

**DRAFT**

**Abbreviated Resettlement Action Plan**

**For Sewage Pumping Station at Ambedkar Colony under Saidpur Sewerage  
Network Project.**

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## Contents

<b>Executive Summary .....</b>	<b>1</b>
The Project .....	1
Objective of ARAP .....	2
Impact on Land acquisition and Voluntary Resettlement .....	2
Policy, Legal Framework and Entitlement .....	3
Entitlement Matrix .....	3
Public Consultations .....	4
Institutional Arrangement .....	5
Implementation Schedule, Monitoring and Budget .....	5
Income Restoration.....	5
<b>1. Introduction .....</b>	<b>7</b>
1.1 Project background .....	7
1.2 Project Description .....	11
<b>2. Land Acquisition and Resettlement.....</b>	<b>16</b>
2.1 General.....	16
2.2 Land requirement in the project .....	17
2.3 Non-titleholder’s (Encroachers & Squatters).....	17
2.4 Other Impacts during Construction .....	18
<b>3. Resettlement Policies and Legal Framework.....</b>	<b>18</b>
3.1 Background .....	18
3.2 Safeguard Policies of the World Bank .....	19
3.3 Applicable Government of India and World Bank Requirements (Table 9).....	20
<b>4. Stakeholders Consultation .....</b>	<b>21</b>
4.1 General.....	21
4.2 Objective of the Public Consultations .....	23
4.3 Methodology of Public Consultation .....	24
4.4 Outcome of Consultations .....	24
4.5 Public disclosure.....	25
<b>5. Institutional Arrangement.....</b>	<b>25</b>
5.1 Background .....	25
5.2 Proposed Institutional arrangements .....	26

5.3 Roles and Responsibilities.....	26
5.4 Institutional arrangement for Monitoring and Evaluation.....	27
5.5 Internal Monitoring.....	28
5.6 Annual Audit.....	28
<b>6. Grievance Redressal.....</b>	<b>28</b>
6.1 Grievance Redressal Act of Bihar.....	28
<b>7. Implementation of ARAP .....</b>	<b>30</b>
7.1. Implementation Procedure .....	30
<b>8. Indicative Resettlement Cost .....</b>	<b>31</b>

<b>Table No.</b>	<b>Description of the Table</b>	<b>Page No.</b>
Table 1	Disposal of Wastewater in Ganga Basin, From Class-I and Class-II Towns in Bihar	8
Table 2	Sewage pollution Load of Patna City (sewage disposed- off in the river Ganga)	9
Table 3	Proposed Capacity of Sewage treatment plant at Saidpur	12
Table 4	Proposed components of the project	12
Table 5	Wards covered, Population and Land Requirement for Saidpur STP	15
Table 6	Tentative project cost	16
Table 7	Details of PAP's in the Project	17
Table 8	Entitlement Matrix	19
Table 9	Applicable acts/rules /policies	20
Table 10	Roles and responsibilities in Project	26
Table 11	Indicative Resettlement Budget	31

<b>Figure No.</b>	<b>Description of the Figure</b>	<b>Page No.</b>
Figure 1	Snapshot of water pollution	9
Figure 2	Existing SPS	10
Figure 3	Existing STP	12
Figure 4	Layout of Saidpur Sewerage Scheme	14
Figure 5	Layout of SPS	14
Figure 6	Approach road- present condition	17
Figure 7	Photographs of Consultations	22
Figure 8	Institutional arrangement in Saidpur STP Project	26

## **Executive Summary**

### **The Project**

Conservation and cleaning of river Ganga is a continuous and collective effort of Central and State Govt. local bodies and general public. The first initiative in this regard commenced in 1985 under Ganga Action Plan (GAP) and extended to two phases over more than two decades. GAP-I completed in 2000 and GAP-II started in 1993. Later the programme was merged with National River Conservation Programme (NRCP). The Government of India (GoI) constituted the National Ganga River Basin Authority (NGRBA) on 20th February 2009, for the comprehensive management of the river. In 2014, the Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD & GR, GoI) has taken up an integrated and comprehensive approach towards Ganga Conservation Mission named “Namami Gange”. It envisaged as a flagship programme by integrating all the previous and currently ongoing initiatives by enhancing efficiency, extracting synergies and supplementing them with more comprehensive and better coordinated interventions. NGRBA has been dissolved with effect from 7th October, 2016 consequently under National Council for Rejuvenation, Protection and Management of River Ganga (referred as National Ganga Council) vide notification no. S.O.3187 dt. 07/10/2016 under EPA 1986. Under Namami Gange programme a holistic approach has been adopted to clean the river.

Patna city covering an area of 100 sq.km is subdivided into 6 Sewerage Zones Digha, Beur, Saidpur, Kankarbagh, Pahari and Karmali chak. Saidpur zone covers the central part of Patna City. In this area the population is very dense therefore the growth of population is less but due to high density area the sewage generation is high. The old Saidpur Zone of Patna as per the existing sewerage scheme is now divided in two zones namely Zone -III & IV A (N). This zone have a STP within its boundary at Saidpur STP (45 MLD plant) site

At present Saidpur zone has an existing ASP based STP capacity of 45 MLD which is catering to a load of 33 MLD with primary level of treatment. There is a demand of 48.23 MLD, 64.78 MLD & 83.11 MLD capacities of STP's for 2017, 2032 & 2047 respectively. Since the existing STP is only capable to cater a load of 33 MLD the remaining load is directly getting dumped into river Ganga through open channel/nallas. Therefore for abatement of pollution & sustaining the flora & fauna of the Ganga and to provide better living conditions, health and personal hygiene of the people, it is recommended to install / augment the capacity of Saidpur STP to cater the estimated sewage load up to 2047 by increasing access of more people to safe sewage disposal and reduce frequency of occurrence of water and wastewater related diseases and mortality rate it is urgently needed to upgrade the existing Sewerage infrastructure of the area. Hence considering the situation, 60MLd capacity of STP based on SBR technology is proposed for this zone, which is likely to be completed by March 2020.

This document comprises the Abbreviated Resettlement and Rehabilitation Action Plan (ARAP) of the proposed SPS under Saidpur Sewerage project. The ARAP meets all

Government of India (GOI) and World Bank Resettlement-related requirements and complies with applicable GOI and World Bank (OP/BP 4.12) regulations, policies, and procedures including those on public participation and environmental assessment.

### **Objective of ARAP**

The overall objective of the ARAP is to ensure that all PAPs at least regain their status of living they had prior to the project implementation or improve upon that. The specific objectives of this ARAP are to:

- Identify the PAPs by the type of loss and extent of damage
- Categorize Entitled Persons (EPs) according to the eligibility criteria mentioned in the R&R policy.
- Work out entitlements for each Eligible Person based on the criteria as laid down in the R&R policy of the project
- Ensure that all PAPs are aware of their entitlements under the policy and participate actively in the project.
- Identify land for resettlement and the preferences of the PAPs for their relocation if there will be any land acquisition in the future.
- Develop an institutional support for the implementation of R&R process.
- Evolve a suitable mechanism for monitoring and evaluation of the R&R process and indicate the parameters for monitoring.

The ARAP components comprises-

- Introduction and methodology
- Legal Framework and Resettlement Policy
- Survey outcome of socio-economic impacts
- Public Consultations
- Income Restoration
- Institutional Arrangements
- Grievance Redress Mechanism
- Implementation Schedule
- Estimated Budget for implementation

While the policy document describes what need to be done, why and how, the action plan describes in more detail how, when by whom the activities will be carried out.

