.
- (v) **Step 5.** Affected person can then collect payment at PID office or on site, based on PID discretion.
- (vi) **Step 6.** PID to issue a cheque to affected persons based on survey record and identity card prior to construction works (if feasible). All payments to be recorded for accounting purposes with signature of affected person to verify payment made. The Project Director to closely monitor payments with PID accounting office.

### D. Vendor Assistance

102. Vendors requiring temporary shifting during construction period will be notified in

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<sup>9</sup> Compensation is based on lost income based on the tax record or, in its absence, comparable rates from registered businesses of the same type with tax records, or for shops not qualifying under these categories (hawkers, vendors, etc.), the option of using the actual income based on survey followed by a verification of the income data based on comparable incomes in the project area.

advance and allowed to salvage all materials for temporary shifting to alternative location. They will be allowed to return to the original location after construction is declared complete. Vendor assistance will take the following steps:

- (i) **Step 1.** Identification of impacted vendors based on detailed design
- (ii) **Step 2.** Notify vendors at least 1 week in advance.
- (iii) **Step 3.** Identify alternative location nearby for affected vendors to continue their business.
- (iv) **Step 4.** Assistance by contractor to shift to alternate location.
- (v) **Step 5.** Assistance by contractor to return to original location after construction works complete.

### VIII. INCOME RESTORATION AND REHABILITATION

103. Incomes of affected persons will be compensated based on replacement value of losses as detailed in the entitlement matrix.

### IX. RESETTLEMENT BUDGET AND FINANCING PLAN

104. The cost of all resettlement related activities is an integral part of overall costs. Activities that may need to be carried out as part of short term resettlement plans if any will be part of SDU's (Social Development Unit) activities. The preparation/ updation of resettlement plan prior to construction, staff training and regular monitoring and evaluation is the responsibility of the Social Development Unit (SDU). Activities identified under resettlement monitoring activities mainly include rapid assessments, surveys and consultations with the affected population. This will be the responsibility of the PMU to be executed through the SDU, costs of which are part of project management. Therefore there are no additional costs. The resettlement cost estimate for the Tranche 1 water supply subproject (Table 37) includes eligible compensation for temporary impacts to income. The total estimated resettlement cost for the project is INR 189,645.

105. The cost items are outlined below:

- (i) For linear works, temporary loss of income if any to shops and businesses due to loss of access caused by construction. Businesses are entitled to income compensation only if income is affected due to loss of access.
- (ii) Vulnerable persons entitled to preferential treatment in project related employment.<sup>10</sup>

106. The engineering design and technology adopted for the project indicate that there is no scope for roads to experience full closure. Impacts on access due to partial closure of roads are avoidable and manageable through good implementation of the Environmental Management Plan (EMP) as detailed in para 20 of this resettlement plan. If in the unlikely event during construction it is found that partial closure is creating loss of income to any business, these businesses would be entitled to livelihood assistance. Discussions with engineers reveal that the duration of such an unforeseen event if any will not be for more than 3 days. There are

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<sup>10</sup> A list of names of vulnerable persons will be submitted by the DSC to PD and contractors.

around 350 shops within the Garden Reach transmission main stretch and sludge pond area. These areas are unlikely to face any form of loss of access as the roads are wide. However, for the purpose of budgeting it is estimated that 10% of these shops (35) may face income loss due to access being hindered. In the water loss management study area also there is unlikely to be any scope for businesses to face loss of income due to loss of access since the area is predominantly residential and there are very few shops. However, for the purpose of budgeting it is estimated that a maximum of 200 shops may face disruption of business due to loss of access.

**Table 37: Resettlement Cost**

Item	Estimated number of days of compensation	Estimated Daily Income	Estimated number of shops in Water subproject area	Total amount
Assistance for income loss	3	269.00/day	235	1,89,645
Staff training for SDU	Part of Project Management Cost			-
Consultation and Information Disclosure	Part of Project Management Cost			-
Updating resettlement plan	Part of Project Management Cost			-
Monitoring and Evaluation	Part of Project Management Cost			-
<b>TOTAL</b>				<b>1,89,645</b>

## **X. INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS**

### **A. Institutional Arrangement**

107. The existing institutional arrangement for implementation of the KEIP, which has been functioning satisfactorily, will continue. The Administrative Officer will coordinate basic social monitoring including resettlement plan implementation. The present SDU with the resettlement and rehabilitation consultant and community mobilisers will actually implement the resettlement plan. Social safeguard obligations are now satisfactorily met with the above arrangement.

