

# Draft Resettlement Plan

---

May 2012

**IND: Kolkata Environmental Improvement  
Investment Program (Tranche 1) – Sewerage and  
Drainage Subproject**

## TABLE OF CONTENTS

EXECUTIVE SUMMARY	I
I. PROJECT DESCRIPTION	1
A. Background	1
B. Project Components	2
II. SCOPE OF LAND ACQUISITION AND RESETTLEMENT	5
III. SOCIO ECONOMIC INFORMATION AND PROFILE	14
IV. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION	21
V. GRIEVANCE REDRESS MECHANISM	27
VI. POLICY AND LEGAL FRAMEWORK	28
VII. ENTITLEMENTS, ASSISTANCE AND BENEFITS	29
A. Eligibility	29
B. Entitlements	30
C. Determination of Compensation	34
D. Vendor Assistance	34
VIII. INCOME RESTORATION AND REHABILITATION	35
IX. RESETTLEMENT BUDGET AND FINANCING PLAN	35
X. INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS	36
XI. IMPLEMENTATION SCHEDULE	38
XII. MONITORING AND REPORTING	39

### **List of Tables**

Table 1 Location of Subproject Components and Number of Beneficiaries .....	3
Table 2: Land Use Pattern of the Subproject Locations.....	6
Table 3: Potential Impacts and Mitigation Measures .....	8
Table 4: Sampling for Business Survey.....	11
Table 5: Shops that Operate Within Public ROW (Diamond Harbour Catchment Area).....	12
Table 6: Shops that Operate Along the ROW (Diamond Harbour Catchment Area) .....	12
Table 7: Shops that Operate Within Public ROW (Diamond Harbor Road).....	13
Table 8: Shops that Operate Along the ROW (Diamond Harbor Road) .....	13
Table 9: Daily Income of Hawkers (Diamond Harbour Road) .....	14
Table 10: Demographic Profile of S&D Subproject Impact Area.....	15
Table 11: Socio-Economic Details of Wards Impacted by S&D Subproject .....	15
Table 12: Gender Wise Age Profile of the Affected Population.....	16
Table 13: Social Status of Affected Population.....	16
Table 14: Social Group of the Affected Households .....	16
Table 15: Gender Wise Occupation Profile of the Affected Adult Population .....	16
Table 16: Level of Primary Income of Affected Population .....	17
Table 17: Percent Expenditure pattern/month of Surveyed Population.....	17
Table 18: Gender Wise Age Education Level amongst the Affected Adult Population .....	18
Table 19: Decision Making in the Households.....	18
Table 20: Division of Household Work .....	19
Table 21: Summary of Impacts for Tranche 1 S&D Subproject .....	20
Table 22: Consultation and Participation .....	24

Table 23: Summary of Applicable Policies and Legal Framework .....	28
Table 24: Entitlement Matrix.....	31
Table 25: Summary of Estimated Land Acquisition and Resettlement Costs.....	36
Table 26: Organizational Procedures/Institutional Roles and Responsibilities for Resettlement Plan Implementation .....	37
Table 27: Schedule for Resettlement Plan Implementation .....	39

**List of Annexes**

Annex 1: Strip Maps of Diamond Harbour Road	41
Annex 6: Sample Grievance Registration Form	44
Annex 7: Benefits of Micro-Tunneling	45
Annex 8: Involuntary Resettlement Impact Categorization	46
Annex 9: Indigenous Peoples Impact Screening Checklist	47

## **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
DMA	—	District Metered Area
DSC	—	Design & Supervision Consultants
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
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
MS	—	Mild Steel
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
PHE	—	Public Health Engineering
PID	—	Project Implementation Director
PMU	—	Project Management Unit
PS	—	Pumping Station

PST	—	Pre-Settling Tanks
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.mts	—	Square Meters
ST	—	Schedule Tribe
STP	—	Sewage Treatment Plant
TV	—	Television
WBPCB	—	West Bengal Pollution Control Board

## 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 multitranche 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 the S&D 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 arrangements, monitoring measures and reporting procedures.

6. Tranche 1 S&D subproject components include (i) S&D pipe laying works along Diamond Harbour Road catchment in parts of Borough XIV; (ii) construction of trunk sewer along Diamond Harbour Road; (iii) construction of pressure main between Santoshpur Main Pumping Station and Garden Reach Sewerage Treatment Plant (STP); (iv) construction of

---

<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.

Begore pumping station in Maheshtala municipality, (v) construction of Churial pumping station within the premises of Joka tram depot in Joka II panchayat area; and (vi) Geographic Information Systems (GIS) Mapping of S&D networks. The resettlement plan will be implemented by the present Social Development Unit (SDU) with the resettlement and rehabilitation consultant and community mobilizers.

7. There is no land acquisition required for Tranche 1 S&D subproject as the components will be located in properties held by KMC and within public right-of-way (ROW) of existing roads. The 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-tunneling for laying of transmission mains.

8. 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.

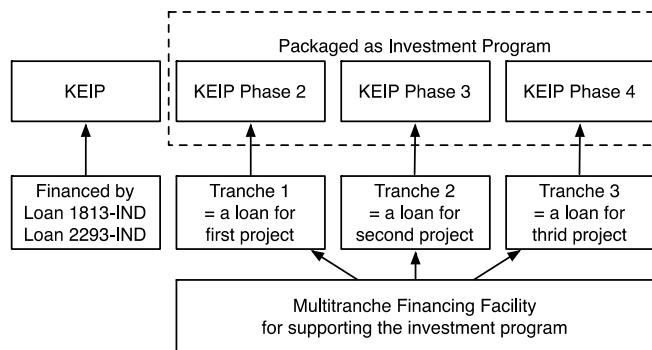
The subproject's Grievance Redress Mechanism will provide the citizens with a platform for redress of their grievances and describes the informal and formal channels, time frame and mechanisms for resolving complaints about environmental performance.

## 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).



<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.



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 S&D 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 arrangements, monitoring measures and reporting procedures.

## **B. Project Components**

4. Tranche 1 S&D subproject components include (i) S&D pipe laying works along Diamond Harbour Road catchment in parts of Borough XIV; (ii) construction of trunk sewer along Diamond Harbour Road; (iii) construction of pressure main between Santoshpur Main Pumping Station and Garden Reach Sewerage Treatment Plant (STP); (iv) construction of Begore pumping station in Maheshtala municipality, (v) construction of Churial pumping station within the premises of Joka tram depot in Joka II panchayat area; and (vi) Geographic Information Systems (GIS) Mapping of S&D networks.

5. Through this subproject KMC plans to establish and upgrade essential infrastructure and service levels to develop an efficient S&D system. The specific objectives of this subproject are, (i) to improve the overall sanitary conditions in the subproject area, (ii) to improve environmental conditions in the subproject area to reduce health risks and economic loss to the citizens directly and indirectly; and (iii) to provide quick relief from water logging conditions in the subproject area. This subproject will have poverty reduction impacts and benefits due to increased service levels of basic amenities. The improved S&D system will ensure (i) provision of S&D infrastructure; (ii) provision of quick relief from water logging conditions in the subproject area; (iii) improved sanitary conditions in the subproject area; and (iv) improved local environmental conditions which will reduce health risks and economic loss to the citizens in the subproject area.

6. The subproject components are located within the Monikhali and Churial Basins. These basins are located in the southern and south western part of Kolkata. Churial Basin serves a present population of 132,504 and Monikhali basin 56,878. Churial basin is moderately populated but currently growing very fast. While Monikhali is a developed area and has higher population densities compared to Churial Basin. Since the metro is routed through these basins which is currently under implementation coupled with the recent improvements in road connectivity to the core city, these two basins are expected to grow at a rapid pace. This rapid growth in population with grossly inadequate S&D infrastructure will definitely put the citizens to great risk and discomfort. Therefore, there is a felt need to provide organized S&D system in these areas in line with the existing system in the core city areas.

