



Completion Report For Implementation of Resettlement plan & ESMP of Bihar State Highway Project: Improvement/Up-gradation of Jahanabad-Ghosi-Islampur-Rajgir-Giriyak-Parwatipur Contract Package No. 4, SH-71, 85.20 Km: for Construction Supervision

Government of Bihar

(Bihar State Road Development Corporation Ltd)

**COMPLETION REPORT FOR IMPLEMENTATION OF
RESETTLEMENT PLAN & ESMP OF SH-71**



Fighting Poverty in Asia and the Pacific



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ABBREVIATION

ADB	Asian Development Bank
AIDS	Acquired Immune Deficiency Syndrome
AP	Affected Person
BOD	Biochemical Oxygen Demand
BPL	Below Poverty Line
BSR	Basic schedule of Rates
BSRDCL	Bihar State Road Development Corporation Ltd.
COD	Chemical Oxygen Demand
COI	Corridor of Impact
CPRs	Common Property Resources
DG	Diesel Generator
EA	Executing Agency
EIA	Environmental Impact Assessment
ESMP	Environmental and Social Management Plan
EMP	Environmental Management Plan
FIDIC	Federation International D'Ingenieur Conseil
Ha	Hectare
HIV	Human Immunodeficiency Virus
HMP	Hot Mix Plant
IEE	Initial Environmental Examination
IRC	Indian Road Congress
Km	Kilometer
LA	Land Acquisition
Ltd.	Limited
MEH	Minimum Economic Holding
MOEF	Ministry of Environment and Forests
NABL	National Accreditation Board for Laboratories
NGO	Non-Government Organisation
NH Act	National Highways Act, 1956
NO ₂	Nitrogen Dioxide
NOC	No Objection Certificate
NOx	Oxides of Nitrogen
NRRP	National Policy of Resettlement & Rehabilitation
PAF	Project Affected Families

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PDP	Project Displaced Person
pH	Negative log of H ⁺ activity
PIU	Project Implementation Unit
Pkg	Package
PPE	Personal Protective Equipment
Pvt.	Private
R & R	Resettlement and Rehabilitation
RO	Resettlement Officer
ROW	Right of Way
RP	Resettlement Plan
RSPM	Respirable Suspended Particulate Matter
SBEs	Small Business Enterprises
SC	Scheduled Caste
SC	Supervision Consultant
SES	Socio-Economic Survey
SH	State Highway
SO ₂	Sulfur dioxide
SPCB	State Pollution Control Board
SPM	Suspended Particulate Matter
Sq. mts.	Square Meters
ST	Scheduled Tribe
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
WMM	Wet Mix Macadam

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Glossary

Acre	A unit for measuring land area. (Acre equals 4840 Square Yards)
Hectare	A unit for measuring land area. (Hectare equals 10000 Square Meters).
Corridor of Impact	Width of corridor required for the construction of road, service lane, drain, footpath, access, tree plantation and for safety zone
Development Block	A number of villages grouped together form a Development Block.
Tehsil/Subdivision	A group of Blocks
Panchayat Samiti	Local Self-governing body at Block level is Panchayat Samiti.
District Collector /Magistrate	Administrative head of a District.
Divisional Commissioner	Administrative head of a division comprising a number of districts.
Panchayat	Elected local self-governing body at village level.
Poverty Line	A family whose annual income from all sources is less than a designated sum as fixed by the concerned State Govt. in which the project falls, will be considered to be below Poverty Line.
Sarpanch	Elected chief of a village (Legal)
Gair Khatedar	Includes allottees, holders of muafi lands
Jambandi Basic record of land rights	Basic record of land rights
Khatedar or tenant	According to Law, all land belongs to the State and all so-called landowners are tenants of the State. They are called Khatedars
Muafi Lands	Include lands attached with Temples, Mosques, Gurudwara, Churches etc.
Pucca	Cement, bricks or concrete build structure
Semi Pucca	Structures with tiles/ thatch roof/ brick cement wall
Kachha	Structures with stone/ mud wall/ thatch roof
Replacement Cost	Amount paid over and above compensation to enable PAP to buy land, house, or any such immovable productive asset.
Entitled Person	A person adversely impacted by the project and is entitled to some kind of assistance as per the project entitlement framework
Titleholder	A person who possess legal documents towards the claim for the property
Grievance Redress Cell	A cell set up by the project authority headed by District Magistrate/or his representative to look in to grievances of a PAP

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1. INTRODUCTION:

Despite vast reserves of natural resources and available manpower, the state could not develop to the extent, as it should have, due to lack of transport infrastructure, and vastness of the geographical area. It is evidently clear from the factor that Bihar has about 21.77 km of roads per 100 sq.km, as against the national average of 38.33 km per 100 sq. km. The road network is seriously deficient both in the quantum network connectivity as well as in riding quality of the roads, mainly the state highways, district roads and village roads. Due to lack of road connectivity, vast areas of the state are inaccessible, resulting in major population chunks, generally in far flung areas of the state having remained under-developed and devoid of educational and health facilities and employment opportunities.