108. The above arrangement will continue to ensure that

- (i) social safeguard issues are addressed;
- (ii) resettlement framework is followed in all resettlement issues;
- (iii) approved resettlement plans are implemented;
- (iv) implementation of resettlement plan is monitored and
- (v) periodic monitoring reports are prepared in time and submitted to PD, KEIP for onward transmission to ADB upon approval

109. The monitoring report will focus on the progress of implementation of the resettlement plan/resettlement framework, issues encountered and measures adopted, follow-up actions required, if any, as well as the status of compliance with the subprojects selection criteria, and relevant loan covenants.

### **B. Implementation**

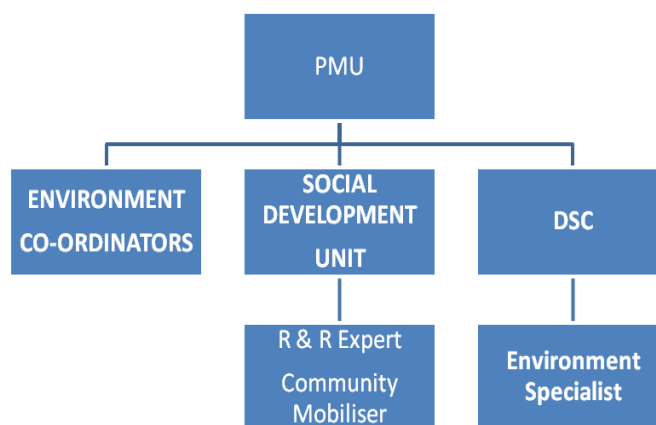
110. The SDU will be responsible for implementation of the resettlement plan. The resettlement and rehabilitation expert will undertake surveys and record observations throughout the construction period to ensure that safeguards and mitigation measures are provided as intended. The PMU through the SDU will arrange for delivery of entitlements to affected persons, implementation and monitoring of safeguards compliance activities, public

relations activities, gender mainstreaming activities and community participation activities. It will also arrange for obtaining statutory clearances and obtaining no objection certificates from government agencies and/or other entities, if required. It will also coordinate for obtaining ROW clearances with related state and national agencies. A consultant for resettlement and rehabilitation will arrange for data collection for future resettlement plan preparation and implementation and prepare progress reports with respect to the resettlement plan implementation.

111. The PMU will finalize entitlements in consultation with affected persons, which will be examined and approved by the KMC. The PMU through the implementing SDU will arrange for delivery of entitlements to affected persons. Organizational procedures/institutional roles and responsibilities for resettlement plan implementation and steps and/or activities involved in delivery of entitlements are described in Table 26.

112. The SDU will continue to assist the PMU in implementing and monitoring the resettlement plan (duly approved by KMC and reviewed/cleared by ADB prior to implementation). The implementing SDU currently has staff fully conversant with provisions of standard resettlement plan and adequate understanding of norms and customs of and respect for the affected persons.

**Figure 1: Institutional Arrangement – Safeguards**



Notes: PMU = Project Management Unit; DSC = Design and Supervision Consultants; R & R = Resettlement & Rehabilitation

**Table 38: Organizational Procedures/Institutional Roles and Responsibilities for Resettlement Plan Implementation**

Activities	Agency Responsible
<b>Subproject Initiation Stage</b>	
Finalization of sites/alignments for the subproject	PMU
Disclosure of proposed subproject details and proposed entitlements/mitigation measures by issuing public notice	PMU
Meetings at community/household level with affected persons of property	PMU/SDU
Disclosure of GRM process	PMU/SDU
<b>Report (Resettlement Plan) Preparation Stage</b>	
Conducting census of all affected persons	PMU/SDU
Conducting FGDs/meetings/consultations/workshops during Social Impact Assessment surveys	PMU/SDU
Formulating compensation and rehabilitation	PMU/SDU



<b>Activities</b>	<b>Agency Responsible</b>
Conducting discussions with APs/stakeholders	PMU/SDU
Finalising entitlements and rehabilitation packages	PMU/SDU
Disclosure of entitlements and rehabilitation	PMU/SDU
Approval of Resettlement Plan	PMU/ADB
Delivery of entitlements	PMU/SDU
<b>Implementation Stage</b>	
Implementation of proposed rehabilitation measures	PMC/SDU
Consultation Workshop	PMC/SDU
Grievance Redress	SDU
Internal monitoring	PMU/SDU
External monitoring	External agency

113. The role of the SDU in resettlement plan implementation is that of a facilitator of the resettlement process. The SDU works as a link between the Project and the affected community. They educate the affected persons on the need to implement each project and subproject under the investment program, on aspects relating to resettlement measures and ensure proper utilization of compensation paid to the affected persons under the entitlement package. After the approval of the micro plans, the SDU will issue identity cards to the entitled persons. The SDU will continue:

- (i) to build rapport with affected persons and/or indigenous peoples, the PMU and the PMC;
- (ii) to educate affected persons on their rights, entitlements, and obligations under the resettlement plan and/or indigenous peoples plan;
- (iii) to ensure that affected persons and/or indigenous peoples including vulnerable households receive their full entitlements;
- (iv) where options are available, to provide advice to affected persons on the relative benefits of each option;
- (v) to assist affected persons on grievance redress through the established system; and
- (vi) to collect data as required to help the PMU monitor and assess progress.