### **Impact on Land acquisition and Voluntary Resettlement**

As per the Census survey, land acquisition (Private land) has not been envisaged in this project. Construction has been proposed on the existing government land only. There are only 2 Non- titleholders who have squatted on the said site since long. These

households face physical displacement due to commissioning of the project component. No livelihood loss is identified. During the socio-economic survey and consultations, the owners requested for cash compensation and opted for self-resettlement.

### **Policy, Legal Framework and Entitlement**

The national, state and local environmental and social regulatory requirements that are applicable to the investments proposed are given in this section. The proposed scheme involves construction of STP, pumping station and sewerage network. It requires following the Water Act and SPCB clearance prior to constructions.

Provisions mentioned in Environment and Social Management Framework has been adopted for this Project. It is also in accordance with the National Policies, State Policies and World Bank's Operational policies (OP. 4.12,). This Policy and Framework document describes the principles and approach to be followed in minimizing and mitigating adverse socio-economic impacts caused by the project. The action plan has been prepared based on the broad outline laid down in the above mentioned policies.

The principle of the R&R policy is the guiding philosophy to provide a development approach to resettle and rehabilitate the people affected by project. In particular:

- Wherever possible, displacement will be reduced on or avoided altogether by sensitive design of civil works (e.g. alternative designs or modification to the design).
- Where displacement is unavoidable, those displaced will have their living standard improved. They will be located as a single unit among the peer groups or will be assisted to integrate into their new community. Attention will be paid to the needs of the most vulnerable groups to be resettled.
- PAPs will be compensated, at replacement cost, for assets lost.
- Adequate social and physical infrastructure will be provided.
- PAPs would be encouraged to participate in the design and the implementation of ARAP

### **Entitlement Matrix**

Entitlement matrix for this project has been developed in accordance with the provisions and guidelines adopted in the ESAMP, State, National and World Bank's Operational Policies and analysis of initial identification of project impacts.

The proposed Entitlement Matrix for Resettlement and Rehabilitation prepared for one of the Sewage Pumping Station proposed in Ambedkar Colony under Saidpur Sewerage project is given in the table 9, Chapter 3.

## Public Consultations

Public participation was undertaken to make explicit the social factors that will affect the development impacts of planned sewerage project results. Through public participation, stakeholders and key social issues were identified and strategy was formulated. It included socio-cultural analysis and design of social strategy, institutional analysis and specifically addressed the issue of how poor and vulnerable groups may benefit from the project.

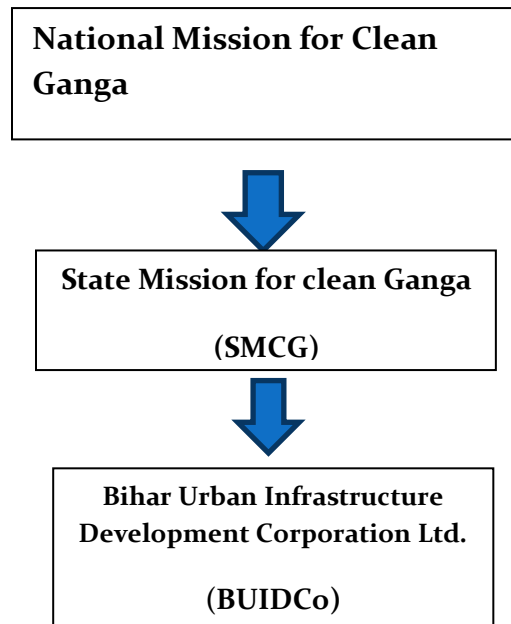
Consultations were held with local residents residing on both sides of the connecting road/lane leading up to the IPS site. The main objectives of the consultation program were to acquaint the participants about the project components and proposed work, the potential benefits that may accrue to them, the temporary inconvenience that they might face due to the commissioning of the project and measures to minimize the envisaged negative impacts of the project. Participants supported the project but expressed their apprehension if (i) road will be restored to its earlier state and the road level should not increase and (ii) due to movement of heavy vehicle alongside their houses, there could be associated health issues like-air and noise pollution and safety hazard to their children who plays there and others who generally rest outside their home. They feared that their younger ones/children might fall in the open excavated areas/sites. The affected family members asked for cash compensation and opted for their self-relocation.

The safeguard experts informed the participants that efforts have been made to avoid or minimize resettlement impact through careful design of the major portion of pipe alignments for sewer network through available government land and existing public road right of way (RoW). Through meticulous exercise, to minimise the impact, the present alignment has been chosen which requires dismantling and rehabilitation of affected persons of only two houses.

The safeguard experts addressed their apprehensions and assured them that - road will be restored to its earlier state and the construction area will be barricaded. Ambient noise levels will be maintained during civil works. Necessary arrangements to ensure occupational safety of the workers and local residents will also be put in place. Participants were apprised that several layers of checks and balances to ensure strict supervision and monitoring of the civil works during its implementation will be put in place and the monitoring team will keep a vigil during implementation.

However, they were also sensitized on the precautionary measures that they might take during the period of civil implementation works and were advised to take special care of their children. Participants expressed their cooperation.

## **Institutional Arrangement**



Within the overall implementation Guideline of the NGRBA program, ARAP will be implemented by the implementing agency under the overall guidance of SMCG. BUIDCo is the implementing agency for this project and ARAP of Ambedkar Colony SPS site will be implemented by social and technical team of BUIDCo with SMCG team. Details can be seen in the chapter.

## **Implementation Schedule, Monitoring and Budget**

Implementation of ARAP mainly consists of assistance to be paid for affected structures; Rehabilitation and Resettlement activities. Implementation of Resettlement Action Plan in this project consists of Resettlement & Rehabilitation of 2 PAPs. As per the conditions in the civil works contracts, land free from all encumbrances is to be made available to the contractors for the contract package.

It is observed during initiation of construction activity at Ambedkar Colony SPS site, the approach road to site is narrow for heavy vehicle to reach there. In order to widen the road, two structure needs to be removed, for which this ARAP is prepared. Details are given in chapter section.

## **Income Restoration**

The basic objective of income restoration activities is that no project affected person shall be worse off than before the project. Restoration of pre-project levels of income is an important part of rehabilitating individuals, households, and socio-economic and



cultural systems in affected communities. No income loss has been ascertained due to the commissioning of the project.

### **Budget**

The total indicative resettlement budget for Saidpur SPS project has been estimated INR 4, 11,071.25.

## **1. Introduction**

### **1.1 Project background**

Bihar is an important state from the perspective of river Ganga as a total of 445 km (almost 18%) of its total length of 2525 Kms flow through the state. The length of Ganga River flowing adjacent to Patna is around 30 Kms. According to CPCB Bulletin (vol 1, July, 2016), the existing sewage treatment capacity in Ganga basin is 1230.7 MLD against the total generation of 4973.81 MLD. Therefore, only 25% of the total generated sewage can be treated in the existing STPs.

Patna is the capital of Bihar and is the second largest urban center in eastern India, after Kolkata. The Municipal limits of PMC form part of Patna Urban Agglomeration Area (PUAA). The PMC boundaries cover an area of 100 sq km with the present population of 16.83 lakhs as per 2011 census, whereas the PUAA covers an area of 146.16 sq km and has a population of 20.47 lakhs. The city is densely populated and is fast developing as a commercial hub of Bihar. The city comprises of 72 wards with variant population growth as per amenities & infrastructure available. As per recent survey by World Bank, Patna is one of the fastest growing city in the world in terms of Infrastructural development.

Geographically the city has a width of 9.5 km. on the western side which gradually reduces to 2.5 km on eastern side. The city is situated on southern banks of river Ganga and has extended linearly over a length of 25 km. The western periphery of PUA area is bounded by river Sone whereas on southern side 20 km away, parallel to the city, flows Punpun River which later joins river Ganga.