7. Construction activities of the S&D subproject will be located in the following areas, although the principal beneficiaries will be the citizens of Kolkata at large: i) S&D pipe laying works along Diamond Harbour Road catchment in parts of Borough XIV; ii) construction of trunk sewer along Diamond Harbour Road; iii) construction of pressure main between Santoshpur main pumping station and Garden Reach Sewerage Treatment Plant (STP); iv) construction of Begore pumping station in Maheshtala municipality; v) construction of Churial pumping station within the premises of Joka tram depot in Joka II panchayat area; and (vi) Geographic

## Information System (GIS) Mapping of S&amp;D Networks.

## 8. Description of the project component locations is provided below

- (i) **Monikhali Basin:** This subproject component is a spillover from KEIP. The subproject activities for the Monikhali basin entail construction of a pumping station at Begore on land (1400 sq mts) that is located within the Behala Flying Club Area and is currently owned by the Airport Authority of India (AAI). The site is on the outer perimeter of an airfield that is marginally being used for training flights but is currently defunct. The land is vacant and there are no squatters or hawkers. The process of acquisition has been initiated by KMC. Payment towards lease of land was made to Airport Authority of India (AAI) on the 25<sup>th</sup> of April 2012. Process of possession of land will be completed prior to award of contract and loan negotiations.
- (ii) **Churial Basin:** The components of this subproject located in this basin include
- Trunk sewer along Diamond Harbour Road from Sakher Bazaar in the north to Churial Canal in the south on the western alignment within public ROW, which is very high on traffic and lined with shops and commercial structures on both sides. Presently the metro construction is also underway along this stretch.
  - Main sewers of 600 mm diameter and above within public ROW in a part of the Diamond Harbour road catchment area that is mostly affected by flooding. The lanes selected are located within residential area
  - Construction of a new combined S&D pumping station at the defunct Joka Tram Depot. This requires 2590 square meters of land, which has been identified within the premises of Joka Tram depot. This land owned by the Calcutta Tramways Company (CTC), is vacant and is surrounded by a brick boundary wall. Letter issued on March 1<sup>st</sup> 2012 by the Transport Department, GoWB states that it has been approved in principal to transfer the land in favour of KMC. Process of possession of land will be completed prior to award of contract and loan negotiations.
- (iii) The pressure main between Santoshpur main pumping station and Garden Reach sewerage treatment plant was planned to be constructed as part of the KEIP project, but could not be taken up. It is the only missing link in a system that is otherwise completely operational after completion of KEIP. Construction of this sewer main will ensure that the S&D system constructed by the KEIP in this area will become fully operational and all anticipated benefits will be achieved. In view of the difficult site conditions the construction will be by micro-tunneling with only two entry pits, of which one will be within the premises of Santoshpur pumping station. The other will be located in a water logged area on KMDA land that is under transfer to KMC.

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

Component	Description	Municipality and Ward No.	Location of Subproject Component	Service Area/ Population
<b>A. Churial Basin</b> (served by Suti canal, Kalagachia canal, Churial canal/ Churial Extension canal)				
Trunk Sewer along Diamond Harbour Road from Sakher bazaar to Churial Canal along	3.9 km of road	Parts of KMC wards 122 to 127	Within ROW of existing road  Very high on traffic and lined with shops and commercial structures. Presently the metro	Trunk sewer will serve a present population of 132,504.

western side			construction is also underway along this stretch.	
Trunk sewer on Diamond Harbour Road from Joka Tram Depot to Churial Canal by micro tunneling (eastern side)	0.3 km of road	As above	Within ROW of existing road  Very high on traffic and lined with shops and commercial structures. Presently the metro construction is also underway along this stretch.	Included in above
S&D mains (600 mm and above) in Diamond Harbour catchment (first stage)	A total of 7 km will be covered in 17 lanes	As above	Located in a part of the Diamond Harbour Road catchment area that is mostly affected by flooding. The lanes selected are located within residential area. Pipes will be within ROW of existing roads.	Included in above
Pressure main between Santoshpur main pumping station and Garden Reach STP	650 m length located in Maheshtala Municipality and The pressure main is designed as a 800 mm diameter HDPE sewer of 580m length.	Serves the population of KMC Borough XV in Hooghly and Garden Reach Basins.	The largest section (525m) is designed to be constructed by micro tunnelling in a casing pipe under passing a busy railway line and highly populated slum area.	
	Construction of this sewer main will ensure that the S&D system constructed by KEIP in this area will become fully operational and all anticipated benefits will be achieved.		In view of the difficult site conditions the construction will be by micro-tunneling with only two entry pits, of which one will be within the premises of Santoshpur pumping station. The other will be located in a water logged area on Kolkata Metropolitan Development Authority land that is under transfer to KMC.	
New S&D Pumping Station at Joka Tram Depot	2590 sq m	Joka 2 panchayat	Within the area of defunct Joka tram depot.  This land owned by the Calcutta Tramways Company (CTC) is vacant and the process of transfer will be completed prior to award of contract and loan negotiations.  No resettlement impacts are envisaged.	The pumping station will serve a present population of 132,504.
<b>Monikhali Basin</b> (served by Monikhali canal, Defunct Monikhali canal, Begore canal, Begore Branch canal, CPT canal, Jinjira canal, Parnasree canal)				
Construction of Begore Khal Pumping Station for dry weather flows from Zone-1 and Zone-4B and storm water flows from Zone-4B at Maheshtala Municipality Area adjacent to Zone-4B sub basin in Monikhali	1400 sq m  This subproject component is a spillover from KEIP.	Maheshtala	The land for the pumping station is located at the Behala Flying Club area and is currently owned by the Airport Authority of India. The land is vacant and there are no squatters or hawkers.  The process of acquisition has been initiated by KMC and will be completed prior to award of contract and loan negotiations.	The pumping station will serve a present population of 56,878

basin. Construction of disposal arrangements for discharging storm water flows into Begore branch canal.  Construction of pumping main to convey dry weather flows to a manhole located in Zone-4A.			No resettlement impacts are envisaged.	
<b>Geographic Information System (GIS) Mapping of S&amp;D Networks</b>				
Mapping of underground utilities is absolutely necessary for future planning, for more effective operation and maintenance scheduling, and to reduce the risks and costs associated with of underground utility shifting.				

9. Given the difficulties associated with laying of large diameter circular sewers by open cut method and based on experience gained in KEIP, it has been decided that the construction of trunk sewers along Diamond Harbour Road from Sakher Bazar to Churial khal will be done using micro-tunnelling technology having entry pits at regular intervals. The locations of these pits have not yet been finalized. The main sewers (approximately 7 km) in the Diamond Harbour Road catchment will be constructed by open trench method. Short term resettlement impacts envisaged during the construction stages are temporary impacts on livelihood and access of local population mostly comprising of residents, shops, a few educational institutions, and local markets.

## II. SCOPE OF LAND ACQUISITION AND RESETTLEMENT

10. 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 subproject. 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

11. 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 are within public ROW and through stretches where there are no structures. The impacts envisaged during construction are the

following: (i) limited mobility and access to business activities during construction; and (ii) temporary shifting of vendors and hawkers during construction works within ROWs where open cut methods are used. These potential temporary impacts will be minimized by adapting micro-tunneling for laying of pipes, alignments will be on public ROWs, and scheduling of open-cut works in a phased manner.

12. **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-April 2012 and strip maps developed during preliminary design stage (Annexes 1 to 5). Table 3 summarizes the potential impacts and mitigation measures.

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

Component	Description and Land Use	Structures Along the Existing Roads <sup>5</sup>		
<b>Monikhali Basin</b>				
Construction of Begore Khal Pumping Station for dry weather flows from Zone-1 and Zone-4B and storm water flows from Zone-4B at Maheshstela Municipality Area adjacent to Zone-4B sub basin in Monikhali basin.	The pumping station will be constructed on a 1,400 sq m land owned by the Airport Authority of India. The location for the pumping station is on the outer perimeter of an airfield that is marginally being used for training flights but is currently defunct. The land is vacant and there are no squatters or hawkers.	N/A		
Construction of disposal arrangements for discharging storm water flows into Begore branch canal.				
Construction of pumping main to convey dry weather flows to a manhole located in Zone-4A.				
<b>Churial Basin</b>		<b>Structures</b>	<b>LHS</b>	<b>RHS</b>
Main sewers of 600 mm diameter and above within public ROW of in a part of the Diamond Harbour Road catchment area that is mostly affected by flooding	A total of 7 km stretch will be covered in 4 laterals with 15 by lanes in the area	Temporary Shops	36	54
		Shops	74	81
		Residences	220	219
		Religious buildings	7	6
		Clubs	-	4
		Businesses	2	-
		Library	1	-
		Commercial/Residential <sup>6</sup>	59	46
		Residential complex	3	3
		Schools	-	4
		Under construction	-	1
		<b>Subtotal structures</b>	<b>204</b>	<b>228</b>
		<b>Total</b>	<b>432</b>	
Trunk sewer on Diamond Harbour Road from Joka Tram Depot to Churial Canal by micro tunneling (eastern side)	High volumes of traffic flow through this road. Presently the work for metro is also in progress along this stretch. The trunk sewer 0.3 km will run along the left (eastern) alignment of this road	Park	3	
		Shops	42	
		Residences	4	
		Office	1	
		Temporary Shops	20	

<sup>5</sup> Based on strip maps prepared based on actual counts conducted during preliminary design stage and therefore can be treated to be indicative. Indicates all structures within and outside ROW.