114. The responsibilities of SDU in the present the resettlement plan and/or indigenous peoples plan implementation will include the following:

- (i) to facilitate transparency in process and public participation;
- (ii) to take lead in joint verification and identification of affected persons/indigenous peoples/vulnerable households, to enlist affected persons/indigenous peoples/vulnerable households, to undertake counselling for livelihood restoration, dissemination of Project policies, documents, etc.;
- (iii) to identify training needs of CBOs/indigenous peoples/vulnerable groups for income generation activities and/or literacy and numeracy and to ensure that they are adequately supported,
- (iv) to put forth grievances of affected persons/indigenous peoples to GRC;
- (v) to generate awareness about livelihood restoration/livelihoods skills development activities and opportunities for employment in Project related activities among affected persons/indigenous peoples/vulnerable groups, and to help them to make informed choices;
- (vi) to assist the PMU in disbursement of monetary compensation, if paid to affected persons; and
- (vii) to participate in public meetings and consultations as and when required; and

- (viii) to submit periodic resettlement plan/IPP implementation reports to the PMU.

## XI. IMPLEMENTATION SCHEDULE

115. All resettlement and assistance disbursement for a individual project component will be completed before implementation/ beginning of construction activities. All land required will be provided free of encumbrances to the contractor prior to handing over of project site and the start of civil works. The implementation of the resettlement plan will include: (i) identification of cut-off date and notification; (ii) verification of losses and extent of impacts; (iii) finalization of entitlements and distribution of identity cards; (iv) consultations with affected persons on their needs and priorities; and (v) resettlement, provision of compensation and assistance, and income restoration for affected persons.

**Table39: Schedule for Resettlement Plan Implementation**

Activity	Time Line (half yearly)					
	1	2	3	4	5	6
Census and socio-economic survey (if required)	√					
Consultation and disclosure	√	√	√	√	√	√
resettlement plan update	√					
resettlement plan review and approval	√					
Establishment of GRM	√					
Issue notice to APs	√					
Compensation and resettlement assistance (if any)	√	√				
Relocation if required	√	√				
Internal monitoring		√	√	√	√	√
Start of civil works		√	√	√	√	√
Rehabilitation of temporarily occupied land if any	Immediately after construction					

## XII. MONITORING AND REPORTING

116. Implementation will be closely monitored to provide an effective basis for assessing and identifying potential difficulties and problems. Monitoring data will be provided by SDU. Monthly Progress Reports will be prepared and semi-annual monitoring reports will be provided by the PMU to ADB.

117. Monitoring will be carried out during the entire subproject period and will identify potential difficulties and problem areas. Monitoring will commence after 3 months of project initiation; reports will be generated every month for the first year of implementation and bi-annually thereafter. All monitoring reports will be produced within fifteen days of the end of a month or half-year. In case short term resettlement plan has to be implemented then the monitoring and evaluation system will involve:

- (i) Administrative monitoring including but not limited to: daily planning, implementation, feedback and trouble shooting, individual affected person file maintenance, progress reporting;
- (ii) Socio-economic monitoring as necessary which might include activities such as, but not limited to: case studies using baseline information for comparing affected persons socio-economic conditions, communal harmony, dates for consultations, number of grievances and resolutions; and
- (iii) Impact evaluation monitoring including but not limited to income standards restored or improved.

118. Internal monitoring will involve the following:

- (i) Administrative monitoring to ensure that implementation is on schedule and problems are dealt with on a timely basis;
- (ii) Overall monitoring whether recovery has taken place successfully and on time.

119. Data from baseline socio-economic surveys undertaken during project preparation will provide the benchmark for monitoring to assess the progress and success of resettlement plan implementation. Monitoring will also include the following:

- (i) Communication with and documentation of reactions from affected persons;
- (ii) Information from affected persons on entitlements, options, alternative developments, etc.
- (iii) Usage of GRM; and
- (iv) Disbursement of compensation amounts, if any and all assistance.