The largest tributary of the Ganga is Ghaghara, which meets it before Patna, bearing much of the Himalayan glacier melt from Northern Nepal. The Gandak, which has its origin near Kathmandu in Nepal, is another big Himalayan tributary. Other important rivers that merge with the Ganga are the Son and Gomati, Upstream from Varanasi, one of the major pilgrimage sites along the river, the water is comparatively pure, having a low Biochemical oxygen demand and faecal Coli form count. Studies conducted in 1983 on water samples taken from the right bank of the Ganga at Patna confirm that ischemia coli (E.Coli.), faecal streptococci and vibro cholera organisms die two to three times faster in the Ganga than in water taken from the rivers Son and Gandak and from dug wells and tube wells in the same area. Patna city covering an area of 100 sq. km is subdivided into 6 Sewerage Zones Saidpur, Beur, Saidpur, Kankarbagh, Pahari and Karmali chak.

### **Condition Assessment of Existing Sewerage System**

A visit to all areas of the city was undertaken to understand ground topography, existing system, and problem being caused due to existing system and to critically identify consultants approach for handling design & planning. Consultant has also interacted with caretakers of existing system, so as to gather maximum Social

Assessment and Management Plan for Sewerage Schemes for Patna City (Saidpur Zone) information from their past experiences.

### Existing STPs Scenario

Sewerage system was first introduced in Patna town during the year 1936-39 under which a STP of 4.5 MLD was constructed in the year 1937 at Saidpur. The existing STPs serve very few households which have central sewerage system facilities available. The sewer network are essentially the sanitary sewers and do not carry sullage (waste water) in the sewage system. These facts indicate that besides the complete sullage, the existing drains are carrying bulk of sewage discharge also. It is noteworthy that at most of the places/ localities, all households are discharging their sewage/ sullage through open drains into the nallas. Discharge of sullage/ sewage into the drain causes septic condition resulting in foul odor and fly nuisance making the surrounding highly unhygienic. With the present population of 3.64 lakhs which generates sewage discharge of 43.69 MLD, open drains are acting as sewers during the dry weather flow. Whereas, in the monsoon, the same infrastructure is serving the dual purpose i.e. as sewers and drains, thus making the situation worst for the local public.

The existing sewerage infrastructure has been planned & augmented at different stages of Ganga Action Plan and has already outlived its life. The main sewer line in Patna is only a length of 27.4 km and that too is in poor condition as have outlived its designed life.

### Need of the Project

Bihar is an important state from the perspective of Ganga Action Plan as a total of 445 km (almost 18%) of its total length of 2525 km. flows through the state, whereas length of Ganga River flowing adjacent to Patna is around 30 km. The recent survey of Class I and Class II cities indicated that about 8250 MLD of wastewater is generated in the Ganga basin out of which treatment facilities are available only for 3500 MLD of wastewater. A summary of total waste water discharged directly and indirectly into the Ganga River is presented in **Table 1** given below:

**Table 1: Disposal of Wastewater in Ganga Basin, From Class-I and Class-II Towns in Bihar**

State	Amount of waste water Directly discharged into the Ganga from class I cities and Class II towns (MLD)	Amount of wastewater directly discharged into the tributaries and sub tributaries of the Ganga from class I cities and Class II towns (MLD)	Amount of waste water discharged on land/low lying areas from class I cities and class II towns (MLD)	Total wastewater disposal in Ganga basin (MLD)
Bihar	412.1	171.5	87.8	671.4

A recent survey conducted by CPCB revealed that there is huge infrastructural gap in Social Assessment and Management Plan for Sewerage Schemes for Patna City (Saidpur Zone) installed capacity and treatment capacity for the Patna City around the year 2001 as tabulated (**Table 2**) below:

**Table 2: Sewage pollution Load of Patna City (sewage disposed- off in the river Ganga)**

S.No	City	Population (2001 census)	State	Total Sewage MLD	Capacity of STPs, MLD	Capacity GAP, MLD	Percent Treatment Capacity
01	Patna	1366444	Bihar	249.2	109.0	140.2	43.7%

The above table reveals a gap of 140.2 MLD in treatment capacity but on-site surveys revealed that the installed treatment plants are not running on their designated capacities due to:

- a. Lack of flow in absence of sufficient sewer length
- b. Power shortage
- c. Shortage of skilled and unskilled labour and
- d. Paucity of funds.

Apart from the shortfall in sewage treatment capacity, there are other important causes of pollution of the river; disposal of garbage and wastewater and at times dead bodies, bathing and washing of clothes and disposal of religious waste (**Figure 1**).



**Figure 1: Snapshot of water pollution**

## **Saidpur Zone**

At present Saidpur zone has an existing ASP based STP capacity of 45 MLD which is catering to a load of 33 MLD with primary level of treatment. There is a demand of 48.23 MLD, 64.78 MLD & 83.11 MLD capacities of STP's for 2017, 2032 & 2047 respectively. Since the existing STP is only capable to cater a load of 33 MLD the remaining load is directly getting dumped into river Ganga through open channel/nallas. Therefore for abatement of pollution & sustaining the flora & fauna of the Ganga and to provide better living conditions, health and personal hygiene of the people, it is recommended to install / augment the capacity of Saidpur STP to cater the estimated sewage load up to 2047 by increasing access of more people to safe sewage disposal and reduce frequency of occurrence of water and wastewater related diseases and mortality rate it is urgently needed to upgrade the existing Sewerage infrastructure of the area. **The photograph of the existing SPS is provided in Figure 2.**

This zone covers the central part of Patna City. In this area the population is very dense therefore the growth of population is less but due to high density area the sewage generation is high.

The old Saidpur Zone of Patna as per the existing sewerage scheme is now divided in two zones namely Zone -III & IV A (N). This zone has a STP within its boundary at Saidpur STP (45 MLD plant) site.



Existing SPS, Saidpur Zone

**Figure 2: Existing SPS**

This zone also includes Zone -IVA (North part) to accommodate sewage load at Saidpur STP site. These zones form a part of Saidpur on west and Saidpur. Previously Saidpur zone have a STP within its boundary located at Saidpur STP (45 MLD plant). As per new distribution of Zones, zone – III & IVA-N, it covers mostly the same the area of old Saidpur zone except Saidpur zone on east side. The terrain profile of the zone results in an economical sectioned sewer system with flow directed in eastern direction. This zone forms the north-central part of city. The west side of this zone is bound by Mahatma Gandhi Maidan, Rajendra path, Bakerganj etc. The south side area of this zone includes Rajendra Nagar, Ghrounda, Delhi-Howrah railway line etc and on east side it has the area named Bhikhana Pahari, Lalbagh Sharif Colony etc. The north part is bounded by Ganga River. Area of zone-III & IVA-N is about 13.77 sq. km. (i.e. 13.77% of project area).

## 1.2 Project Description

### Objectives of the Project

The prime object of the project is to collect the waste water into the sewers and then to treat it before disposing off safely, so that the River Ganga do not get polluted through the drains in the project area. The qualities of waste flowing in the drain/ open nallas are putrecible with high BOD & Faecal Coliform content. This waste water via different routes is reaching through Serpentine & Saidpur Nalla to pumping stations located on the bank of river and finally falls into river Ganga. Thus making the condition of Ganga water not fit for aquatic life and also the downstream which is fully dependent on Ganga water would have health hazards. This project is basically provided/ proposed to stop the uncontrolled flow of waste water into the open nallas and to divert the load finally to the STP.