Bihar is a land-locked state in the Eastern part of the country having a geographical area of about 94,163 sq km. It is bounded by the states of West Bengal to the East, Uttar Pradesh to the West, Nepal to North and Jharkhand to the south. The population of the state stood at over 82.9 million (2001) of which about 10 percent is urban. The Bihar plain is divided into two unequal halves by the river Ganga which flows through the middle from west to east. The state has three main seasons: winter (December and January), summer (April through June), and the monsoon season (June through September). During the winter average temperatures range from 10° to 27°C. Summers are hot, with an average temperature varies between 40°C to 45°C. During the winter season temperatures average is about 5° to 10°C. Bihar receives an average annual rainfall of about 1205 mm, of which 90 percent falls during the monsoon season.

To overcome this acute bottleneck in the overall development of the state, the Government of Bihar (GoB) has negotiated with the Asian Development Bank (ADB) for a loan (**loan no.: 2443-IND**) for upgradation, rehabilitation and strengthening of state roads, mainly state highways, in the state to improve the connectivity and upgrade the infrastructure in transport sector to provide impetus to developmental activities.

Thus with ADB assistance under BSHP-I, 9 stretches of existing state highways with total length of 826 kms., were identified for rehabilitation & up gradation in the state of Bihar falling in the district of the Aurangabad, Araria, Arwal, Chapra , Darbhanga, Gaya, Jahanabad, Katihar Motihari Muzaffarpur, Nalanda Nawada , Purnia Siwan, Supaul and Vaishali. These nine roads have been grouped in two packages namely “Package1- North Bihar” and “Package2- South Bihar”. The subprojects included in **Package 4- North Bihar** are as described table below

Sl.No.	SH No.	Name of the Subproject Road	Length in Km	District Covered
1	SH 68	Shivganj-Baidrabad	78	Aurangabad,Arwal
2	SH 69	Dumaria-Ranitalab	153	Gaya,Jahanabad,Patna
3	SH 70	Gaya-Rajauli	58	Gaya,Nawada
4	SH 71	Jahanabad-Parwatipur	91	Jahanabad, Nawada
5	73	Siwan- Shitalpur	88	Siwan, Chapra

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6	74	Hajipur-Areraj	85	Vaishali, Muzaffarpur, Motihari
7	75	Darbhanga-Madawpur	47	Darbhanga and Madhubani
8	76	Araria- Bhaptiyahi	121	Araria, Supaul
9	77	Kursela- Forbesgunj	105	Katihar, Purnea, Araria
Total length			826	18

The Bihar State Road Development Corporation Ltd., Govt of Bihar has undertaken the work of widening and strengthening of state highways from single lane to two lane carriageway. The proposed alignment is mostly concentric widening for all road sections. Sufficient considerations, within the limitation of technical and economic requirement, have been given at design and construction stage to minimize the adverse impacts on the community and surrounding environment. The EMP and RAP prepared for the projects are being implemented to mitigate or minimize negative impacts caused due to the projects. **The present report pertains to implementation of resettlement plan and ESMP compliance of “Gaya-Rajauli” road subproject.**

2. BRIEF DESCRIPTION OF SUB-PROJEC:

The Bihar State Road Development Corporation BSRDC, Government of Bihar is presently implementing Bihar State Highway-I project under Asian Development Bank assistance to strengthen and rehabilitate the deteriorated state roads and upgrade some newly declared state roads to provide reliable road transport services in the state. The subproject (SH-71) road section starts from Maniama in the district of Jahanabad and ends at Parwatipur in the district of Nawada, Total length of this road section is 85.20 kilometers. Some of the villages falling on the road are Ghosi, Katauli, Islampur, Ankuri Bazar, Satya Nagar, Adampur, Satua and Parmanadpur. The subproject road was single lane with 3.5 meter carriageway and having a right of way (ROW) ranging from 20 to 25 meters. The condition of the pre-existing road was very poor. There are villages in regular interval with many squatters and encroachers living or doing business along the road

The Bihar State Road Development Corporation Ltd awarded the work of consultancy services for the Construction Supervision of the Civil Works Contracts of BSHP-I (Package-I-North Bihar), Project under the loan assistance of ADB Loan No.2443-IND, for up-gradation and construction of four State Highway Roads to URS Scottwilson India Ltd.

Name of road	Length in Km	Width of proposed road + shoulders	Package for Civil Works	Name of Contractor
Jahanabad-Parwatipur	85.20	7.00 m. +2 x2.5 m	Package-4	M/s C&C Construction Limited

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The works in package-04 includes widening of existing carriageway to two lanes and improvement of shoulders with side drains and rehabilitation of bridges and cross drainage structures.. Diversions at Bridge sites were provided for smooth and safe movement of traffic on the road. Associated works include construction of Drainage and Protection Works improved, Traffic safety features, Road Signs and Road markings, Environmental mitigation measures, Retaining/Breast walls etc. Use of modern equipment and construction practices were adopted during construction.