<sup>6</sup> Commercial/residential structures that have shops on the ground floor with residences above, may also be apartment complexes

Component	Description and Land Use	Structures Along the Existing Roads <sup>5</sup>	
	stretch.	Commercial/Residential	5
		Schools	1
		<b>Subtotal structures</b>	<b>76</b>
		<b>Total</b>	<b>76</b>
Trunk Sewer along Diamond Harbour Road from Sakher bazaar to Churial Canal along western side	A total of 3.9 km stretch will be covered	Temporary Shops	298
		Shops	416
		Under construction	6
		Residences	14
		Residential complexes	5
		Commercial residential complexes	12
		Commercial	78
		Others	23
		Businesses	6
		Religious structures	9
			<b>Subtotal Structures</b>
	<b>Total</b>		<b>867</b>
New S&D Pumping Station at old Joka Tram Depot	The property belongs to Calcutta Tramways Corporation and process of land transfer is in progress. The Tram Depot is defunct, the land is vacant and the property is well guarded and bound by a wall and gates. There are no squatters or hawkers within this depot.	N/A	N/A
<b>Santoshpur Pumping Main</b>			
Pressure main between Santoshpur main pumping station and Garden Reach STP	650 m in length. One of the micro-tunnelling pits will be located within the Santoshpur STP and the other jacking shaft will be in a KMDA land that is under transfer to KMC.	N/A	N/A

13. The above-mentioned potential temporary impacts will be minimized by adapting micro tunneling for laying of pipes. The subproject components located within government land will not result in any permanent or short-term resettlement impacts due to location or construction activities. However, components located within the public ROW may have the following temporary or short term impacts,

- (i) **Main sewer within Diamond Harbour catchment area.** It is anticipated that the laying of pipes for the 7 km stretch in the 4 laterals may have short term temporary impacts on livelihood and accessibility for the local communities during the construction period. Rapid assessments indicate that these stretches are lined by around 432 structures which are mostly residential. Pipes will be laid using open cut method. Pedestrian access will not be hindered; therefore no impacts on businesses are envisaged. The roads are 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. However, it is anticipated that there may be temporary disruption of utilities like water supply during construction. 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.

- (ii) **Trunk Sewer on Diamond Harbour Road.** The Diamond Harbour road where the trunk sewer will be laid is a major road with pockets of dense commercial activity. The trunk sewer will be laid on the western alignment within public ROW. Rapid assessments indicate that around 867 structures line this stretch of the road. This is predominantly a commercial area with shops and businesses. This pipeline will be laid using micro-tunneling (refer annexure 2 for advantages of micro tunneling). Micro tunneling mitigates problems of access to a large extent thereby ensuring decreased impact on livelihood by the subproject. Micro tunneling pits will be made at intervals of approximately 150-250m and there might be a temporary impact on livelihood and access. 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.

14. **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: Potential Impacts and Mitigation Measures**

Component	Description	Potential Impact		Mitigation Measures
<b>Monikhali Basin</b>				
Construction of Begore Khal Pumping Station for dry weather flows from Zone-1 and Zone-4B and storm water flows from Zone-4B at Maheshtela Municipality Area adjacent to Zone-4B sub basin in Monikhali basin.	The pumping station will be constructed on a 1,400 sq m government-owned land.  There are no squatters or temporary structures located within the land	N/A	N/A	N/A
Construction of disposal arrangements for discharging storm water flows into Begore branch canal.				
Construction of pumping main to convey dry weather flows to a manhole located in Zone-4A.				
<b>Churial Basin</b>				
Main sewer within Diamond Harbour catchment area	Laying of pipes for the 7 km stretch in the 4 laterals  Pipes will be laid using open cut method.  The roads are 4-6 metres wide.	Short term temporary impacts on livelihood and accessibility for the local communities during the construction period.	Rapid assessments indicate that these stretches are lined by around 432 structures which are mostly residential.  Pedestrian	During construction it will be ensured that a pathway is left for access to the houses and commercial establishments.  The contractors will also be required to maintain access to shops to avoid and limit the disturbance to the extent possible.

Component	Description	Potential Impact		Mitigation Measures
			<p>access will not be hindered; therefore no impacts on businesses are envisaged.</p> <p>Temporary disruption of utilities (like water supply) during construction.</p>	<p>Mitigation measures will be incorporated into 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>
Trunk Sewer on Diamond Harbour Road	<p>A major road with pockets of dense commercial activity. This is predominantly a commercial area with shops and businesses.</p> <p>Construction of trunk sewer of 2200 mm dia for a length of 3.9 km along Diamond Harbour Road from Sakher bazaar to Churial Canal (western alignment).</p> <p>Construction of trunk sewer for 0.3 km on Diamond Harbour Road from Joka Tram Depot to Churial Canal (0.3 km) by micro tunneling (eastern alignment). Annex 7 summarizes advantages of micro-tunneling method. Micro-tunneling pits will be made at intervals of approximately 150 to 250m.</p>	Short term temporary impacts on livelihood and accessibility for the open-cut excavation works.	<p>Rapid assessments indicate that around 867 structures line this stretch of the road.</p> <p>During construction activities there might be limited temporary impact on access for all road users and on livelihood opportunities for street vendors and hawkers.</p> <p>Possible rerouting of 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>Micro tunneling mitigates problems of access to a large extent thereby ensuring decreased impact on livelihood by the subproject. 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.</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</p>



Component	Description	Potential Impact		Mitigation Measures
				for concerns/complaints.
Pumping station at Joka Tram Depot in Joka-II Panchayat area	The pumping station will be constructed on a 2,590 sq m government-owned land.  The land is vacant, well-guarded, and there are no squatters or temporary structures located within the land	N/A	N/A	N/A
<b>Santoshpur Pumping Main</b>				
Pressure main between Santoshpur main pumping station and Garden Reach STP	650 m in length. One of the micro-tunnelling pits will be located within the Santoshpur STP and the other jacking shaft will be in a KMDA land that is under transfer to KMC.	N/A	N/A	N/A

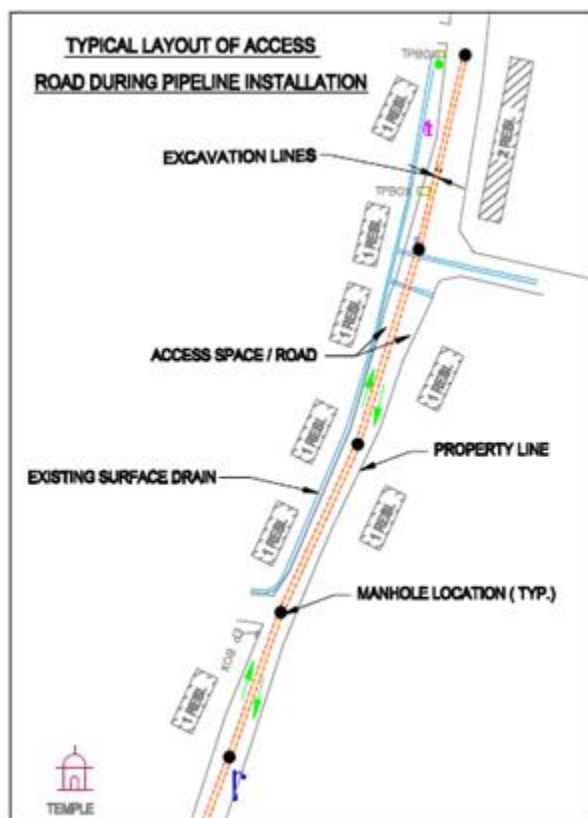
15. **Mitigation.** The sites or locations for the S&D subproject components have been carefully selected to avoid and minimize resettlement impacts. The works are proposed on land belonging to government bodies' or within the ROW thereby avoiding land acquisition. The overall impacts will be further minimized through careful alignment selection during detailed design and subproject implementation. Micro tunneling method will be used for laying of pipelines. This will help ensure that adverse impacts due to construction activities are minimized to a large extent. The following mitigation measures are proposed in the EMP to avoid and/or reduce the impacts during linear pipe works:

- (i) Provide at least 1 week's prior 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
- (vii) Contractors to assist vendors and hawkers in shifting to alternative location

16. The engineering designs adopted will ensure that routing of pipelines and mains within the ROW are through stretches where there are no structures or access is not hindered, thereby having no 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.

17. **Business Survey.** In order to determine the scale of temporary impacts during the construction stage 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. Hawkers were not found in the laterals hence have not been surveyed. Table 4 provides the number of sampling and description of the business survey.



**Table 4: Sampling for Business Survey**

S&D Component				
<b>1. Diamond Harbour Road</b>				
3.9 km on eastern side and 0.3 km on western side road stretch.	Along the right alignment from Sakher Bazar to Churial Canal	45 nos	15 respondents/km	
			Street hawkers	15
			Shops/Businesses within ROW	15
			Permanent Shops	15
<b>2. Diamond Harbour Road Catchment Area</b>				
4 laterals.		20 nos	5 respondents / lateral	
			Shops along the ROW	8
			Shops/businesses within ROW	12

**A. Daily Income Estimates for Businesses in the Subproject Locations.**

18. **Main Sewer within Diamond Harbour Catchment Area.** For the purpose of this study

shops have been categorized as: (i) shops that operate within the public ROW; and (ii) shops that are located along the ROW. The average daily profit of the shops was found to be Rs. 243.00. Tables 5 to 6 show the results of the survey conducted on shops in the Diamond Harbour catchment area. This area is predominantly a residential area with some shops or temporary markets (set up during the morning hours or evening along the roads) to provide for the general requirements of the residents.