Patna city is located along the river Ganga and this stretch of the river is designated as critical from quality point of view. The National Ganga River Basin Authority (NGRBA) decided that no untreated municipal sewage and industrial effluents would be allowed to enter the river Ganga after 2020 under mission for clean Ganga. After detailed planning & consultation with BUIDCo officials and all the stakeholders of the project, sewerage system of Patna city has been divided into 6 sewerage zones based on topography, railway lines and contributory population for provision of complete sewerage system. The existing capacity of Saidpur STP (**Figure 3**) is 45 MLD which is proposed to be augmented for treatment of 60 MLD (**Table 3**) within the premises of existing STP. The existing land parcel is so planned to be utilized that the load of Zone -III & IV A (N) would be catered by Saidpur STP only. Elsewhere too, the new systems have been planned at the site of the existing STPs and no private land will be required at any location; STPs as well as the Pumping Stations.

**Table 3: Proposed Capacity of Sewage treatment plant at Saidpur**

Zones	Population (lakhs)			Sewer Generation (MLD)			Proposed STP (MLD)	
	2017	2032	2047	2017	2032	2047	2032	2047
III & IV A-N (Saidpur)	4.02	5.40	6.93	48.23	64.79	83.11	65	83



Existing STP, Saidpur.

**Figure 3: Existing STP**

### Project component

The proposed components of the project is given below in **Table 4** while the layout of Saidpur Sewerage Scheme and layout of SPS has been provided in **Figure 4** and **Figure 5** respectively-

**Table 4: Proposed components of the project**

Saidpur Sewerage Network				
Sl. No.	Major Items of Work	Unit	Revised Scope	Remarks
<b>PIPELINE</b>				
1	Laying of Trunk Sewer Main	Metres	22,150	
2	Laying of Branch Sewer Main	Metres	1,40,230	
3	Construction of Man-Hole	Nos	6,379	
4	Road Restoration Work	Metres	1,62,380	
5	House Connection Pit	Nos	18,618	
6	House Connection	Nos	28,118	
7	DI Rising Main	Metres	6,650	
<b>DWC Pipe Details</b>				
1	200 mm dia	Metres	127974	DWC Pipe

2	250 mm dia	Metres	2207	DWC Pipe
	<b>Total</b>	<b>Metres</b>	<b>130181</b>	<b>DWC Pipe</b>
<b>RCC Pipe Details</b>				
3	300 mm dia	Metres	1215	RCC Pipe
4	350 mm dia	Metres	771	RCC Pipe
5	400 mm dia	Metres	423	RCC Pipe
6	450 mm dia	Metres	188	RCC Pipe
7	500 mm dia	Metres	464	RCC Pipe
8	600 mm dia	Metres	204	RCC Pipe
9	700 mm dia	Metres	303	RCC Pipe
10	800 mm dia	Metres	393	RCC Pipe
11	900 mm dia	Metres	0	RCC Pipe
12	1000 mm dia	Metres	44	RCC Pipe
13	1200 mm dia	Metres	357	RCC Pipe
14	1600 mm dia	Metres	355	RCC Pipe
	<b>Total</b>	<b>Metres</b>	<b>4717</b>	<b>RCC Pipe</b>
<b>HDPE Pipe Details</b>				
1	Upto 300 mm dia	Metres	11876	HDPE Pipe
2	Above 300 mm and upto 450 mm dia	Metres	7543	HDPE Pipe
3	Above 450 mm and upto 600 mm dia	Metres	4165	HDPE Pipe
4	Above 600 mm and upto 900 mm dia	Metres	3898	HDPE Pipe
	<b>Total</b>	<b>Metres</b>	<b>27482</b>	<b>HDPE Pipe</b>
<b>DI Pipe Details</b>				
1	DI Rising Main 600 dia	Metres	6650	DI Pipe
	<b>Total</b>	<b>Metres</b>	<b>6650</b>	<b>DI Pipe</b>
<b>Sewage Pumping Station</b>				
1	<b>Zone III SPS A Exhibition Road</b>	<b>MLD</b>	<b>20.63</b>	<b>Land belongs to BRJP which is merged in BUIDCo now.</b>
2	<b>Zone III SPS BC Bazaar Samiti</b>	<b>MLD</b>	<b>18.58</b>	<b>Land belongs to Patna Municipal Corporation.</b>
3	<b>Zone IV SPS A Ambedkar Colony</b>	<b>MLD</b>	<b>24.66</b>	