2.1 Contract Details:

Name of Work	:	Improvement/Upgradation Jahanabad-Ghosi-Islampur-Rajgir-Giriyak-Parwatipur Road Contract Package No.4 SH-71
Contract Agreement No.	:	14-1CB/2008-2009 Dated 24 November 2008
Date of Commencement	:	6-Jan-09
Contact Period	:	900 days
Contract Amount	:	Rs. 159,57,13,280
Approved Amount of Variation	:	Rs. 19,82,50,299 (12.42% of the contract amount)
Date of Completion (as per Contract agreement)	:	24-Jan-11
Funding Agency	:	Asian Development Bank
Loan No	:	2443-IND, BSHP-I Project
Contractor	:	M/s C&C Construction Limited, Plot No.70, Sector-32, Gurgoan-1220001
Consultant	:	Scott Wilson India Private Limited New Delhi in Association with Theme Engineering Services Private Limited, Jaipur

3. PROJECT OBJECTIVE:

The subproject can be viewed as boosting economic growth and poverty reduction which will bring substantial social and economic development in the region. The main objective of the improvement are to improve the regional, as well as inter and intra state transport flows, and in doing so improving access to services, and making the state attractive to developers and investors. The proposed State Highway Project will foster the economic growth in region through better connectivity to improved transport facilities with emphasis on promoting commerce and on improvement of livelihood for the poor.

Primary focus of the Project is to improve rural connectivity and facilitate all-round development in

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educational & health facilities and trade activities within the State for economic growth. It is expected that the sub-projects will upgrade facilities, which at present are in poor condition. The up gradation of State highways would provide enable rural population's easy access to essential socio-economic services such as basic medical care, administrative services, schooling and markets directly enhancing the health conditions, education, employment opportunities, income generation and ultimately general welfare of the people.

4. OBJECTIVES AND SCOPE OF SERVICES:

The objectives of the environmental and social monitoring is to ensure that the concerned Resettlement Plan (RPs) and Environment and Social Management Plan (ESMP) is implemented on a timely and effective manner to confirm that the envisaged purpose of the project are achieved and results in desired benefits to the target population without adversely affecting environmental resources. To ensure this, it is essential that an effective monitoring system be designed and implemented. The recommended environmental and social monitoring plan for the Project will not only be used to ensure the timely and effective implementation of the mitigation measures but will also serve to establish a data base for future reference.

In this context, the purpose of this assignment was to:

- a) Assess whether the implementation of the Resettlement Plan (RP) is as per the applicable R&R Policy and the RPs,
- b) Monitor the schedules and achievement of targets,
- c) Evaluate whether the outcomes of social development objectives of the project are being achieved, and
- d) Monitor the implementation of Environment and Social Management Plan (ESMP)

The Scope of Work as outlined on the basis of contract documents includes the following:

1. Monthly and quarterly monitoring of the implementation of the RPs for the first year of services, and if required, extended to further duration as decided by the RCD and undertaking quarterly evaluation for the 2nd and 3rd years besides annual, mid-term and end-term evaluation of the R&R components of the project.
2. Computerization of the available R&R database to monitor the progress of the R&R activities against the targeted performance indicators.
3. Developing formats for monitoring on the basis of indicators for all the R&R activities included in the RPs and other required indicators.
4. Collection of data from the secondary and primary sources, which shall include field visits and interviews with a section of the Affected People (APs).
5. Monthly and quarterly monitoring of the implementation of the RP for the project would include but not limited to monitoring the following:
 - Appointment of the required staff (quarterly only),
 - Training (quarterly only),
 - Consultation and participation of the people (quarterly only),
 - Inclusion of the vulnerable groups in the decision making process,

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- Verification of the APs and distribution of the identity cards,
 - Distribution of assistance to the affected families (AFs)
 - The overall work of NGOs appointed for the implementation of the RPs
 - Financial and physical progress
 - Any deviation from the RPs (quarterly only)
6. Annual and mid-term evaluation of the R&R components of the project would include but not limited to the following aspects:
- The process of implementation of the RAP,
 - The process of consultation,
 - Transparency,
 - The process of delivery of the R&R services within the timeframe,
 - The grievance redressal processes,
 - The processes related to the District Level Committees (DLCs),
 - The process of disbursement of compensation and assistance,
 - The processes of rehabilitation, which includes restoration of livelihoods,
 - Training of staff of PMU and PIU of BSRDCL and the APs
 - Institutional arrangement and capacity to implement the RPs
7. End-term evaluation of the R&R components of the project would include but not limited to the following aspects:
- Evaluate whether the goal of the applicable R&R Policy to improve or restore the livelihood of the APs has been achieved,
 - Evaluate consultation and participation of the people enabled the implementation of the RPs,
 - Evaluate how the vulnerable groups benefited from the project,
 - Evaluate the impact of the project specific measures to address the issues of (a) the quality of life of the APs, (b) health and hygiene, (c) gender sensitivity and empowerment and (d) sexually transmitted diseases (STDs) including HIV/AIDS.
8. People's perception about the processes adopted for implementation of the RP including about the
- a) compensation and / or assistance received,
 - b) grievance redressal committees,
 - c) the district level committees,
 - d) the services of the NGOs and BSRDCL
9. Monthly and quarterly monitoring of the implementation of the mitigation measures suggested in ESMP
10. Ensuring that applicable clearances and approvals from the respective authorities for construction and related activities have been obtained by contractors;

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11. Monitoring whether execution of civil works is in conjunction with the ESMP;
12. Suggesting corrective actions regarding specific environmental safeguards measures
13. HIV/AIDS and human trafficking awareness programs for labour
14. Dissemination of information at worksites on risks of sexually transmitted diseases and HIV/AIDS
15. Ensure no employment or use of children as labour
16. Ensure equal pay for equal work to both men and women
17. Implementation of all statutory provisions on labor like health, safety, welfare, sanitation, and working conditions.