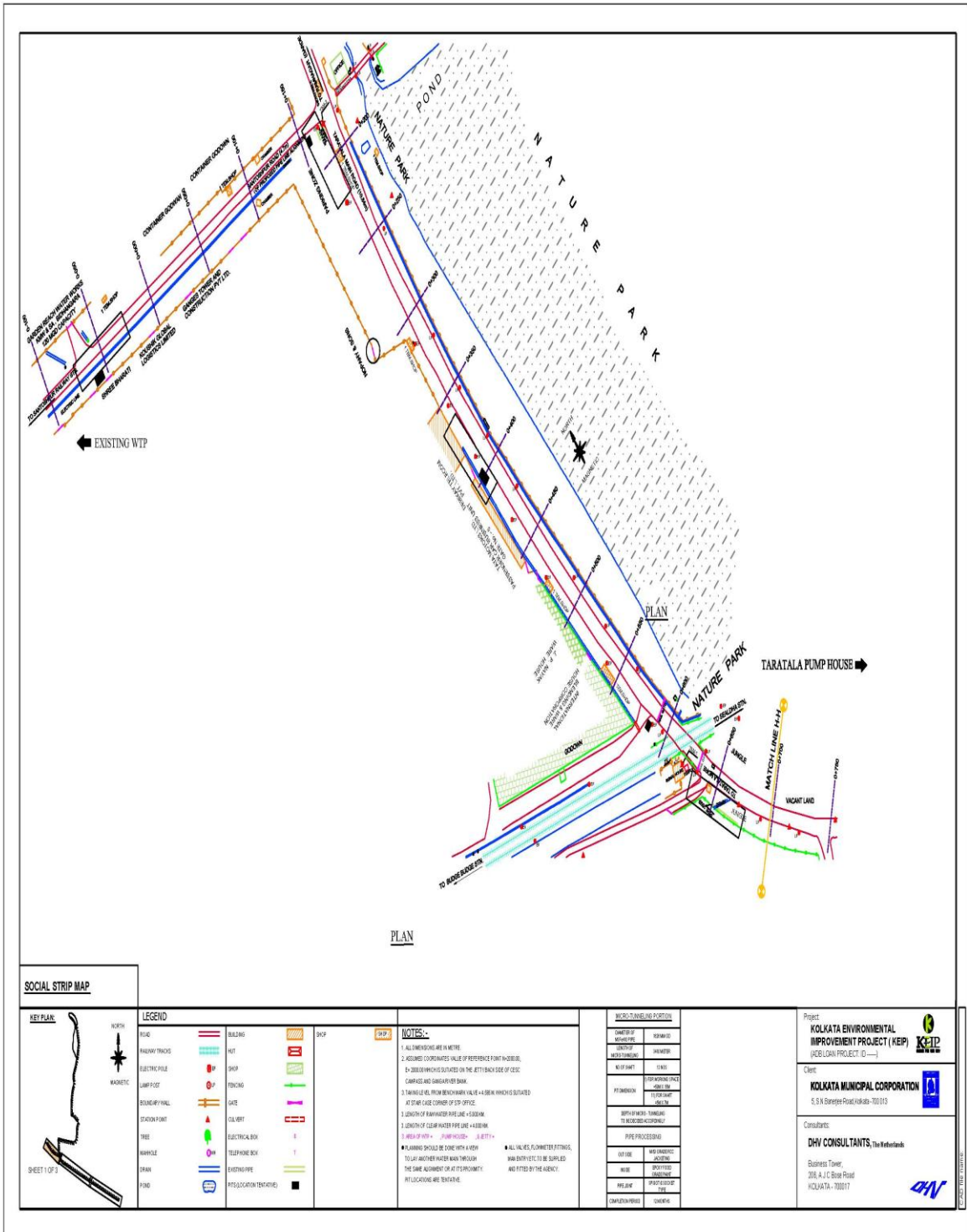
120. Monitoring will also cover the physical progress of resettlement plan implementation. This will include relocation of affected community properties, if any.