# Layout of Saidpur Sewerage Scheme

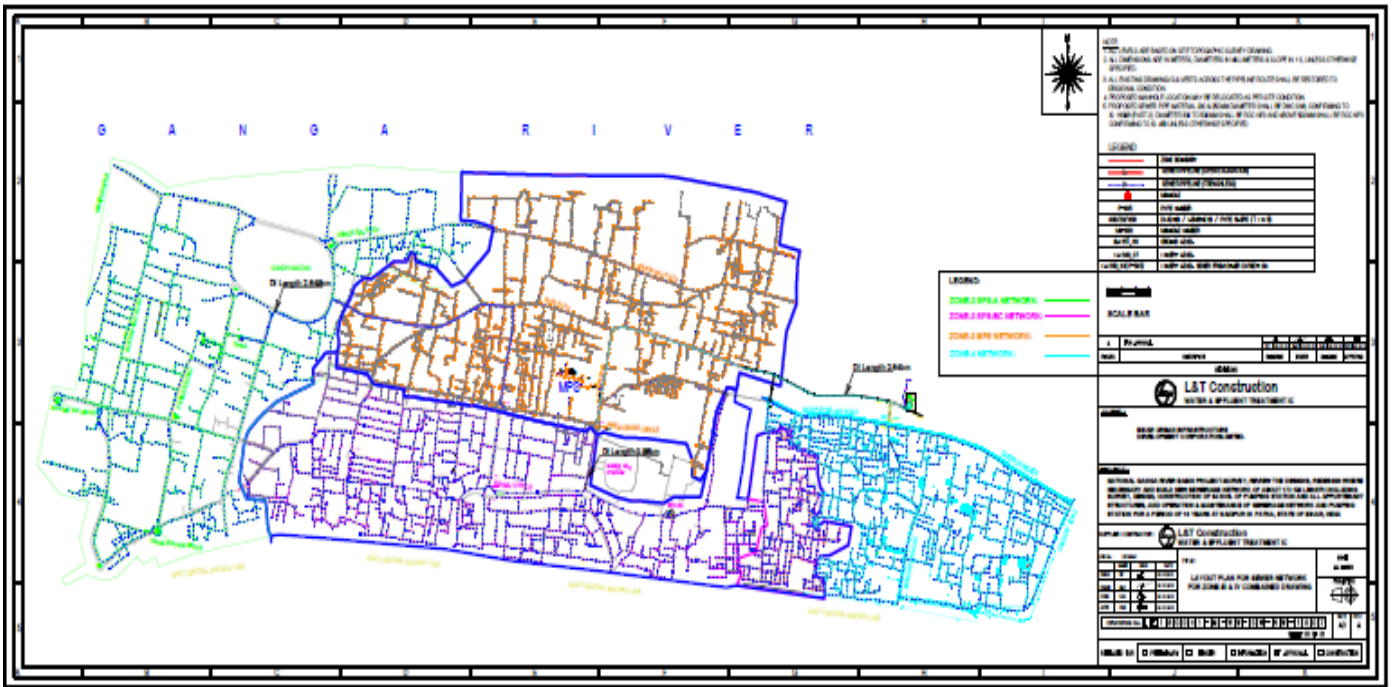


Figure 4: Layout of Saidpur Sewerage Scheme

## SPS layout

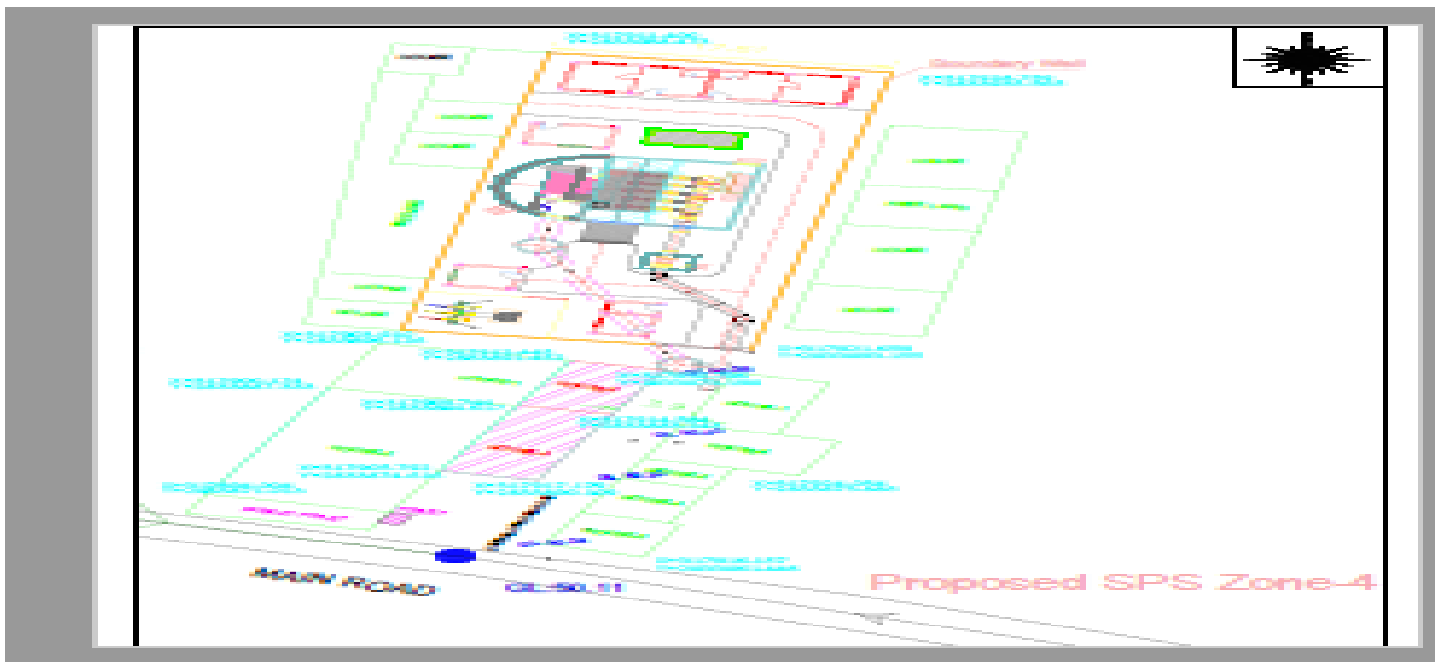


Figure 5: Layout of SPS

## Land Availability

Patna city is densely populated in the core area, and outgrowth on the fringes is expected in the years to come. Therefore, at this stage it is possible to earmark the land requirement for ultimate stage STP capacity. The area available at the existing STP at Saidpur will be utilized for the project. The existing STP is proposed to be converted to lesser land footprint intensive technologies during future expansion. After detailed study and feasibility analysis, it was found that retaining existing land is not only the most feasible available option, but also it has techno-economical advantage over other options.

## Land Requirement

The list of wards in Saidpur zone with population, sewage generation and land requirement for STP have been presented in **Table 5** given below -

**Table 5: Wards covered, Population and Land Requirement for Saidpur STP**

Wards Covered	Population projection for 2047 (lakhs)	Sewage Generation for 2047 (MLD)	Land Requirement (Ha)
27,28,35,36,37,38,39,40,41,42,43,47,48,49,50,51,52,53,54	6.93	83	4.15

The total land required for Zone III and IVA (N), *Saidpur* STP is 4.15 Ha. The proposed enhancement in capacity will be carried out on land available on existing site and no land acquisition is required

The SPS has been proposed on the parcel of land belonging to Patna Nagar Nigam. The tentative project cost has been given below in **Table 6**-

**Table 6: Tentative project cost**

**Summary of cost of the project proposal of  
"Saidpur Sewerage network for Patna in Bihar"**

S.No	Description	Estimated Cost (INR Lakhs)
<b>A</b>	<b>Saidpur Sewerage Scheme at Zone III + IVA (N)</b>	
1	Sewerage system complete with laterals, collector, interceptors and trunk sewers including Trenchless portion etc	12945
2	Construction of 04 Nos of SPS	2200
3	Total House Connection is 67000 Nos	2573
4	Relocation of Utilities.	500
5	Provision of boring of Trenchless Sewers	4489
	<b>Sub Total of A</b>	<b>22707.00</b>
<b>B</b>	<b>Charges</b>	
1	Cost of Project preparation @ 4% as per NGRBA Programme guidelines (maximum)	908.28
2	Cost of supervision of project @ 4% as per NGRBA Programme guidelines (maximum)	908.28
	<b>Sub Total of B</b>	<b>1816.56</b>
<b>C</b>	<b>Cost of Work where charges will not be admissible</b>	
1	ESAMP	55.00
2	Communication and Public Outreach	10.00
3	GAAP	2.50
	<b>Sub Total of C</b>	<b>67.50</b>
<b>D</b>	<b>Operation and Maintenance</b>	
1	Five Years O&M Cost	2272
	<b>Sub Total of D</b>	<b>2272.00</b>
	<b>Total cost (A+B+C)</b>	<b>26863.06</b>
	<b>Say</b>	<b>Rs. 268.63 Crores</b>

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## 2. Land Acquisition and Resettlement

### 2.1 General

This chapter presents the requirements of land acquisition and other immovable assets in the project. It also discusses projects impacts on people and on their assets. This chapter is based on the finding of census Survey and the results of the survey established the impact on land, structures, buildings, community property, income, livelihood, trees, crops etc. and types of Project Affected Persons (PAPs) including the significance of impacts, vulnerability and socio-economic status. The result of the Census Survey indicates the nature and characteristics of R&R interventions required to mitigate negative impacts of the project.

## 2.2 Land requirement in the project

The project does not require acquisition of any private land. However physical relocation impact on two squatter households has been identified to facilitate civil implementation works. These semi pucca houses are constructed on the left bank of the approach road (**Figure 6** -approx. 2.5 meter width) leading upto the site. In order to facilitate hassle free movement of heavy equipments etc. approach road of width approx. 6 meters is required. It therefore necessitates demolition of these two houses.