5. INSTITUTIONAL ARRANGEMENT:

The Bihar State Road Development Corporation Limited (BSRDCL), an Executing Agency (EA), has a Project Management Unit (PMU) and Project Implementation Unit (PIU). The PMU is headed by Managing Director (MD) with General Managers and Deputy General Managers (DGM) assisted by Managers. The Project Implementation Unit (PIU) is headed Deputy General Managers (DGM) assisted by Managers and Construction Supervision Consultant.

The PIU and consultant monitored the project compliance with the ESMP, NOC conditions and applicable laws and regulations. For resettlement activities, PMU did the overall coordination, planning, implementation, and financing. The PMU created a Resettlement Cell (RC) within itself with designated Resettlement Officer (RO) at the rank of Executive Engineer (EE) and required support staff for the duration of the Project to ensure timely and effective planning and implementation of resettlement activities. The RO was assisted by the respective Assistant Resettlement Officer (ARO) in PIU for planning and implementation of resettlement activities in the project. An Experienced and well-qualified NGO was engaged to assist the PIUs in the implementation of the RP. The NGO played the role of a facilitator and worked as a link between the PIU and the affected community. NGO assisted AP in income restoration by preparing micro plan and guiding to access into various ongoing government development schemes and agencies providing financial assistance and loan.

From BSRDCL side Mr. Surya Mani Singh Dy. General Manager was monitoring the overall implementation above activities. The contractor was also asked to nominate a person for implementation of environmental and social management plan on site. The input of environmental and social expert of supervision consultant was intermittent and they visited the site as and when required.

6. IMPLEMENTATION OF RESETTLEMENT PLAN (RPs):

Among the large array of issues that could be formed as the objectives and scope of the project, the implementation and monitoring of implementation of Resettlement Plan, is the prime one, which may provide the right platform for smooth implementation of project. As per TOR, the activities, the RPs was prepared in accordance with ADB's Policy on Involuntary Resettlement, and the R&R implementation was carried out by Pragati Sansthan in joint venture with AMAR-CHHAVI CONSTRUCTION & CONSULTANCY PVT. LTD. as per the institutional arrangement agreed in the RPs, which have been executed as per ADB's Policy and monitor the implementation of resettlement plan (RP).

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For successful implementation of resettlement action Plan, monitoring of its progress is indispensable, which is based on the provisions made in approved Resettlement Plan and in accordance with the existing laws of Bihar Govt. and ADB Policies etc. The implementation of the Resettlement Plan had been closely monitored by the Consultant and suitable steps suggested to NGO to resolve any likely impediments, coming in the way of proper implementation of plan to the satisfaction of the affected people. A very close interaction was maintained by the Consultants with affected people / communities and the implementing agency for trouble free implementation of the plan.

After completion of resettlement process, this Completion Report on RP implementation is being prepared to give details of the actions taken during the resettlement implementation, the methods and personnel used to carry out the assignment, withdrawal plan and a summary of support/ assistance given to APs and details of left over work, if any.

7. THE EXECUTION OF RESTTLEMENT ACTION PLAN:

Implementation of RP consists of several resettlement activities. These includes deputation of a team of efficient professionals and sub-professionals under Team Leader in the project site for execution of RP implementation, interacting with diverse stakeholders including APs, who are directly or indirectly associated with RP implementation of relevant committees at district level etc.

The following key RP implementation activities done and monitored:

7.1 Updating RP and translation of the RP summary in local language: The purpose of updating the RAP report is to include APs left over in inventory list and apprise/ update the impacts, which was undermined or remaining at DPR stage. Here for the project, the updating of RAP has been done and impacts has been re-assessed and documented taking the help of key informants and Village Head. The summary of the RP was translated in local language and issued to village leaders and stakeholders.

7.2 Updating, Preparing and Managing database of Affected Persons for socio-economic monitoring.

Socio-economic information of all the APs has been collected as a part of preparation of socio-economic database of affected person for all the sub-project. Also collect data as required to help PIU to monitor and assess progress. Socio-economic status of all the Affected Persons has been reviewed and monitored as required helping PIU to monitor and assess progress.

7.3 Identification and verification of the APs and other Assets and affected properties.

The final list of affected people and assets was upgraded on the basis of final assessment/ micro plan at the time of verification of APs and assets. The remarks and observation, made by the client in the past, were also taken into consideration, while updating the list of APs. According to updated list the number of Affected Persons and Assets are as below

Affected Buildings: 156 Nos.