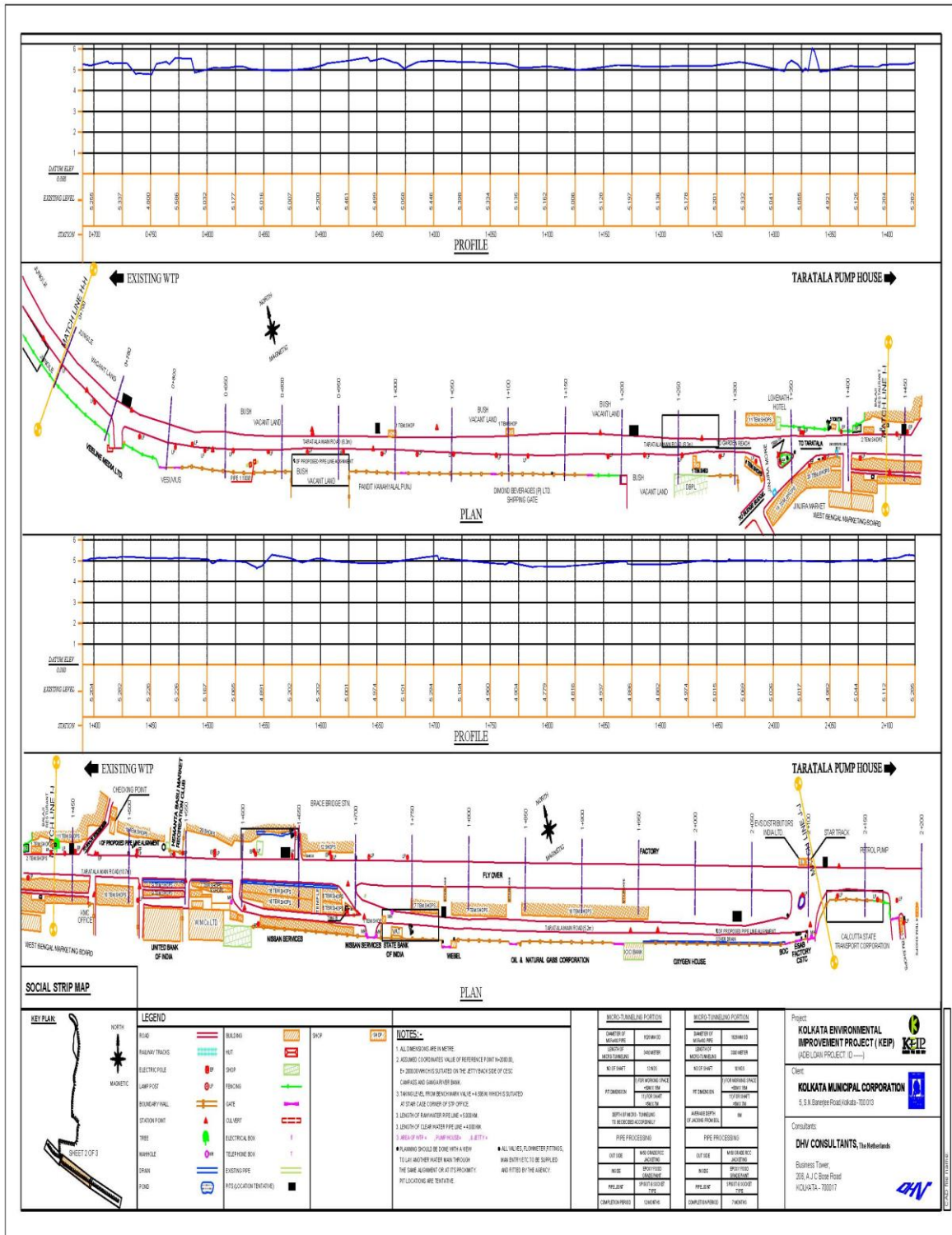
121. The indicators for achievement of objectives during resettlement plan implementation are of two kinds:

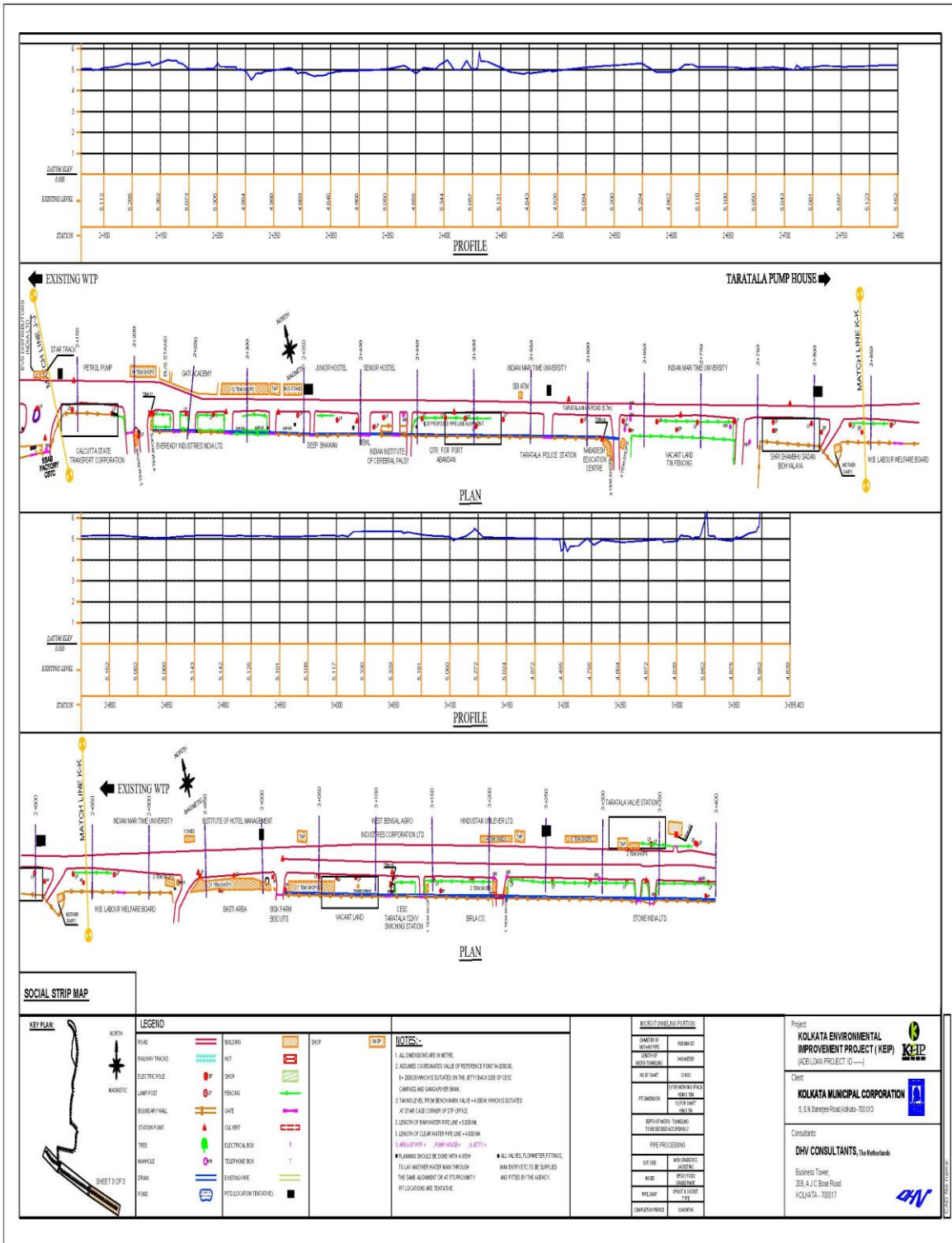
- (i) **Process Indicators:** Indicating subproject inputs, expenditure, staff deployment, etc.; and
- (ii) **Output Indicators:** Indicating results in terms of numbers of affected persons compensated and number of affected persons provided with skills training, etc. (if any)

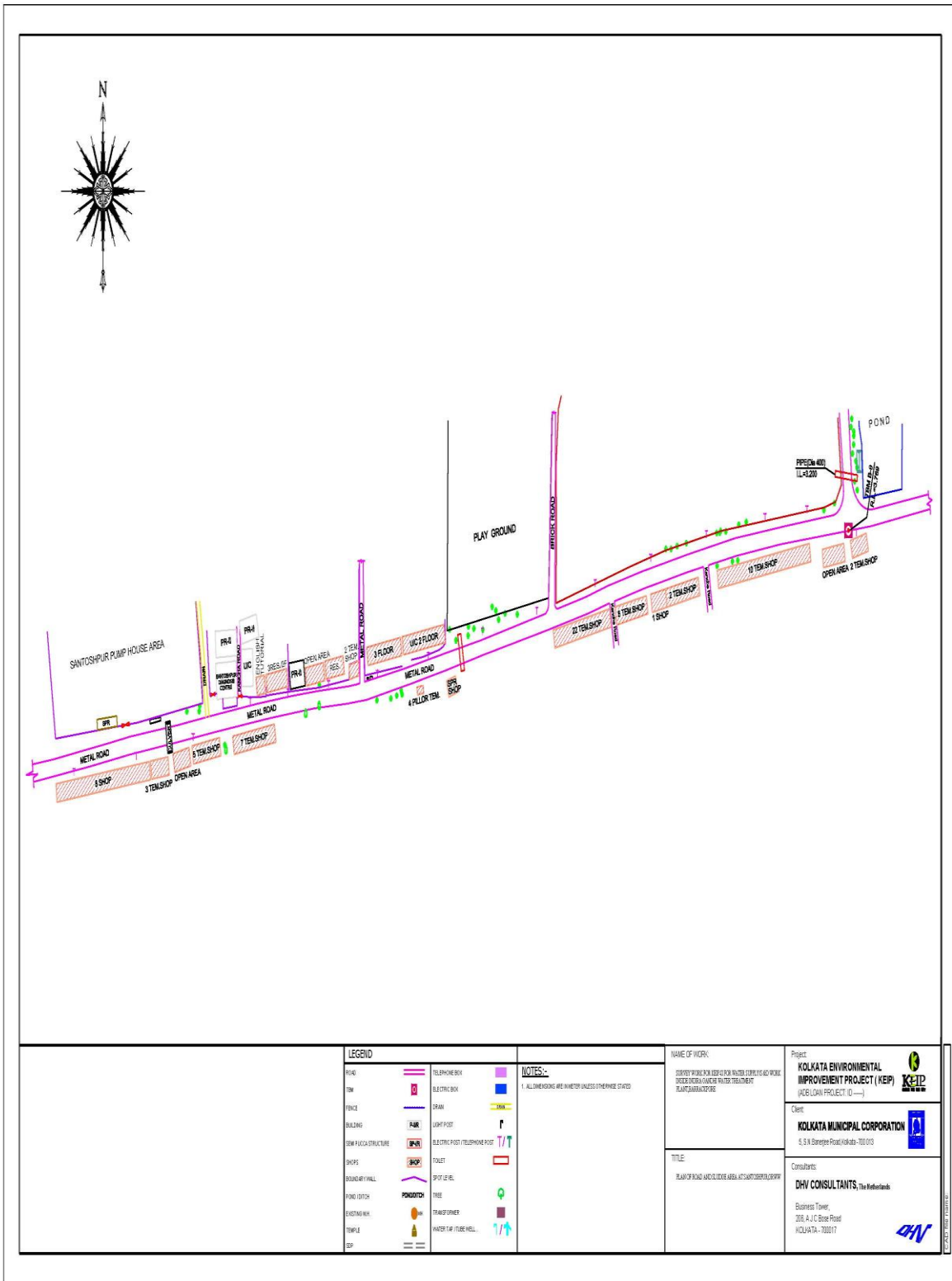
122. After subproject implementation, an end-term evaluation will be carried out to assess the effectiveness of implementation of short term resettlement measures, if any. The evaluation will emphasize on the assessment of achievements of resettlement plan targets and the change in the quality of life of affected persons. This report will evaluate whether the subproject has improved the quality of life of residents of the area, especially affected persons. Gaps will be identified and future strategies to address these will be included in the evaluation's conclusion.