**Figure 6: Approach road- present condition**

## 2.3 Non-titleholder's (Encroachers & Squatters)

As per the census survey there are 2 families who face involuntary physical displacement owing to dismantling of semi pucca house due to commissioning of the project. During the consultations, these two families opted for cash compensations and self-relocation. Accordingly, these families will be given assistance as per the approved Entitlement Matrix of the project. Details are given in the **Table 7** given below-

**Table 7- Details of PAP's in the Project**

Sl. No.	Name of the PAPs	Sex	Total no. of family members	Source of Income	Whether vulnerable	Type of Impact
1	Ganga Paswan	Male	7	Labour	Schedule Cast	Physical relocation
2	Ms. Sundar Devi	Female	14	Labour	Widow	Physical relocation

## **2.4 Other Impacts during Construction**

Construction related impacts are of various natures which will be mitigated by the construction Contractor through proper consultation process. Some of the general impacts as foreseen during construction in the Project are as below:

- Short-term impact in terms of minor increase in temperature may happen in the immediate vicinity of the alignment, construction camp area due to construction activities
- During construction phase, changes in topography are envisaged due to the clearing of land, cutting and filling, and due to the construction of structures.
- Construction may cause aesthetic changes in the landscape.
- Drainage and flooding problem during construction due to stockpiling of materials, debris and construction of temporary approach road and yards would have impact of temporary nature.
- issues related to air and noise pollution and safety

## **3. Resettlement Policies and Legal Framework**

### **3.1 Background**

The Government of India (GoI) constituted the National Ganga River Basin Authority (NGRBA) on 20th February 2009, for the comprehensive management of the river. In 2014, the Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD & GR, GoI) has taken up an integrated and comprehensive approach towards Ganga Conservation Mission named “Namami Gange”. It envisaged as a flagship programme by integrating all the previous and currently ongoing initiatives by enhancing efficiency, extracting synergies and supplementing them with more comprehensive and better coordinated interventions. NGRBA has been dissolved with effect from 7th October, 2016 consequently under National Council for Rejuvenation, Protection and Management of River Ganga (referred as National Ganga Council) vide notification no. S.O.3187 dt. 07/10/2016 under EPA 1986. Under Namami Gange programme a holistic approach has been adopted to clean the river.

Considering the importance of the Resettlement and Rehabilitation (R&R) activities in Saidpur Sewerage Network Project (NGRBA), a Resettlement action plan (ARAP) has been prepared by BUIDCo. The action plan prepared for the project serves as an appropriate tool, offers the required flexibility, within the boundaries set forth by the requirements of the Bank’s operation policies and the country’s regulatory mechanisms, in guiding the process of dealing with the unwarranted impacts and would help in augmenting the positive benefits.

Abbreviated Resettlement Action Plan prepared for Saidpur Sewerage Network Project is based on the provisions of Resettlement Policy Framework as given in agreed Environmental and Social Management Framework for NGRBA project. The

entitlements for the two affected families have been worked out based on the entitlement matrix (Table 8) of the RPF. Accordingly, the entitlements are as under:

**Table 8 : Entitlement Matrix**

Sl. No.	Impact type	Entitlements
1.	<b>Non-Titleholders - Loss of Residential/ Commercial Structures</b>	
	Non -titleholders - structures on Government land	(i) Replacement cost for affected structure at current PWD schedule rates without depreciation for squatters and vulnerable encroachers. (ii) Right to salvage material from the demolished structures. (iii) One months' notice to vacate structures will be given. (iv) One time resettlement allowance (v) One time shifting allowance

### 3.2 Safeguard Policies of the World Bank

#### Involuntary Resettlement (OP 4.12)

OP/BP 4.12 – Involuntary Resettlement- The key objective of the Bank's safeguard Policy 4.12 is to “ensure that displaced persons are assisted in their efforts to improve their livelihoods and standard of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher”. The important clauses of the World Bank Policy in preparation of resettlement plan and policy framework includes the following:

- Ensure that the displaced persons are informed about their options and pertaining to resettlement;
- Consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives;
- Prompt and effective compensation at full replacement cost for losses of assets;
- Provide assistance and allowances;
- Provide equivalent productive assets for the loss of residential house, agricultural land etc.;
- Provide support for the transition period (between displacement and livelihood restoration);
- Provide land related development assistance (credit facilities, training and job opportunities);
- Preferences should be given to land-based resettlement strategies for displaced persons whose livelihoods are land – based;

- Cash compensation level should be sufficient to replace the lost land and assets at full replacement cost in local markets;
- Depreciation and salvage value will not be deducted from the compensation value.
- Eligibility of Benefits should include the PAPs who have formal legal rights to land (including customary and traditional land rights recognized under law), the PAPs who do not have formal legal rights to land at time of census but have a claim to such land or assets and the PAPs who have no recognizable legal right to the land they are occupying;
- Particular attention will be paid to the needs of vulnerable groups among those displaced, especially those below the poverty line, landless, elderly, women and children , ethnic minorities etc.
- The displaced persons and their communities will be provided timely and relevant information, consulted on resettlement options, and offered opportunities to participate in planning, implementing and monitoring resettlement. Appropriate and accessible grievance mechanisms will be established for these groups;
- A Grievance Redressal Mechanism will be made functional to resolve all complaints and grievances of PAPs.

### 3.3 Applicable Government of India and World Bank Requirements (Table 9)

**Table 9 : Applicable acts/rules /policies**

SL. NO.	ACTS/NOTIFICATIONS/POLICIES	RELEVANCE TO THE PROJECT	APPLICABILITY
<b>1</b>	<b>APPLICABLE WORLD BANK POLICIES</b>		
(1)	OP 4.12 – Involuntary Resettlement	The project entails no land acquisition but it will adversely affect structures used for residential purposes.	<b>APPLICABLE TO THE PROJECT</b>
<b>2</b>	<b>APPLICABLE STATE POLICIES</b>		
(1)	Minimum wages act	Provides for payment of fixed minimum wages fixed by the government as per the provisions of the act.	<b>APPLICABLE</b>
<b>3</b>	<b>CENTRAL ACTS AND POLICIES</b>		
(1)	Equal Remuneration act, 1976	Project will ensure that equal wages will be paid to both men and women for similar works	<b>APPLICABLE</b>

SL. NO.	ACTS/NOTIFICATIONS/POLICIES	RELEVANCE TO THE PROJECT	APPLICABILITY
(2)	Child Labor Prohibition act, 2016	Contractor will ensure that no child will be engaged in any type of activity.	<b>APPLICABLE</b>
(3)	The Right to Information Act, 2005	The Act provides for setting out the practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the project.	<b>APPLICABLE</b>

#### 4. Stakeholders Consultation

##### 4.1 General

Public Consultation was undertaken to make explicit the social factors that will affect the development impacts of planned sewerage project and mediate project results. Through public participation, stakeholders and key social issues were identified and strategy was formulated. It included socio-cultural analysis and design of social strategy, institutional analysis and specifically addressed the issue of how poor and vulnerable groups may benefit from the project.

Consultation is a process, through which stakeholder influence and share control over development initiatives and the decisions and the resources, which affects them. The effectiveness of R&R programme is directly related to the degree of continuing involvement of those affected by the project. Comprehensive planning is required to assure that local government, NGOs, local population and project staff interacts regularly, frequently and purposefully throughout all stages of the project. Participation of persons affected by projects is a primary requirement in development of R&R, if its programmes are to be suited the needs of the affected population. Their involvement vastly increases the probability of their successful resettlement and rehabilitation.

Consultations in the project were carried out with respective groups of affected population including women groups, farmers and agricultural labourers, etc. All the participants were informed in advance about the date, venue and time of the consultation. No livelihood loss is identified. Photographs of the consultations (**Figure 7**) are appended below.





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**Figure 7: Photographs of Consultations**

#### **4.2 Objective of the Public Consultations**

The process of stakeholder's participation / consultations was taken up as an integral part of the study. The objectives of these consultations are:

- (i) To educate the general public, specially potentially impacted communities / individuals and stakeholders about the proposed project activities;
- (ii) To familiarize the people with technical, environmental, social and economic issues of the project for better understanding;
- (iii) To solicit the opinion of the affected communities / individuals on environmental issues and assess the significance of impacts due to the proposed development;
- (iv) To secure people's inputs in respect of project planning, selection of mitigation measures and monitoring strategies;
- (v) To ensure lessening of public resistance to change by providing them a platform in the decision-making process;
- (vi) To inculcate the sense of belongingness in the public about the project.
- (vii) Understand the view of the affected persons on rehabilitation and resettlement issues; and
- (viii) Make the resettlement and rehabilitation process transparent.