Entitled Families: 156 Nos.

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7.4 Listing of Entitled persons and their Category:

The Affected Persons (APs), who have opted for cash compensation as per revised micro plan. Those 156 APs, whose structures were fully affected, has been put under ‘Cheque Schedule’ and they will receive the payment through open cheques of compensation as per the entitlement. The details of the APs, who are 156 in number, are computed in the table below:

The Number of Entitled Persons and their Entitlement Category

Category	As per Approved Micro Plan	No. of APs added by Supplementary Micro Plan	No. of AP deleted	Total APs as per Final revised Micro Plan
Squatter	59	00	00	59
Encroachers	97	00	00	97
Vulnerable	149	00	00	125
Non-vulnerable	07	00	00	10

7.5 Preparation/ updating of Micro Plan at sub-project level and after the approval of the micro plans, issue of identity cards to the entitled persons by the NGO:

Micro planning is the next step after verification to categorize affected APs for endow with the entitlement. Census and Socio-economic data with assistance details incorporated in micro plan of different category of APs as per his entitlement in R&R policy.

Micro Plan the base document for the entire implementation process was prepared taking into consideration the type of loss of structure, replacement cost, shifting allowance, special assistance to vulnerable APs and relevant training programs based on the individual skill assessment for various income generation schemes. The basis for micro plan preparation was the verification data and affected structure valuation. The assistance amount for structure comes from the valuation on replacement cost. The replacement cost of the structure was calculated based on the BSR rates.

The methods in arriving and finalizing the Micro plan was based on the identification and verification of APs, cost calculation of structure and assistance as per entitlement matrix.

For verification, 100% census survey was undertaken. Personal interview with APs and physical verification of the structure was undertaken. In addition the details socio economic information was collected.

As per approved Micro Plan the total no. of APs was 156..The details of APs, who received the compensation payment through open cheque and total compensation amount is delineated in the table below:

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The Summary of Assets Valuation and Compensation Payable

Sl. No.	Assistance (including kiosks)	Compensation Structure	of	Total in Rs
1	764000	6254738		Rs. 70,18,738/-

Micro plan for NTHs has been developed to provide baseline information of APs and assistance details for different categories. Information incorporated in Micro plan.

7.6 Develop project level plan for R&R in consultation with the affected persons and communicate same to BSRDC:

The next main issues and activities was Opening Joint Accounts; and the documentary requirements for opening of joint accounts. NGO representatives assisted in opening of joint account of each AP for deposit of assistance cheques.

Several public consultations were held at the village level / block level, district level and the state level for information dissemination of the project to the project affected people. The purpose was to have public participation into the project and to incorporate the perceptions of the stakeholders in the implementation of the RP.

The implementation stage public consultations focused mainly on the mapping of the social issues related to the project stretch and were targeted to understand the concerns and aspirations of the people from the road project. Public consultations have also facilitated to make a rapport to affected APs along the project area. Focused Group Discussions (FGDs) were held with women, SC, ST and other vulnerable and non-vulnerable groups. This assisted in formulating a RP, which is more responsive to the needs of the community and the affected groups. Besides this rapid assessment technique was used to assess STD/HIV (highway related diseases) vulnerability of different population groups at specific locations of the project corridor so as to suggest mitigation measures, action plan for addressing the target groups and perform roles and responsibilities in implementation of the action plan.

The objective of the district level and block level consultations was to build awareness about the project amongst the people, district level administration, local NGOs and to enlist their support in implementation of the project.

The issues and concerns that emerged as a result of this consultative process include:

- If the traffic on the road would move at very high speeds, the risk for accidents would be very high especially for slow moving traffic, pedestrians and the cyclist, the issue was particularly highlighted in a big way at the sections where the settlement is spread across both the sides of the road, particularly in Attasarai and Islampur or where the village boundaries cut across the road or where the schools are located on one side of the road and settlement on the other
- majority of the project affected persons in the stretch were poor non-titleholders and their concern was that whether the government would do something for their welfare as they do not have any alternative source for their livelihood

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- when would they be required to shift and where will they go as they do not have any alternative, their concern was that if they are relocated to places away from the highway, they would lose opportunities for small business what they get now as a result of the highway;
- The consultations were centered around formation of Shelf Help Groups (SHGs)
- While finalizing the locations for meeting, the consultation with affected people and village head were also made so that the opening of Joint Account could be take place smoothly.

7.7 Preparation and distribution of ID cards of entitled persons:

The Identity Cards of APs for loss of properties have been prepared for entitled APs for the projects road under implementation. Identity card explains the basic information of each AP and total assistance approved in micro plan. Photograph of AP was taken by NGO in which every AP has made to stand with a slate board having the name of AP, ID number, chainage etc. written on that. The ID cards were prepared in two copies of each AP, one copy for distribution to AP and another was kept with PIU for verification during the disbursement of assistance. The ID card was distributed to all APs before disbursement of assistance.