### Annex 1: Strip Maps of Garden Reach









LEGEND	
ROAD	TELEPHONE BOX
TIN	ELECTRIC BOX
FENCE	SPAN
BUILDING	LIGHT POST
SEW PIPES/STRUCTURE	ELECTRIC POST/TELEPHONE POST
SHOPS	TOILET
BOUNDARY WALL	SPOT LEVEL
POND DITCH	POND
EXISTING W.H.	TRANSFORMER
TEMPLE	WATER TAP/TUBE WELL
ESP	

**NOTES:-**  
 1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED.

NAME OF WORK:  
 SURVEY AND LAYOUT FOR WATER SUPPLY AND SEWER DUCTS UNDER WATER TREATMENT PLANT SANITATION WORKS

TITLE:  
 PLAN OF ROAD AND CLOSED AREA AT SANTOSHPUR

Project:  
**KOLKATA ENVIRONMENTAL IMPROVEMENT PROJECT (KEIP)**

Client:  
**KOLKATA MUNICIPAL CORPORATION**  
 5, S.N. Bose Road, Kolkata - 700015

Consultants:  
**DHV CONSULTANTS, The Netherlands**  
 Business Tower,  
 208, A.J.C. Bose Road  
 KOLKATA - 700017



**Annex 2: Sample Grievance Registration Form**  
(To be available also in Bengali, Hindi and Urdu)

The \_\_\_\_\_ Project welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing \*(CONFIDENTIAL)\* above your name.

Thank you.

Date		Place of registration			
Contact Information/Personal Details					
Name		Gender	* Male * Female	Age	
Home Address					
Village / Town					
District					
Phone no.					
E-mail					
Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below: If included as attachment/note/letter, please tick here: How do you want us to reach you for feedback or update on your comment/grievance?					

**FOR OFFICIAL USE ONLY**

Registered by: (Name of Official registering grievance)	
Mode of communication: Note/Letter E-mail Verbal/Telephonic	
Reviewed by: (Names/Positions of Official(s) reviewing grievance)	
Action Taken:	
Whether Action Taken Disclosed:	Yes No
Means of Disclosure:	