### **4.3 Methodology of Public Consultation**

Consultation with the stakeholders, beneficiaries, and community leaders were carried out by, personal discussions with officials, on site discussion with affected stakeholders, and during reconnaissance visits to the project area.

### **4.4 Outcome of Consultations**

Consultations were held with local residents residing on both sides of the connecting road/lane leading up to the IPS site. The main objectives of the consultation program were to acquaint the participants about the project components and proposed work, the potential benefits that may accrue to them, the temporary inconvenience that they might face due to the commissioning of the project and measures to minimize the envisaged negative impacts of the project. Participants expressed their willingness to support the project but also had apprehension if (i) road will be restored to its earlier state and the road level should not increase and (ii) due to movement of heavy vehicle alongside their houses, there could be associated health issues like-air and noise pollution and safety hazard to their children who plays there and others who generally rest outside their home. They feared that their younger ones/children might fall in the open excavated areas/sites. The two affected family members asked for cash compensation and opted for self-rehabilitation. None of the participants are economically impacted.

The safeguard experts informed the participants that efforts have been made to avoid or minimize resettlement impact through careful design of the major portion of pipe alignments for sewer network through available government land and existing public road right of way (RoW). Through meticulous exercise, to minimise the impact, the present alignment has been chosen which requires dismantling and rehabilitation of affected persons of only two houses.

The safeguard experts addressed their apprehensions and assured them that - road will be restored to its earlier state and the construction area will be barricaded. Ambient noise levels will be maintained during civil works. Necessary arrangements to ensure occupational safety of the workers and local residents will also be put in place. Participants were apprised that several layers of checks and balances to ensure strict supervision and monitoring of the civil works during its implementation will be put in place and the monitoring team will keep a vigil during implementation.

However, they were also sensitized on the precautionary measures that they might take during the period of civil implementation works and were advised to take special care of their children. Participants expressed their cooperation.

## **4.5 Public disclosure**

In order to make the ARAP implementation process transparent, series of Public Consultation Meetings with all stakeholders have been carried out in the field. The purpose was to informally make the people aware about the project. The same will be continued for dissemination of information regarding rehabilitation process and entitlement framework. The salient features of ARAP and the R&R policy will be translated in Vernacular languages (Hindi) and will be disclosed through public consultations. It will also be disclosed through the BUIDCo Website. The documents available in public domain will include:

- (i) Executive Summary (both in Hindi & English)
- (ii) ARAP and entitlements;
- (iii) Monitoring reports.

## **5. Institutional Arrangement**

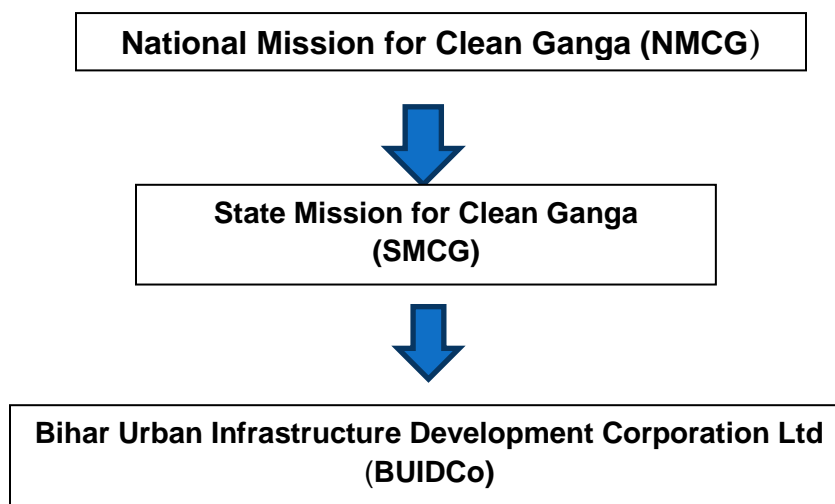
### **5.1 Background**

Institutions for planning and implementation of resettlement programmes are numerous and vary substantially in terms of their respective roles and capacity to successfully carry out various components. Timely establishment and involvement of appropriate R&R institutions would significantly facilitate achievement of the objectives of the R&R Programme. This document reflects an institutional assessment and provides a strategy for developing required implementation capacity and minimizing risks. Capacity building and training are coordinated with the project implementation schedule to ensure that skilled staff is available to implement the ARAP without delay in civil works. The main R&R institutions would include:

- (i) Official Agencies
- (ii) PWD
- (iii) World Bank
- (iv) SPMG
- (v) Local Administration
- (vi) Line Departments
- (vii) Implementing agency (BUIDCo)
- (viii) Training Institutions
- (ix) Grievance Redress Cell and
- (x) Monitoring & Evaluation Agency

## 5.2 Proposed Institutional arrangements

Within the overall implementation guideline of the NGRBA program, ARAP will be implemented by the Implementing agency (**Figure 8**) under the overall guidance of Social officer of SMCG and NMCG. In BUIDCO, Environment and Social Management Coordinator with Safeguard officer and technical team will implement the ARAP of this project with support from SMCG & NMCG. All co-ordination among different agencies, such as the district administration and other line departments will be done by technical team. The roles and responsibility is provided in **Table 10**.



**Figure 8: Institutional arrangement in Saidpur STP Project**

## 5.3 Roles and Responsibilities

**Table 10: Roles and responsibilities in Project**

Levels	Roles and Responsibilities
NMCG Social Specialist	<ul style="list-style-type: none"> <li>• Provide policy guidance to the state level counterparts</li> <li>• Monitoring R&amp;R and relocation process.</li> <li>• Liaison with state administration for implementation of ARAP;</li> <li>• Participate in state level meetings</li> <li>• Finalize TOR of contracting NGO for implementation and external agency for monitoring and evaluation if required</li> <li>• Prepare training schedule if required for state and project level social development officials for capacity building to implement the ARAP;</li> <li>• Prepare TOR for any studies required and qualitative dimensions to the implementation of ARAP;</li> <li>• Facilitate appointment of consultants if required to carry out the studies and co-ordinate them.</li> <li>• Monitor physical and financial progress on implementation of ARAP;</li> </ul>

Levels	Roles and Responsibilities
SMCG – Social Development Officer	<ul style="list-style-type: none"> <li>• Co-ordinate with district administration and NGO responsible for implementation of ARAP;</li> <li>• Translation of R&amp;R policy in local language and ensure dissemination at state; district and community level - prepare pamphlets on policy for information dissemination</li> <li>• Coordinate with the state and district level officials for implementation of ARAP;</li> <li>• Liaison with district administration for dovetailing of government schemes for Income Restoration Schemes</li> <li>• Monitor physical and financial progress of implementation of ARAP,</li> <li>• Participate in the project level meetings</li> <li>• Report progress, highlighting social issues not addressed, to provide for mid-course correction,</li> <li>• Coordinate training of project level staff with agencies involved.</li> <li>• Organise by-monthly meetings with NGO to review the progress of R&amp;R and gender actions</li> </ul>
BUIDCO	<ul style="list-style-type: none"> <li>• Disclosure of ARAP and entitlements and also ensure that copies are made available to the PAPs;</li> <li>• Coordinate with local official for relocation of displaced households if applicable</li> <li>• Dissemination of Project Information at various stages of project as envisaged in the ARAP</li> <li>• Ensure community involvement in every stage of the sub project</li> <li>• Documentation and disclosure of consultations</li> <li>• Shall be first level of grievance redressal and will guide PAPs further to redress their grievances</li> <li>• Ensure disbursement of compensation and / or entitlements as per schedule</li> <li>• Responsible for addressal of additional unforeseen impacts during construction</li> <li>• Supervising the ARAP tasks during implementation &amp; its progress</li> <li>• Collect data pertaining to the evaluation and monitoring indicators</li> <li>• Will prepare monthly progress report and quarterly process documentation report</li> </ul>

#### 5.4 Institutional arrangement for Monitoring and Evaluation

Given that only two families are impacted, the internal monitoring will be carried out by BUIDCo.