19. Surveys reveal that businesses that operate within the ROW are 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 Public ROW (Diamond Harbour Catchment Area)**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	Dakhinpara	Tailor	Tenant		110
2	Near Natun Sangho Club	Tailor	Owner		300
3	P10/23, Brijomoni Deby Road,KOL-8	Fast Food Center	Tenant		250
4	6 NO Sasan Kalitala, Kolkata-08	Gift Shop	Tenant		150
5	Diamond Harbour Road	Pan Shop	Tenant		150
6	142 B.B.P.Road,Kolkata-63	Stationary	Owner	1	200
7	71 K.K.R.Choudhury Road	Work shop/garage	Owner	2	500
8	Near Masjid	Bhujawala	Owner		100
9	Porawasa tala	Hawker of masala puffed rice	Owner		150
10	81 Barisha,D.Para	Stationary	Owner		100
11	Dakshin Para	Stationary	Owner		250
12	D.P.Road	Bhujawala	Tenant		150

**Table 6: Shops that Operate Along the ROW (Diamond Harbour Catchment Area)**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	Dakshin Para,Kol-41	Decorator	Owner	1	500
2	Padhapukur	Garage	Owner	2	500
3	35 K.K.Roy Choudhuri Road, KOL-8	Laundry	Tenant	-	150
4	8 No.K.K.Roy chowdhury Road,Kolkata-8	Pan Shop	Owner	-	150
5	279,D.P.Road	Computer Peripherals	Owner	3	700
6	4 Narain Road	Grocery	Owner	-	100
7	Padmapukur	Pan Shop	Owner	-	200
8	4 Narain Road	Cigarette Shop	Owner	-	150

20. **Trunk sewer on Diamond Harbour Road.** For the purpose of this study shops have been categorized as: i) shops that operate within the public ROW; and ii) shops that are located along the ROW. The average daily profit of the shops was found to be Rs. 350.00. Tables 7 to 8 show the results of the survey conducted on shops along Diamond Harbour Road. 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 tunneling 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.

21. Surveys reveal that businesses that operate within the ROW are 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. Some of the permanent shops like the Gas workshop (Lafarge Cement Enterprise) have encroached upon the ROW by extending the frontal shade. The temporary shops operating within the ROW are mostly small eateries and cycle repairing shops.

**Table 7: Shops that Operate Within Public ROW (Diamond Harbor Road)**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	Shakhar Bazar,Lafarge cement Enterprise	Gas Workshop	Owner	1	300
2	Diamond Harbour Road ,Uddanpally,Shilpara, Kol-8	Hotel	Owner		250
3	120 Diamond Harbour Road , S.B.S. T.C.Garage	Hotel	Owner	2	200
4	Shivtala Para	Electronics Shop	Owner		200
5	Pusposhree Bus Stand	Cycle Repairing Shop	Owner		150
6	210. Diamond Harbour Road	Champa tobacco stores	Owner	2	500
7	206. D.H .Road	Cig Pan Shop	Owner		180
8	206,Diamond Harbour Road	Vicky Motors	Owner		600
9	208,Diamond Harbour Road ,Thakur pukur	Babu Electronics	Owner		200
10	206, D.H,Road	Cycle Tube Repairing Centre	Owner		150
11	Near 3 A Post office	Hotel	Owner		100
12	Near 3 A Post office	Hotel	Owner		150
13	Diamond Park Joka	Hotel	Owner		200
14	Diamond Harbour Road ,Joka ,KOL-104	Cycle Repairing Shop	Owner		200
15	Diamond Harbour Road ,Joka ,KOL-105	Motor repairing	Owner	5	100

22. The shops along the ROW on Diamond Harbour Road are all permanent businesses. The shops surveyed were a mix of small and medium businesses. While the small shops are managed by the owners themselves the larger businesses have upto 4-6 employees working the shops.

**Table 8: Shops that Operate Along the ROW (Diamond Harbor Road)**

S.N.	Location Address	Type of business	Owner/ Tenant	No. of persons employed	Average daily profit (Rs)
1	1 NO K.K.R.Road	Rice Shop	Owner		50
2	120 Diamond Harbour Road ,	Lubricant Motor parts	Owner		150
3	120 Diamond Harbour Road	Auto parts	Owner		250
4	8 ILE Para Taxi Stand	Hardware	Owner		100
5	centaral Bank	Paint and hardware	Tenant		150
6	204. Diamond Harbour Road	Marble Shop	Owner	1	1000
7	B.A.Bus stand	Stationary	Owner		300

8	206/2 Diamond Harbour Road	Pharmacy	Tenant	2	1000
9	3 H Bus Stand	Business	Owner		150
10	18 Thakurpukur Road, Kolkata-104	Stationary	Tenant	1	300
11	Joka	Automobiles	Owner	4	1000
12	Joka	Automobiles	Tenant		150
13	3 A Bus Stand	Sweet shop	Owner	6	1200
14	Joka, Diamond Harbour Road	Hotel	Owner	1	100
15	Joka	Saloon	Owner	2	1100

### B. Daily Income Estimates for Hawkers:

**Trunk sewer on Diamond Harbour Road.** Table 9 shows the results of the survey conducted on hawkers along Diamond Harbour Road. 15 Hawkers were surveyed and the average profit was found to be Rs.144/day. All these hawkers are permanently based in this location. They sell their wares on wooden carts or tin vans which can be easily shifted to another location during construction.

**Table 9: Daily Income of Hawkers (Diamond Harbour Road)**

S.N.	Location	Type of Merchandise	Site Occupy Frequency	Full/Half day	Permanent/ Temporary/ Mobile	Daily profit	Means of selling the product ( vehicle)
1	Shilpara,S.B.S.T.C Garage	Tiffin Shop	Daily	Full day	Permanent	100	Tin van
2	Shil Para	Street Hawker	Daily	Half day	Permanent	200	Wooden cart
3	Shilpara,The times of India	Fruit seller	Daily	Half day	Permanent	100	Plastic basket
4	Central Bank	Pan shop	Daily	Full day	Permanent	100	Tin van
5	120.Diamond HarbourRoad,Kadamtala	Fruit seller	Daily	Full day	Permanent	100	Wooden cart
6	Swadesh Basu	Flower seller	Daily	Full day	Permanent	150	Plastic
7	Swadesh Basu	Toys	Daily	Full day	Permanent	160	Wooden cart
8	3A Bus stop	Books	Daily	Full day	Permanent	150	Tin van
9	Thakurpukur,3A Stand	Tea Shop	Daily	Full day	Permanent	250	Tin van
10	160, Diamond HarbourRoad	Tea Shop	Daily	Full day	Permanent	100	Wooden cart
11	Dimond Park,Joka	Hawker	Daily	Half day	Permanent	100	Wooden cart
12	Dimond Park,Joka	Tea shop	Daily	Half day	Permanent	150	Tin van
13	3 A Bus Stand	Roti Shop	Daily	Half day	Permanent	200	Tin van
14	D.H .Road.KOL-104,Joka	Pan Shop	Daily	Full day	Permanent	100	Tin van
15	D.H .Road.KOL-104,Joka	Shop	Daily	Full day	Permanent	200	Wooden cart

### III. SOCIO ECONOMIC INFORMATION AND PROFILE

#### A. Socioeconomic Profile of KMC Area

23. 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 sq km. In terms of population the KMA belongs to the world's top ten megacities. Administratively the urban area of the KMA is subdivided in 3 municipal corporations, 38 municipalities, and a large number of smaller administrative units called Panchayat Samities.

24. 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 48.5 sq 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”. Since these latest additions

25. 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 neighboring municipalities and suburban areas. Population density per sq km is 24,783. It is estimated that there are 972,264 households in the municipal area with the average household size being around 5.

26. 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

27. S&D subproject components are located in parts of Monikhali and Churial basins. The total extent of the subproject area is 1,246 hectares and serves an existing population of 189,382. It is imperative to note that wards benefiting from this subproject are not necessarily the wards being impacted by the construction activities of this subproject. The sub project components are located not only in areas under KMC area but also under Joka-2 panchayat. Table 10 and 11 provide the demographic and socio-economic details of the population living in the area impacted by sub project related construction activities.

**Table 10: Demographic Profile of S&D Subproject Impact Area**

Ward No.	No.of HH	Total population	Slum popln.	Population	
				M	F
KMC-125	9984	42245	0	21931	20314
Joka- 2 panchayat	1816	7670	0	3985	3685

**Table 11: Socio-Economic Details of Wards Impacted by S&D Subproject**

Ward No.	Literacy		Total Literacy	Workers		Total Workers	Non Workers		Total Non Workers
	M	F		M	F		M	F	
KMC-125	18609	15779	34388	11998	2445	14443	9933	17869	27802
Joka-2 panchayat	3237	2551	5788	2128	428	2556	1857	3257	5114

## C. Affected People

28. Subproject components located within government held land (Joka Tram depot or Behala Flying Club) premises will not impact the general public. However, components located within the ROW may impact the following during the construction phase.