7.8 Opening of bank account for eligible APs:

The main issues and activities, which needs to be accomplished before payment of compensation after getting the ID Card, is the procedures on Opening Bank Accounts; and the documentary requirements for opening of bank accounts. The NGO representatives assisted in opening of bank account of each AP for deposit of assistance cheques. The new bank account was opened for all 135 APs as they do not have any bank account by their name in any bank.

7.9 Valuation of Affected Properties and Preparation of Compensation Schedule:

The basic principle behind the valuation of affected properties for compensation purpose is to take care of the concerns that none of the affected people be made worse off compared to the pre-project situation in which he/she was in before when the asset was acquired. In the backdrop, the cost estimation was done by a competent value by applying appropriate methods for preparation of Compensation Schedule. The detailed methodology and procedure, followed in cost estimation of the properties to arrive at the replacement values of various building has been well defined in the approved RAP report.

All 156 non-titleholder APs have received their assistance/ compensation amounting to Rs. 7018738/- and relocated successfully outside ROW. After the disbursement of assistance NGO and Manager (Tech) verified the structures. It was ensured that APs used assistance paid is being utilized for relocation and livelihood activity. Vouchers and package wise list of vouchers from all the APs have been received and deposited to PIU-BSRDCL.

7.10 Preparation of Supplementary Compensation Schedule:

There was no need to prepare the supplementary compensation schedule as there was no addition of APs in micro plan

7.11 Training Programme for Income Restoration Activities:

The training of APs was an essential component in the implementation of the R&R activities. The objective being to upgrade/enhance the skills of the APs so that they may utilize these skills in

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income generating or any other economic activity so that the quality of life or the socio-economic condition of the APs is improved.

Training program has been organized in different location of project area in scheduled program to train the affected persons. NGO played active role in coordination of the training program ranging from transporting the APs to the training centre follow up of training program etc. Male and female both were trained in the training program. Each entitled AP has got training toolkit, that contained one bag, Pen, Pad, Training book and Training material to start the income earning/enhancing pursuits. Each AP who attended training program has been distributed Training certificate also. Breakfast, lunch and transport facility has also given to each AP.

7.12 Dispute/grievances resolution:

In the course of RP implementation for this project, the Consultant and the NGOs received few grievances from affected people and their representative, but it was amicably redressed at the local level itself by Consultant and NGOs. The main grievances and disputes, which arose during the course of implementation of the resettlement and compensation programme, are as follows:

- Disagreements and or misunderstanding on asset valuation (e.g.- inadequate compensation);
- Successor and the family issues resulting into ownership dispute or dispute share between in heirs or family; and
- Disputed ownership of given assets (two or more affected individual(s) claim on the same).

8. IMPLEMENTATION OF ENVIRONMENT AND SOCIAL MANAGEMENT PLAN (ESMP):

The road construction project can cause environmental impacts that are short, or long-term, and beneficial, or adverse, in nature. The project activities such as clearing of vegetation, felling the trees along the road, leveling, cutting, opening of new borrow areas/quarry, construction of culverts & bridges, setting up of labour camps, installation of construction machinery, generation of waste from construction/labour camp and construction activity and other related operations are bound to cause environmental impacts (positive/negative). The impact, due to road project on environment, can be minimized, if suggested mitigation measures are adopted during design, construction and operation phase.

The work of the Detailed Project Report (DPR) preparation was assigned to Gherzi Estern Ltd. It was envisaged that the "Jahanabad and Parwatipur" road section will have major positive impacts on socio-economic environment and quality-of-life particularly in Jahanabad and Nawada districts. The benefits from reduction in travel time, fuel consumption, wear and tear of tyres, lower vehicle operating cost, reduction in accident rate due improvement in road geometry and by provision of road furniture etc. constitute an important element of the economic benefits.

The implementation of the ESMP had been closely monitored by the supervision Consultant and suitable steps were suggested to contractor from time to time to avoid, minimize or rectify adverse impact of construction activity on surrounding environment and habitations. In the first progress review meeting itself it was conveyed to the Construction Contractor that they are responsible for undertaking all duties and works assigned in the construction contracts, including all specified recommendations and conditions in this ESMP. The Contractor will work closely with the Contract Engineer to ensure that works are constructed to the required standard employing good engineering

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and environmental practices. The status of ESMP implementation during execution of project is described below

9. ENVIRONMENTAL CATEGORY OF SUBPROJECT:

The subproject was categorized as Environmental Category “B”, according to ADB’s Environment Policy (2002).

10. ENVIRONMENTAL PERFORMANCE INDICATORS SELECTED FOR THE SUBPROJECT:

Monitoring involves measuring, tracking, evaluating and reporting compliance with action items and outcomes specified in the EMP. An effective system will include performance indicators or targets that can be tracked over defined periods. The environmental performance indicators are physical, biological and social characteristics identified as most important in affecting the environment at critical locations all along the sub-project corridors. For effective monitoring, selected environmental parameters have been identified as indicators which may be qualitatively and quantitatively measured and compared over a period of time in order to assess/ensure the compliance of EMP. The parameters identified as performance indicators are:

- Compliance with Environmental and Social Management Plans.
- Compliance to state/national environmental regulations.
- Monitoring of ambient air quality, water quality and noise levels and comparison with baseline environmental quality and state/national standards.