Indicators that would be monitored related to performance are provided in the following sections. However, if during the project implementation some other indicators are found relevant those shall be included.

## **5.5 Internal Monitoring**

The project is responsible for internal monitoring on regular basis by BUIDCO and SMCG. A quarterly report of internal monitoring will be prepared by Social Officer. BUIDCO will maintain a record of all transaction in their resettlement database, followed by entitlement records signed by the affected persons and survey based monitoring of resettlement progress. The internal monitoring will also provide feedback on community concerns, grievances and requests. Internal monitoring will focus and ensure the followings:

- (i) Verification that there are no outstanding or unresolved issues with respect to the project and that property valuation in accordance with the provision of plan,
- (ii) Information dissemination and consultation with affected persons,
- (iii) timely disbursement of R&R assistance,
- (iv) Compensation for affected structures and other assets,
- (v) Relocation of affected persons and supports provided,
- (vi) Effective operation of the Grievance Redress Committees detailing out number of complaints received and those resolved; reasons for not being able to resolve the grievance and status of unresolved grievances

## **5.6 Annual Audit:**

The project will be covered under annual Environment and Social (E&S) audit to be carried out by NMCG.

## **6. Grievance Redressal**

It cannot be ruled out that during the implementation of ARAP, some PAPs may not be satisfied with the assistance/benefits offered and may have some grievances. There is a provision for redress of grievances of PAPs. Toll free number is placed in Grievance Redressal Cell of BUIDCo and is also displayed/shared at each construction site. BUIDCo is going to launch "GRM app" shortly which can also be used for registration of grievances by PAPs and any other local residents having a stake in the ARAP implementation process.

Presently each project has Grievance Redressal Committee consisting of BUIDCo (EE, AE and ESMC) and Contractor (PM, Supervisor and H&S officer) officials. Grievance register is maintained at each site .If there is any issue related to grievance this committee takes up it in scheduled Monday meeting.

### **6.1 Grievance Redressal Act of Bihar**

Government of Bihar has announced a new Grievance Redressal act2015. According to this act:

The GOB may notify from time to time, the Public Grievance Redressal Officer, first appellate authority, second appellate authority and revision authority and stipulated time limits.

The state government may notify from time to time, Department wise schemes, programmes and services on which complaint can be filed and also the public authority and department on which level the complaint will be redressed.

Establishment of Information and facilitation center- For the purposes of the efficient and effective Redressal of grievance of the people and to receive complaints under this act, the state government shall establish Information and Facilitation centers.

### **Procedure**

- (i) On receipt of a complaint under sub section 1, the Public Grievance Redressal Officer shall give an opportunity of hearing to the complainant within the stipulated time limit and after hearing the complainant, decide the complaint either by accepting it or by suggesting an alternative benefit or relief available under any other law, policy, service, programme or scheme or by rejecting it for the reasons to be recorded in writing and shall communicate his decision on the complaint to the complainant within the stipulated time.
- (ii) Any person, who has not been given an opportunity of hearing and redressal of the complaint within the stipulated time limit or who is aggrieved by the decision of the Public Grievance Redressal Officer, may file an appeal to the first appellate authority within thirty days from the expiry of the stipulated time limit or from the date of the decision of the Public Grievance Redressal Officer: Provided that the first appellate authority may admit the appeal after the expiry of the period of thirty days but not exceeding forty five days if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.
- (iii) If the Public Grievance Redressal Officer does not comply with the provision of section 5, any person aggrieved by such non-compliance, may submit complaint directly to the first appellate authority which shall be disposed of, in the manner of a first appeal.
- (iv) The first appellate authority may order the Public Grievance Redressal Officer to give an opportunity of hearing and redressal to the complainant within the period specified by it or may reject the appeal.
- (v) A second appeal against the decision of the first appellate authority may be filed before the second appellate authority within thirty days from the date of the decision of the first appellate authority: Provided that the second appellate authority may admit the appeal after the expiry of the period of thirty days but not exceeding forty five days, if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.



- (vi) An aggrieved person may file an appeal directly to the second appellate authority, if the Public Grievance Redressal Officer does not comply with the order of first appellate authority passed under sub-section (3) or the first appellate authority does not dispose of the appeal within the stipulated time limits and it shall be disposed of in the manner of a second appeal.
- (vii) The second appellate authority may order the Public Grievance Redressal Officer or the first appellate authority to give an opportunity of hearing and redressal to the complainant or dispose of the appeal, as the case may be, within the period specified by it which in any case will not exceed thirty days or may reject the appeal.
- (viii) Along with the order to give an opportunity of hearing and redressal to the complainant, the second appellate authority may impose a penalty on Public Grievance Redressal Officer or any other Public authority or the first appellate authority in accordance with the provisions of section 8.

## **7. Implementation of ARAP**

Implementation of Resettlement Action Plan mainly entails assistance/compensation to be paid for affected structures; Rehabilitation and Resettlement activities. Implementation plan has been spread over a period of six months. No civil works will be initiated unless R&R assistance and compensation for houses are disbursed to entitled persons as per Entitlement Matrix.

Implementation of ARAP in this project consists of (i) compensation for the structure and (ii) Resettlement assistance to two families.. As per the conditions in the civil works contracts, land free from all encumbrances is to be made available to the contractors for the contract package. Time frame for implementation of ARAP is synchronized with the proposed project implementation (construction schedule) in a way that commencement and progress of civil works is not jeopardized.

### **7.1. Implementation Procedure**

The implementation procedure includes the following:

1. Social specialist of BUIDCo will prepare a micro plan based on this ARAP and same will be approved by BUIDCO.
2. In case PAPs do not have a bank account, the social specialist will help them open a joint account (along with the spouse) in a nearest bank.
3. The amount as calculated in the micro plan will then be transferred to the bank account of PAPs.

The social specialist of BUIDCO will ensure that PAPs have purchased another house with the compensation and R&R assistance.

## 8. Indicative Resettlement Cost

The implementation of ARAP entails expenditure, which is a part of the overall project cost. The R&R budget, gives an overview of the estimated costs of the ARAP and provides a cost-wise, item-wise budget estimate for the entire package of resettlement implementation, including compensation, assistance, administrative expense, and contingencies. Values for compensation amounts and other support mechanism will be adjusted, based on annual inflation factor.

Around 5% of the total cost should be set aside for physical contingencies. Such type of contingencies may arise as a result of time overrun of the project or due to various other unforeseen circumstances.

The costs estimated under this SPS site mainly include structure cost and R&R assistance costs.

A consolidated overview of the budget and cost estimates are given below. The budget is indicative of outlays for the different expenditure categories. These costs are finalized after final verification by the implementing agency. Unit cost will be updated after recommendation of the Competent Authority. The budget (**Table 11**) includes item for compensation (structural loss), resettlement assistance and implementation cost and contingency.

**Table 11: Indicative Resettlement Budget**

Type of Impact	No. of HHs impacted	Provision as per entitlement Matrix	Amount	Total amount
Loss of house	2	Cost for structure,	110948.4 + 80548.03	191496.43
	2	Shifting Allowance	50,000	100,000
	2	Resettlement Allowance	50,000	100,000
		<b>Sub total</b>		<b>3,91,496.43</b>
Contingency @ 5%				19574.82
<b>Total</b>				<b>4,11,071.25</b>