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

29. The S&D subproject components involving pipe laying and trunk sewers are located within ward number 125, which has a total population of 42, 245. For the purpose of this study, sample socio-economic surveys were conducted in the Diamond Harbour Road and Diamond Harbour Road Catchment area.

#### D. Socio-Economic Profile of Diamond Harbour Road Area

30. **Social Profile.** The average family size is around 3.5 per family. The total population of the surveyed households (HHs) is 298. The table below indicates that the major population group of the HHs lies between the ages 31-50 at 38.3% followed by the above 50 age group at 21.1%. Literacy levels indicate that 34.7% are undergraduates, while 21.5% are graduates. 4.4 % are postgraduates and 1.2% have a professional degree. 251 (84.2%) of the total population of 298 are adults.

**Table 12: Gender Wise Age Profile of the Affected Population**

Age Group	Male		Female		Total	
	No	%	No	%	No	%
1-5	2	1.2	1	0.8	3	1.0
6-14	15	8.8	16	12.5	31	10.4
15-18	12	7.1	9	7.0	21	7.0
19-30	44	25.9	22	17.2	66	22.1
31-50	57	33.5	57	44.5	114	38.3
Above 50	40	23.5	23	18.0	63	21.1
<b>Total</b>	<b>170</b>	<b>100</b>	<b>128</b>	<b>100</b>	<b>298</b>	<b>100</b>

31. 87.1% of the HHs are Hindus by religion and 75.3% are nuclear families.

**Table 13: Social Status of Affected Population**

Item	Description	Number	% of Total
Religious Group	Hindu	74	87.1
	Christian	7	8.2
	Muslim	4	4.7
Family Type	Joint	21	24.7
	Nuclear	64	75.3
	Individual	0	0.0

32. **Social Classification.** 87% of the respondents are found to belong to the general class, 12% belong to schedule caste category and 1% backward class. 97% of the household have electricity and 90% have access to Public Distribution System (PDS) facility.

**Table 14: Social Group of the Affected Households**

Social Group	Number	Electrified	Ration Card
General	87%	84.4%	79%
SC	12%	12%	12%
ST	0	0	0
OBC	1%	1%	1%

33. **Occupational Status.** The survey reveals that 74% of adult women in the sample household's are housewives. 5.6 % of the adult population is students. 50.5% of the adult population is engaged in some form of economic activity. 25.5% are traders and 2.4% are in government service. 9.6% were unemployed at the time of survey. 114 men (78%) and 13 women (12.5%) are engaged in some form of economic activity.

**Table 15: Gender Wise Occupation Profile of the Affected Adult Population**

Occupation (Primary)	Male		Female		Total	
	No	%	No	%	No	%
Not yet admitted	2	1.4	2	1.9	4	1.6
School Dropout	4	2.7	1	1.0	5	2.0
Student	10	6.8	4	3.8	14	5.6
Housewife	0	0.0	77	74.0	77	30.7
Unemployed	17	11.6	7	6.7	24	9.6
Domestic Help	0	0.0	3	2.9	3	1.2
Wage Labour	8	5.4	0	0.0	8	3.2
Rickshaw Puller	3	2.0	0	0.0	3	1.2
Trader	62	42.2	2	1.9	64	25.5
Govt. job	6	4.1	0	0.0	6	2.4
Private Office	12	8.2	2	1.9	14	5.6
Others	23	15.6	6	5.8	29	11.6
<b>Total</b>	<b>147</b>	<b>100</b>	<b>104</b>	<b>100</b>	<b>251</b>	<b>100</b>

34. **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 wagger 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.

35. **Household Income and Expenditure:** The survey reveals that amongst the economically engaged population 46% of men and 36% of women earn an average of Rs. 75,000/annum. Income levels of men is found to start from an average of Rs. 15,000/anum to above Rs.5, 80,000 /annum. The average income of the surveyed households is found to be Rs.190,000. 68.2% HH's spend more than Rs.30,000 on food per annum. 3.5% spend more than Rs. 30000 on travel per annum.

**Table 16: Level of Primary Income of Affected Population**

Income (Yearly)	Male	%	Female	%
10000 - 20000	0	0.00	2	14.29
20000 - 30000	4	3.54	3	21.43
30000 - 50000	22	19.47	2	14.29
50000 - 100000	53	46.41	5	35.71
100000 - 200000	23	20.35	1	7.6
200000- 960000	12	10.62	0	0.00

**Table 17: Percent Expenditure pattern/month of Surveyed Population**

Range	Food	Health	Rent	Addiction <sup>7</sup>	Electric charges	Supplementary Water	Sanitation	Education	Travel	Others
	%	%	%	%	%	%	%	%	%	%
100-500	0	1.2	0	5.9	3.5	0	7.1	1.2	2.4	2.4
500-1000	0	3.5	0	2.4	1.2	0	9.4	1.2	4.7	1.2
1000-2000	0	11.8	0	9.4	1.2	2.4	8.2	2.4	8.2	10.6
2000-3000	3.5	17.6	0	1.2	30.6	1.2	0	2.4	12.9	5.9
3000-5000	2.4	15.3	7.1	3.5	34.1	0	0	5.9	14.1	15.3
5000-10000	1.2	22.4	9.4	2.4	23.5	0	1.2	11.8	20	15.3
10000-20000	7.1	9.4	3.5	1.2	2.4	0	0	23.5	7.1	15.3
20000-30000	16.5	1.2	1.2	0	1.2	0	0	1.2	2.4	4.7
> 30000	68.2	0	0	0	0	0	0	1.2	3.5	2.4
No response	1.2	17.6	78.8	74.1	2.4	96.5	74.1	49.4	24.7	27.1

## E. Gender Considerations

<sup>7</sup> alcoholism



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

37. **Women Headed Households:** There are no women headed households amongst the surveyed population.

38. **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 18: Gender Wise Age Education Level amongst the Affected Adult Population**

Literacy Level	Male		Female		Total	
	No	%	No	%	No	%
Illiterate	0	0.0	0	0.0	0	0.0
Preprimary	3	2.0	4	3.8	7	2.8
Primary	11	7.5	11	10.6	22	8.8
Middle	29	19.7	35	33.7	64	25.5
Intermediate	56	38.1	31	29.8	87	34.7
Graduation	35	23.8	19	18.3	54	21.5
Post-Graduation	7	4.8	4	3.8	11	4.4
Professional	3	2.0	0	0.0	3	1.2
Any Other	3	2.0	0	0.0	3	1.2
<b>Total</b>	<b>147</b>	<b>100</b>	<b>104</b>	<b>100</b>	<b>251</b>	<b>100</b>

39. **Economic Activity.** 77% of the women are housewives amongst the surveyed households. Only 12.5% women are involved in the income earning activities compared to 87.5% 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.

40. **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. 68% of the HHs reported that decisions are taken by both spouses, 30% HHs stated that decisions were taken by men and 2% that decisions were taken by women.

**Table 19: Decision Making in the Households**

	Adult Male	Wife	Both
1. Which school is best for your child	20	7	47
2. Should you change address; move to a new residence	30	1	50
3. What type of employment the women should take up	40	2	38
4. How do they utilize their individual income in running the family	30	3	48
5. In what community activity (if any) is wife involved	25	6	48
6. How to discipline children	12	6	56

41. **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 20: Division of Household Work**