11. APPROACH AND METHODOLOGY ENGAGED FOR ESMP MONITORING:

Government of Bihar had commissioned the services of Scott Wilson), in association with Theme Engineering Services Pvt. Ltd. to supervise the construction activity including implementation of Environmental Management Plan by Contractor.

Monitoring schedules and reporting formats were prepared and issued to contractors by SC. Constant monitoring of EMP implementation on under construction projects was carried out by SC and PIU.

Concerned staff of SC visited the constructions sites regularly and reported the issues/problems related to environment and non-compliance of measures as given in EMP to Resident Engineer/Team Leader. Necessary directions, in case of non-compliance, were given to the contractors on the site and through the writings about the procedures to resolve problems/issues or requirements.

The supervision consultant submitted periodic progress report on implementation of ESMP to BSRDC. The environmental information captured in these reports includes environmental monitoring status of construction sites, pollution control measures being adopted, and measures for workers safety at construction site and camp site etc.

12. COMPLIANCE OF NATIONAL /STATE /LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS:

BSRDC and Civil works contractors obtained permissions required under the existing statutory environmental regulations. These includes permission for tree cutting from forest department, permissions from the Department of Mining, Directorate of explosive, Consent to establish and

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operate construction Plants/Machinery/Equipment such as Hot Mix Plants (HMP), Wet Mix Macadam (WMM) Plant, Stone Crushers, Concrete Batching Plant, DG sets etc. The summary of permission obtained for the projects are given in table below

Statutory Requirements	Compliance Status
Approval for Tree Cutting	Tree cutting work completed after obtaining permission from forest department.
Consent to establish and operate a) HMP 120 TPH b) WMM 100 TPH c) Batching Plant 30 cum/hr	Consent to establish HMP, WMM and Batching Plant obtained from SPCB.
Consent to operate DG sets	Included in consent of HMP, WMM Plant and Batching Plant.
NOC for Fuel Station	Obtained
PUC Certificates for contractors vehicles	PUC certificates available with contractor.

13. ESMP COMPLIANCE STATUS:

BSRDCL, through it's PIU and environmental expert of SC strictly monitored the implementation of environmental and social management plan (ESMP) through regular review meetings held with the environmental experts of supervision consultants and by visiting the construction sites. For effective supervision of implementation of these ESMP, the supervision consultant and contractor had designated their existing site staff for environmental coordination during day to day activity.

The mitigation measures identified during environmental assessment had been incorporated in design and were implemented during construction. There was no land acquisition involved in this project. The Contractor was asked to have written agreements with land owner for all temporary lands acquired for the construction camps, borrow areas and other project related ancillary activity. Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works was removed. Trees identified under the project were cut after getting approval from Concerned Forest Department or have been saved.

No debris or other unsuitable excavated material is laying along the road as same had been utilized for the paving of cross roads, access roads, paving works in construction sites and campus, temporary traffic diversions, haulage routes and filling in low laying areas etc. Adequate precautions were taken by Contractors not to dump any spoils or unsuitable excavated material in any water course, on agricultural land, and natural habitat like grass lands or pastures.

Contractor deployed the water tankers to sprinkling water on unpaved surfaces to control dust particularly in sections passing through the settlement areas or habitations. The frequency of water sprinkling was regulated depending on weather conditions and the local requirements. The construction camps were located away from the habitation. There were sufficient facilities in Camp to ensure that the workforce are provided with an acceptable standard of living and comfort during their stay in camp. Sufficient quantity of potable water supply was there in every workplace/ labour camp site at suitable and easily accessible places and such facilities are regularly maintained. The contractors provided garbage bins in the camps and these were regularly emptied. Labor/supervisor camps were also provided with adequate and appropriate facilities for water supply, sanitation,

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disposal of sewage and solid waste. At every camp, first aid kits were available and fire extinguishers were installed at readily accessible places. The contractor was advised to rehabilitate temporary land acquired for execution of project and he did the same. Proper mitigation measures like warning signs, barricading, flags and ribbons were taken according to IRC: SP: 55-2001 during construction phase of the road for safety of traffic and pedestrians.

The environmental and social management plan compliance status was in general satisfactory. However there were some areas such as safety arrangements, traffic management and usage of personal protective equipment (PPE) by the construction workers which were lacking effective implementation and there was scope for further improvement. The environmental expert of BSRDCL &SC instructed the civil work contractors to take appropriate mitigation actions to improve implementation of traffic and worker safety measures and dust control measures by carry out regular water sprinkling in dust prone areas, and to ensure that all workmen and staff employed on site & Construction camp use safety gear provided to them.

14. MONITORING OF ENVIRONMENTAL RECEPTORS/ ATTRIBUTES (E.G. AMBIENT AIR, SURFACE WATER, GROUND WATER, NOISE ETC.):

Besides regular on site monitoring for the implementation of Environmental Management Plan, air quality, water quality and noise levels were required to be monitored to check any adverse impact due to construction activities and to ensure that plants and machineries working on project do not pollute the surrounding environment. The monitoring of environmental variables was carried out as per the agreed Environmental Monitoring Plan.