**Annex 3: Benefits of Microtunneling**

<b>Open Trenching</b>	<b>Micro tunneling</b>	<b>Benefits of Micro tunnelling</b>
Width is at least 5 m and is a continuous trench	Size of bore pit is maximum 4 m and each opening is made at a distance of 150 -250 m based on road alignment and other conditions.	Micro tunneling will help in minimizing impact on access which is one of the major temporary adverse impacts identified in this project
Disruption of other utility services due to shifting/ damage caused during construction.	Is placed below the existing utilities	No disruption in living standard of affected community
Inconvenience to people using ROW is very high	Inconvenience caused to people using ROW is minimal	
Degradation of quality of road due to high volume of excavated materials	Minimal scope of degradation of road due to excavated material.	Affect on road aesthetics is minimal
Scope of high levels of air, water and noise pollution due to operations	Minimal scope since operations are carried out underground	Micro tunneling will ensure low levels of air and water pollution
Time required for construction is high, thus increasing the duration of temporary impact on affected population. A 1km stretch under optimal conditions requires around 6-8 months of construction time.	Time required for construction is 4 months for a 1 km stretch.	Quicker implementation will reduce the period of temporary effects. The affected population will be able to regain their quality of life without much impediments
Generates employment	Highly skilled and mechanized operations	

**Annex 4: Involuntary Resettlement Impact Categorization**  
**Involuntary Resettlement Impact Categorization Checklist**

Probable Resettlement Effects	Involuntary	Yes	No	Not Known	Remarks
<b>Involuntary Acquisition of Land</b>					
1. Will there be land acquisition?			√		
2. Is the site for land acquisition known?					NA
3. Is the ownership status and current usage of land to be acquired known?					NA
4. Will basement be utilized within an existing Right of Way (ROW)?		√			
5. Will there be loss of shelter and residential land due to land acquisition?			√		
6. Will there be loss of agricultural and other productive assets due to land acquisition?			√		
7. Will there be losses of crops, trees, and fixed assets due to land acquisition?			√		
8. Will there be loss of businesses or enterprises due to land acquisition?			√		There maybe temporary impacts during the construction phase. However, phasing of work and improved engineering techniques will help minimize this impact
9. Will there be loss of income sources and means of livelihoods due to land acquisition?			√		
<b>Involuntary restrictions on land use or on access to legally designated parks and protected areas</b>					
10. Will people lose access to natural resources, communal facilities and services?			√		NA
11. If land use is changed, will it have an adverse impact on social and economic activities?			√		It is expected that with this change there will be positive impact on the living environment of the local community.
12. Will access to land and resources owned communally or by the state be restricted?			√		
<b>Information on Displaced Persons:</b>					
Any estimate of the likely number of persons that will be displaced by the Project?					[ √ ] No
[ ] Yes					
If yes, approximately how many? _____					
Are any of them poor, female-heads of HHs, or vulnerable to poverty risks?					[ √ ] No [ ]
Yes					
Are any displaced persons from indigenous or ethnic minority groups?					[ √ ]
No [ ] Yes					

Note: The project team may attach additional information on the project, as necessary

<b>KEY CONCERNS</b> (Please provide elaborations on the Remarks column)	<b>YES</b>	<b>NO</b>	<b>NOT KNOWN</b>	<b>Remarks</b>
<b>A. Indigenous Peoples Identification</b>				
1. Are there socio-cultural groups present in or use the project area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities" in the project area?		√		The impact area is totally urban. Secondary sources of demographic data do not show the presence of any indigenous people, and it can be safely assumed that if they are there they have been mainstreamed into the urban social set up
2. Are there national or local laws or policies as well as anthropological researches/studies that consider these groups present in or using the project area as belonging to "ethnic minorities", scheduled tribes, tribal peoples, national minorities, or cultural communities?		√		
3. Do such groups self-identify as being part of a distinct social and cultural group?		√		
4. Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?		√		
5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?		√		
6. Do such groups speak a distinct language or dialect?		√		
7. Has such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?		√		
8. Are such groups represented as "Indigenous Peoples" or as "ethnic minorities" or "scheduled tribes" or "tribal populations" in any formal decision-making bodies at the national or local levels?		√		
<b>B. Identification of Potential Impacts</b>				
9. Will the project directly or indirectly benefit or target Indigenous Peoples?			√	
10. Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)		√		
11. Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)		√		
12. Will the project be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?		√		
<b>C. Identification of Special Requirements</b> <i>Will the project activities include:</i>				

<b>KEY CONCERNS</b> (Please provide elaborations on the Remarks column)	<b>YES</b>	<b>NO</b>	<b>NOT KNOWN</b>	<b>Remarks</b>
13. Commercial development of the cultural resources and knowledge of Indigenous Peoples?		√		
14. Physical displacement from traditional or customary lands?		√		
15. Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the identity and community of Indigenous Peoples?		√		
16. Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by indigenous peoples ?		√		
17. Acquisition of lands that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?		√		

#### **D. Anticipated project impacts on Indigenous Peoples**

<b>Project component/ activity/ output</b>	<b>Anticipated positive effect</b>	<b>Anticipated negative effect</b>
1.	NA	NA
2.	NA	NA
3.	NA	NA
4.	NA	NA
5.	NA	NA

Note: The project team may attach additional information on the project