Household work	Member	Level of Participation (%)			
		Never	Often	Seldom	Sometimes
Cleaning the House	Husband	17.9	5.1	70.5	6.4
	Wife	1.4	95.7	2.9	0.0
	Son/s (if aged 12 or above)	26.1	10.9	52.2	10.9
	Daughter/s (if aged 12 or above)	0.0	26.7	20.0	53.3
	Others (Females)	0.0	90.0	0.0	10.0
Preparing food and cooking meals	Husband	37.1	5.7	54.3	2.9
	Wife	0.0	95.8	4.2	0.0
	Son/s (if aged 12 or above)	65.0	5.0	25.0	5.0
	Daughter/s (if aged 12 or above)	0.0	26.7	26.7	46.7
	Others (Females)	0.0	83.3	0.0	16.7
Shopping for food and other household needs	Husband	1.3	36.4	22.1	40.3
	Wife	0.0	45.6	33.8	20.6
	Son/s (if aged 12 or above)	8.5	31.9	17.0	42.6
	Daughter/s (if aged 12 or above)	0.0	7.7	61.5	30.8
	Others (Females)	0.0	16.7	50.0	33.3
Babysitting/ looking after young children, feeds, bathes, and put them to bed	Husband	16.7	0.0	58.3	25.0
	Wife	0.0	100.0	0.0	0.0
	Son/s (if aged 12 or above)	100.0	0.0	0.0	0.0
	Daughter/s (if aged 12 or above)	0.0	0.0	0.0	0.0
	Others (Females)	0.0	0.0	0.0	0.0
Helping school aged children with their studies	Husband	22.2	0.0	55.6	22.2
	Wife	0.0	59.3	18.5	22.2
	Son/s (if aged 12 or above)	9.1	27.3	36.4	27.3
	Daughter/s (if aged 12 or above)	0.0	0.0	0.0	0.0
	Others (Females)	0.0	0.0	50.0	50.0
Take care of the sick members of the HH	Husband	11.3	16.9	42.3	29.6
	Wife	1.5	89.6	3.0	6.0
	Son/s (if aged 12 or above)	9.5	19.0	35.7	35.7
	Daughter/s (if aged 12 or above)	0.0	40.0	0.0	60.0
	Others (females)	0.0	81.8	9.1	9.1
Repairs/attends to broken electrical items	Husband	72.4	9.2	14.5	3.9
	Wife	85.7	9.5	3.2	1.6
	Son/s (if aged 12 or above)	37.5	10.0	52.5	0.0
	Daughter/s (if aged 12 or above)	100.0	0.0	0.0	0.0
	Others (Males)	88.9	0.0	11.1	0.0
Repairs attends to plumbing related problems 616969	Husband	94.6	2.7	2.7	0.0
	Wife	96.8	0.0	3.2	0.0
	Son/s (if aged 12 or above)	89.2	10.8	0.0	0.0
	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

42. The survey indicates that 50.5% of the adult population is engaged in some form of economic activity. 25.5% are traders and 2.4% are in government service. The strip maps indicate that Diamond Harbour road stretch is major business centre with lots of shops dealing with various kinds of products. While the main Diamond Harbour Road is not prone to flooding during rains the laterals face water-logging frequently during heavy rains making access and sanitation a major problem for this area covered by open drains. This has adverse impacts on the income potential of the businesses located within this area. Water logging also impacts the earning potential of the road side hawkers and street side markets. Discussions with respondents during the survey revealed that most of them feel that construction works within the ROW always leads to transportation problems and traffic jams. They were of the opinion that traffic management should be given priority to minimize traffic congestion and that information sharing would help people in managing the disturbances faced during road works.

43. 24.7% of the respondent HH's spend amounts ranging from 100-2000 per annum towards sanitation. Moderate amount of money is also spent towards health care. While all illnesses are not attributable to sanitation levels, improved service levels is expected to reduce the burden on care giver who is mostly the woman in the household.

44. The summary of impacts for the investment program Tranche 1 S&D subproject can be summarised as indicated in the table below

**Table 21: Summary of Impacts for Tranche 1 S&D Subproject**

Impact	Sewerage and Drainage
Permanent Land Acquisition (ha)	None
Permanently Affected Households (AHs)	None
Temporarily Affected AHs	None
Titled AHs	n/a
Non-titled AHs	n/a
BPL AHs	n/a
APL AHs	n/a
Female-headed AHs	n/a
IP/Schedule Caste AHs	n/a
Affected Trees/Crops / trees	None
Affected Common Structures	None
Average Family Size	n/a
Income Sources Permanently Affected Persons	n/a
Temporarily Affected Businesses	None
Average Daily Profit of Affected Businesses	n/a

#### **F. Impact to Vulnerable Persons<sup>8</sup>**

45. 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 S&D system will help improve the overall conditions of hygiene resulting in improved health situation and reduce time and expenses spent on availing hygienic conditions. 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 subproject 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.

#### **G. Impact on Indigenous Peoples**

46. The subproject 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 facilities 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. Rapid assessments transect walks and socio-economic surveys did not indicate the presence of Indigenous People (IP). Therefore no impacts are

<sup>8</sup> Persons belonging to below poverty line (BPL) category, or those who maybe reduced to BPL category due to the subproject impact, women from slums, women headed households, aged persons.

envisaged.

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

##### **A. Stakeholders**

47. The stakeholders identified for this subproject are:

###### **Primary**

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

###### **Secondary**

- (i) Representatives of community based organizations, civil society groups
- (ii) Police Department
- (iii) NGO's
- (iv) Builders

##### **B. Public Consultations**

48. 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.

49. 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.

50. 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**

51. 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**

52. 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, iii. Summary of discussions and concerns raised. Regular updates on the subproject will kept available at the PMU office of KMC.

53. 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.

54. 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**

55. 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

56. 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;

57. A summary of the proposed Consultations is given in Table 22. Some of the scheduled consultations may be combined in to a single composite consultation if the situation so demands.

### **D. Project Disclosure**

58. 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 signages, etc.

59. 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 work progress and future plans.

60. 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 22: 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 the investment	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 social frameworks and plans.</li> </ul>	PMU with assistance from Project Team	Years 1:	Project Orientation Seminar households = 50,000  Project Orientation Seminar for women = 25,000

program (half day)			<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</li> </ul> <p>Compilation of recommendations and agreements on remedial measures</p>	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 to the Project.</li> <li>• To discuss possible roles as watchdogs of the Project's implementation.</li> </ul>	PMU with assistance from Project Team	Year 1: One consultation workshop	Consultation Workshop = 50,000 Travel of participants = 25,000



			<ul style="list-style-type: none"> <li>To gather other relevant recommendation</li> </ul>			
<p>Strategic and Action Planning Workshop</p> <p>1 half day for Councilors and KMC officials &amp; engineers</p> <p>1 half day for ADB Project Team</p>	Councilors, KMC and KMC officials & engineers	<p>Information sharing</p> <p>Shared responsibility.</p> <p>Shared decision making control</p>	<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	<p>Councilors meetings 50,000 X 5 years = 250,000</p> <p>Project Team monitoring meetings: 15000 X 4 years = 60,000</p>
<p>Participatory Monitoring Meetings (half day) (for community watchdogs)</p>	20 representatives (50% women) from the community and civil society (representatives of CBOs, NGOs, ward committees, poor/slum communities, private sector)	<p>Information sharing.</p> <p>Shared responsibility</p>	<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

61. 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

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

63. **Grievance Redress Process.** PMU will maintain a Complaint Cell headed by a designated Grievance Officer at its office. The Grievance Registration/Suggestion Form (Annex 6) will be available at the Complaints Cell and in Borough Offices and will also be downloadable from the KEIP website.

64. 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.

65. 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, the KEIP. The draft Grievance Redress Process will be discussed with the stakeholders at the proposed disclosure workshop.

66. 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.

67. **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 the 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.

68. **Record-keeping.** Records will be kept by the 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.

69. **Information Dissemination Methods of the GRM.** Grievances received and responses provided will be documented and reported back to the affected persons. 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

70. **Periodic Review and Documentation of Lessons Learned.** The 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.

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

## VI. POLICY AND LEGAL FRAMEWORK

72. 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 23: Summary of Applicable Policies and Legal Framework**

<b>Policy/Legal Framework</b>	<b>Relevance</b>
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 program.
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

Policy/Legal Framework	Relevance
	payment of compensation and establishing <i>especially the right of bargadars</i> (share-croppers).
ADB Policy: ADB's Safeguard Policy Statement, 2009	<p>ADB's involuntary resettlement policy is to avoid resettlement wherever possible; to minimize involuntary resettlement by exploring project and design alternatives; to 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>

73. 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 been achieved by taking into account the baselines conditions.

## VII. ENTITLEMENTS, ASSISTANCE AND BENEFITS

### A. Eligibility

74. 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.

75. 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 17 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'.

76. 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.

77. 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, and 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.

78. 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) requesting them to vacate premises and dismantle affected structures prior to subproject implementation. Contractors will provide shifting assistance to any vendors needing help.

## **B. Entitlements**

79. The Entitlement Matrix (Table 24) 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 24: 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 construction stage. 2. Businesses are entitled to compensation for	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>each day of income loss due to loss of access (full or partial, permanent or temporary)<sup>9</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>10</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.	<p>Advanced notice of at least 2 weeks will be given. Rights to salvage materials from structure.</p> <p>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</p> <p>Assistance in shifting to nearby location.</p>	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 assessed.	PMU/DSC
4.2 Temporary loss of structures	Temporary or semi-permanent structures or	<p>Advanced notice of at least 2 weeks will be given. Rights to salvage materials from structure.</p>	Temporary shifting for 5-7 days during period of construction.	Contractor/DSC/PMU

<sup>9</sup> Economic displacement will be avoided through implementation of EMP

<sup>10</sup> First day of the income survey being conducted in a particular section.

in right of way	stalls that belong to licensed and non-licensed vendors, and titled and non-titled households.	Assistance in shifting to nearby location. Allowed to return to original site after completion of construction works	PMU and contractor will identify alternative site and help in shifting.	
-----------------	--	--	---	--



### C. Determination of Compensation

80. **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.