The environmental attributes to be monitored include the air, noise and water quality parameters at the proposed construction sites in the sub-project corridors. In air quality the parameters monitored include PM₁₀, PM_{2.5}, SO₂, NO_x, CO and Pb. The water quality parameters for outlet water of camp include temperature, pH, BOD, COD, SS, oil and grease etc. Drinking water samples were also collected and tested to ensure the parameters compliance with IS: 10500.

The monitoring of components such as ambient air quality, water quality and noise level was carried out by the civil work contractors as per the agreed monitoring plans. The contractor hired the services of M/s Microtech Systems and Services, Dhanbad, Jharkhand to monitor air, water and noise parameters. M/s Microtech Systems and Services have been accredited by NABL. Contractor asked the agency to collect samples from the site as and when required. The values of all the air quality parameters, water and Noise levels, observed at all the sites, were within the permissible/regulatory limits.

15. ANY OTHER ENVIRONMENTAL ASPECTS, IMPACTS OBSERVED DURING IMPLEMENTATION WHICH WAS NOT COVERED EARLIER:

There is no such environmental aspect, which was not covered earlier.

16. COMPLAINTS RECEIVED FROM PUBLIC ON ESMP IMPLEMENTATION:

BSRDC has established a mechanism to receive and facilitate the resolution of concerns and grievances due to project impacts. However no complaint on environmental issues was received from public or any other quarter during the execution of project

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17. MONITORING AND REPORTING:

The Project was designed, constructed and monitored in compliance with the environmental laws and regulations of the Country, laws of Bihar Govt., ADB Guidelines on R&R issues, ADB's Environment Policy (2002) and the EARF. Semiannual progress reports have been submitted to ADB on the implementation of the ESMP's, and measures under the IEE, and the environmental monitoring carried out as a regular part of Project Implementation for review and disclosure in accordance with ADB's Public Communications Policy (2005).

BSRDCL and supervision consultant through environmental and social expert strictly monitored the implementation of RP and environmental and social management plan (ESMP). Monitoring of the RP implementation are critical activities in involuntary resettlement. Monitoring involves periodic checking to ascertain whether activities are carried out according to the RP and in accordance with the existing and ADB Guidelines etc. It provides the necessary feedback for project management to keep the programme on schedule. The close interaction with affected people/ communities was maintained to keep the implementing agency trouble free during implementation of the plan. There was a good coordination among social and environmental staff of BSRDCL, supervision consultant and designated environmental officer of contractor. Meetings were held by BSRDCL with supervision consultant, contractors and NGO for reviewing the progress and to devise corrective measures.

18. LESSON LEARNT/SUGGESTIONS:

- Timeline of EA to complete the work of R&R. EA wants NGOs to remain at site till contractor fully complete their CG work.
- The CPR construction must be at least started on time so any issue on relocated site can be handled by NGO during mobilization period.
- NGO TOR refers for lump- sum contract; however its activities are dependent on RO, approvals at different levels and the contractors for construction of CPRs. The delays caused due to such reasons should be incorporated in the TOR and should be modified/ amended to incorporate these issues.
- The Monitoring by HQ on R&R is not done physically. There should be regular visit from HQ to monitor and assess the progress.
- The execution of training programme shall be indicated in the RP. Its payment mechanism and modality of payments.
- There should be regular capacity building of the ROs and sensitized towards their roles and responsibility and positive impacts on R&R. The experience of different ROs can also resolve many issues faced at site and at same time monitoring can be done on implementation.
- More emphasis and priorities were given to construction deadlines over environmental concerns.
- In case of intermittent input of Environmental Expert provision of continuous input of environmental sub-professional shall be there in supervision consultants staff to supervise day to day environmental compliance where numbers of projects are grouped in one package.
- It should be mandatory for contractor to have an environmental expert in their construction crew.

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- All management measures of the Environment and Management plan shall be deemed to be incidental to work unless otherwise provided in the BOQ. No separate payments shall be made for implementing these measures.
- Environment-Protection Trainings shall be organized at construction sites on specific topics to convey knowledge on environmental protection during construction. The contractor shall ensure that his staff including engineers, supervisors and operators, workers attend the training sessions organized by the Engineer/ PIU.
- There should be some penalty system based on type of Infringement. The compliance framework must be clear with specific definitions of infringement/ non-compliance with environmental requirements. The IPC shall be processed only after statutory compliance by Contractor and an Environmental compliance certificate issued by designated environmental officer of the engineer stating compliance status of measures / works stipulated in the EMP shall be submitted by the contractor along with the IPC.
- There should be some provisions in contract to reward the contractor for better performance, less non-compliance notifications. This will become a driving force to motivate him to work in environment friendly manner.
- The Engineer shall issue substantial completion / works completion certificate only after verifying and certifying that clean-up operations and rehabilitation works have been completed satisfactorily.