81. **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>11</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

82. Vendors requiring temporary shifting during construction period will be notified in advance and allowed to salvage all materials for temporary shifting to alternative location. They

---

<sup>11</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.

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

83. 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

84. 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 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 sewerage and drainage sub project (Table 25) includes eligible compensation for temporary impacts to income. The total estimated resettlement cost for the project is INR 115,830.00

85. 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>12</sup>

86. The engineering design and technology adopted for the project indicates 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. 17 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. It is estimated that there are around 1,295 shops along the proposed alignments for the trunk sewer and main sewers. These areas are unlikely to face full closure due to the roads being wide. However, for the purpose of budgeting it is estimated that 10% of these shops (130) may face income loss

---

<sup>12</sup> A list of names of vulnerable persons will be submitted by the DSC to PD and contractors.

due to access being impacted.

**Table 25: Summary of Estimated Land Acquisition and Resettlement Costs**

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	297.00/day	135	115,830.00
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>115,830.00</b>

## X. INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

### A. Institutional Arrangements

87. 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.

88. 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

89. 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.

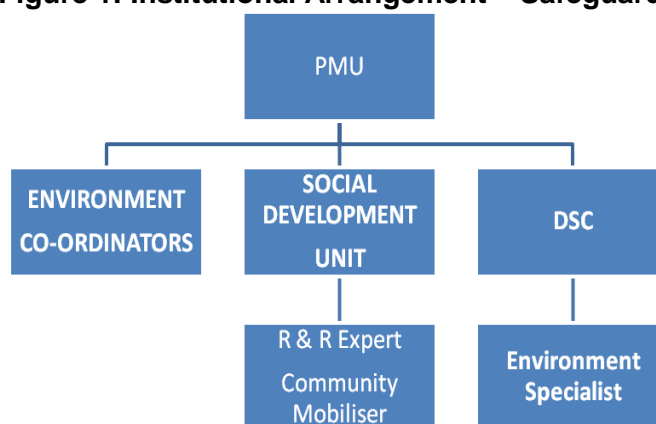
### B. Implementation

90. 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.

91. 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**.

92. 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 26: 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
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

Activities	Agency Responsible
External monitoring	External agency

93. 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.

94. 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**

95. All resettlement and compensation for the Tranche 1 S&D subproject will be completed before displacement. 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.

**Table 27: 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	√					
Transfer of land	√					
Issue notice to APs	√					
Compensation and resettlement assistance (if any)	√	√				
Relocation if required	√	√				
Taking possession of land	√	√				
Internal monitoring		√	√	√	√	√
Start of civil works		√	√	√	√	√
Rehabilitation of temporarily occupied land if any		Immediately after construction				

## XII. MONITORING AND REPORTING

96. 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.

97. 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.

98. 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.

99. 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.

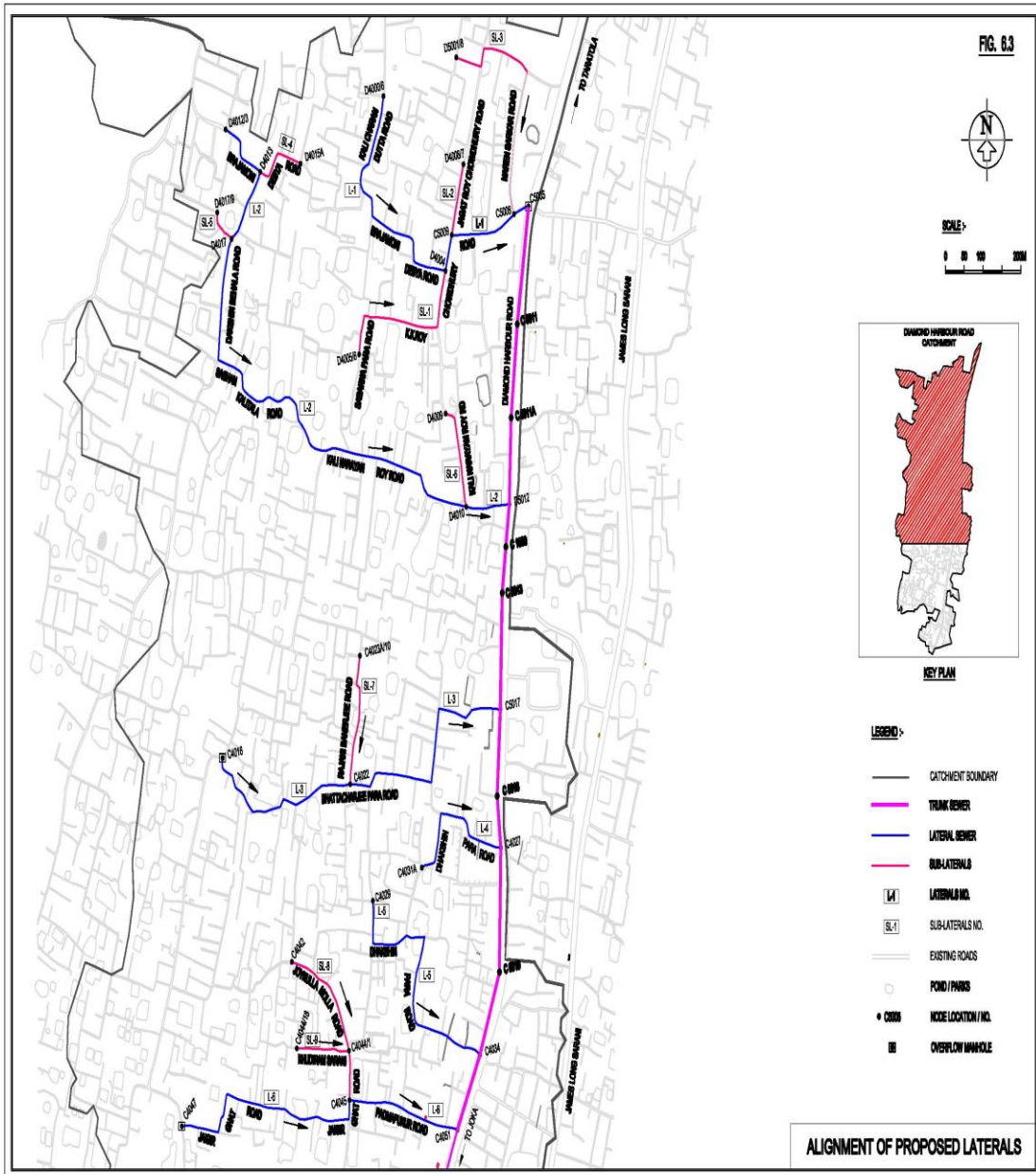
100. Monitoring will also cover the physical progress of resettlement plan implementation. This will include relocation of affected community properties, if any.

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

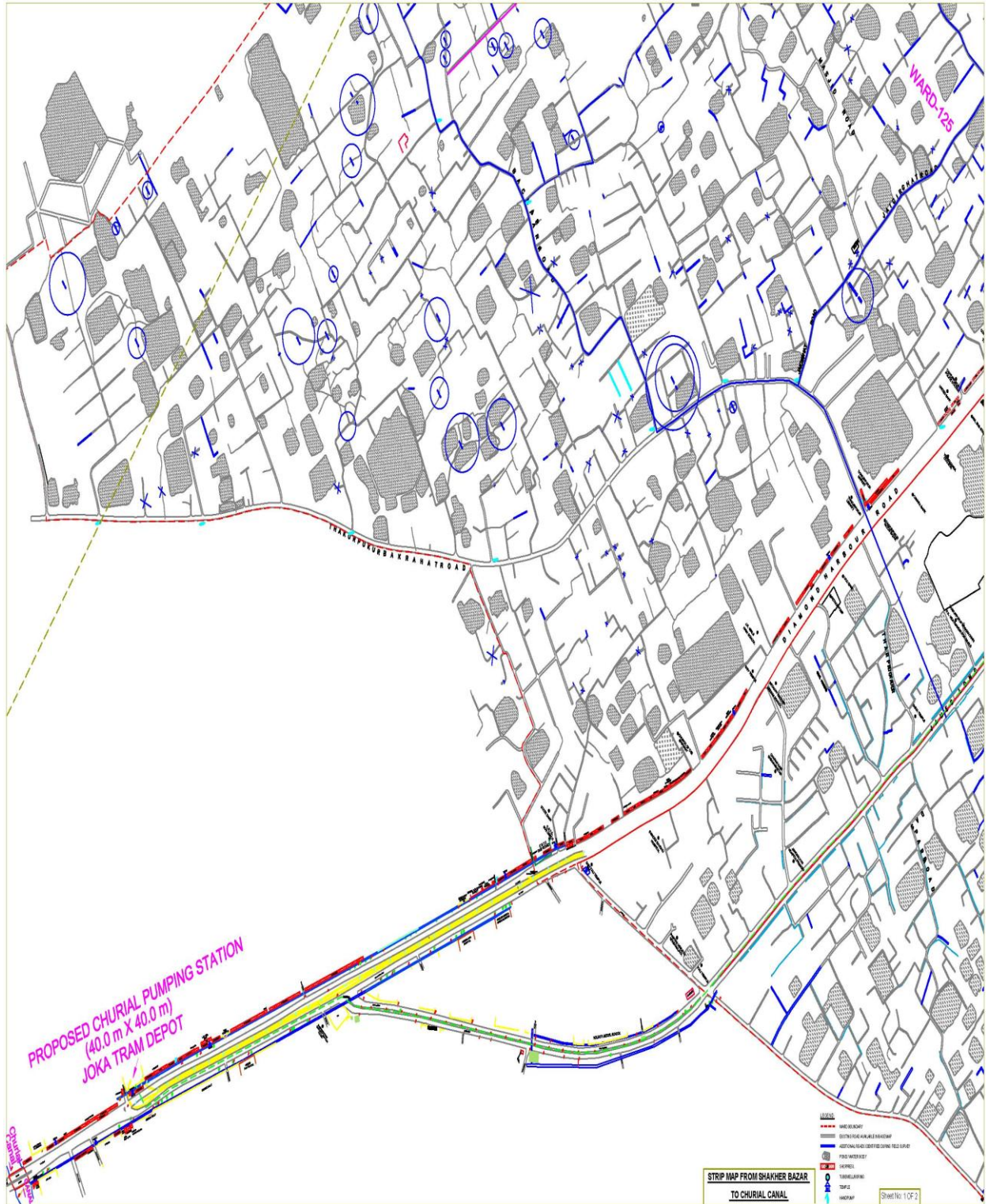
- (i) **Process Indicators:** Indicating subproject inputs, expenditure, staff deployment, etc.; and
- (ii) **Output Indicators:** Indicating results in terms of numbers of affected persons compensated and number of affected persons provided with skills training, etc. (if any)

102. 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.

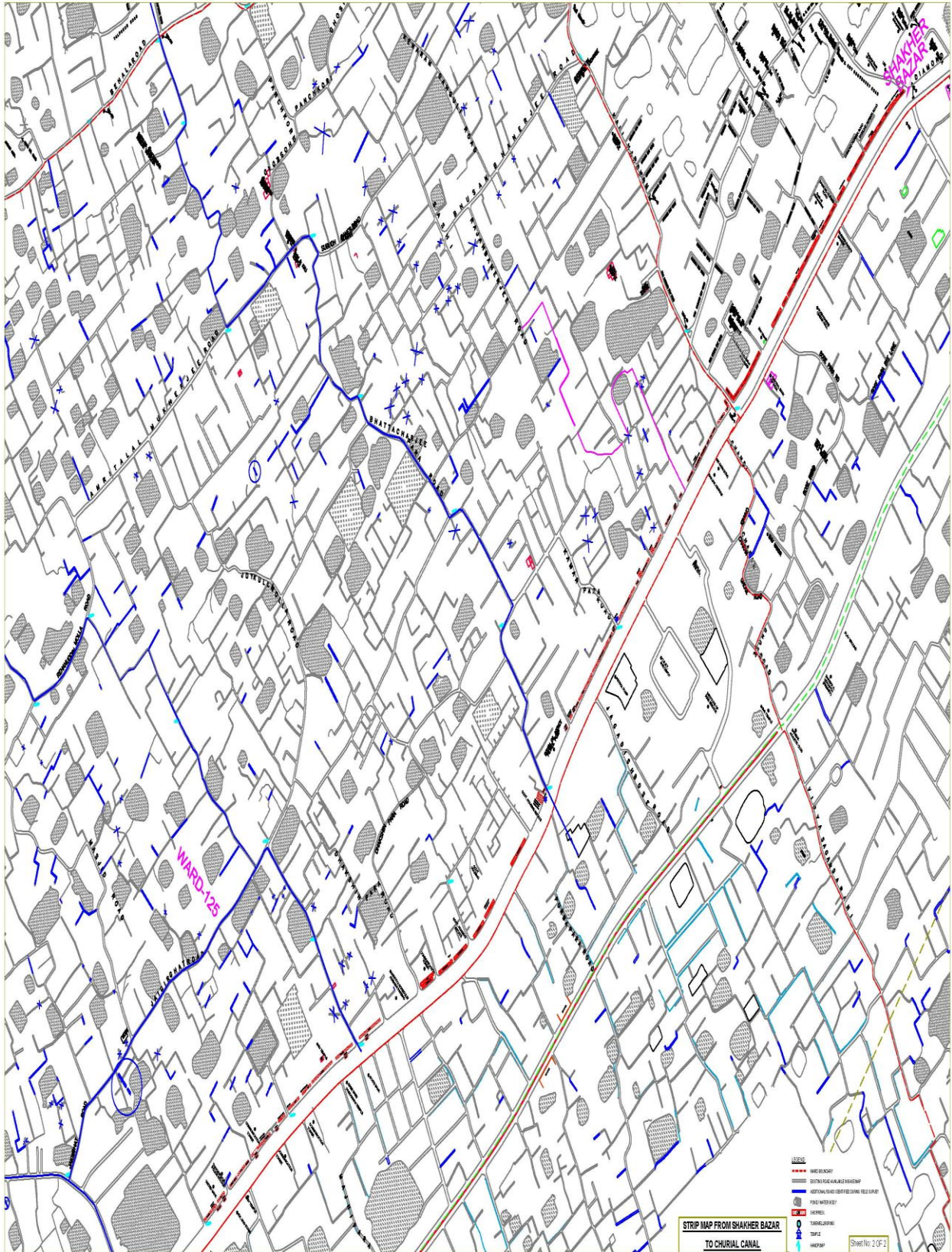
Annex 1: Strip Maps of Diamond Harbour Road Catchment Area











**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 Micro-Tunneling

Open Trenching	Micro tunneling	Benefits of Micro tunneling
Width is at least 5 mtrs and is a continuous trench	Size of bore pit is maximum 4 mtrs and each opening is made at a distance of 150 -250 mtrs 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 Involuntary Resettlement Effects	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?		✓		Not applicable.
3. Is the ownership status and current usage of land to be acquired known?		✓		Not applicable.
4. Will easement be utilized within an existing Right of Way (ROW)?	✓			Linear works for S&D network pipes.
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?		✓		Temporary impacts to businesses may occur during drainage and linear pipe laying works.
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?		✓		The subprojects will not have any impacts on broader land uses in the project area. Meaningful and sustained community consultations will be undertaken throughout the project period so as to ensure no such adverse impacts.
11. If land use is changed, will it have an adverse impact on social and economic activities?		✓		
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? If yes, approximately how many?				<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Are any of them poor, female-heads of households, or vulnerable to poverty risks?				<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Are any displaced persons from indigenous or ethnic minority groups?				<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes

### Annex 5: Indigenous Peoples Impact Screening Checklist

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
<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?		✓		There are no identified STs in the Project area.
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?	✓			Scheduled Tribes are notified in the Constitution of India under Article 342.
3. Do such groups self-identify as being part of a distinct social and cultural group?		✓		Not applicable.
4. Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?		✓		The projects are within the urban areas and not in ancestral territories.
5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?		✓		The projects are within the urban areas and not in ancestral territories.
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?	✓			Scheduled Tribes are notified in the Constitution of India under Article 342
<b>B. Identification of Potential Impacts</b>				
9. Will the project directly or indirectly benefit or target Indigenous Peoples?	✓			All will benefit equally from the urban infrastructure created under this Project.
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)		✓		The subprojects are within the urban areas and not in ancestral territories.
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>		✓		
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 ?		✓		

<b>KEY CONCERNS</b> (Please provide elaborations on the Remarks column)	<b>YES</b>	<b>NO</b>	<b>NOT KNOWN</b>	<b>Remarks</b>
17. Acquisition of lands that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?		✓		

#### **D. Anticipated Impacts on Indigenous Peoples**

<b>Project Component/ Activity/Output</b>	<b>Anticipated Positive Effect</b>	<b>Anticipated Negative Effect</b>
<b>1. Sewerage and Drainage Subproject</b>		
(i) construction of combined sewerage and drainage (S&D) pipe along Diamond Harbour (Diamond Harbour) Road using micro-tunnelling; (ii) construction of S&D network within Diamond Harbour Road catchment (1st stage); (iii) construction of Churial pumping station within the compound of Joka Tram depot; (iv) construction of Begore pumping station; and (v) laying of pressure main between Santoshpur main pumping station and Garden Reach Sewage Treatment Plant using micro-tunnelling.	Environmental benefits and service delivery improvements will benefit the urban population. Some key benefits are: (i) reduction in unhygienic conditions resulting in cleaner surroundings; (ii) reduction in choking of drains and streams; (iii) reduction in vulnerability to diseases; (iv) reduction in the hazards of pollution of surface water and groundwater; (v) provide quick relief from water logging conditions in the subproject area; and (vi) improved quality of life;	None.