



**Dedicated Freight Corridor Corporation of India Ltd.**

**DRAFT ENVIRONMENTAL ASSESSMENT**

**FOR**

**PILKHANI- SAHNEWAL SECTION**

**OF**

**EASTERN DEDICATED FREIGHT CORRIDOR**

**October 2014**

**Prepared By**



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## Executive Summary

### 1. Introduction

Ministry of Railways established “Dedicated Freight Corridor Corporation of India Limited (DFCCIL)” as a Special Purpose Vehicle for construction, operation and maintenance of the dedicated freight corridors. This is to undertake planning & development, mobilization of financial resources and construction, maintenance and operation of the dedicated freight corridors. DFCCIL was incorporated as a company under the Companies Act 1956 on 30<sup>th</sup> October 2006. Mumbai-Delhi and Mumbai-Howrah route have a current capacity utilization of more than 140%. This has led to the saturation of the Railways system in terms of line capacity utilizations on these corridors, which are specifically called the Western and Eastern corridor respectively. Dankuni -Sonnagar-Ludhiana section has been identified as part of the eastern corridor while from JNPT to Dadri via Vadodara – Ahmedabad - Palanpur-Phulera - Rewari is called Western corridor having total length of 1483 km. The total length of EDFC works out to 1839 Kms. The present EIA study pertains to development of **Pilkhani to Sahnewal** (Ludhiana) section of the Eastern Dedicated Freight Corridor covering about **175 km** in length.

### 2. Objective of the Assignment

The prime objective of the EA study is to identify the likely environmental impacts and their magnitude during various stages (design, construction and operation) of the project and develop cost effective mitigation and monitoring measures along with institutional mechanism to enhance the environmental sustainability of the project.

### 3. Scope of Environmental Assessment

The scope of current assignment includes environmental assessment of Pilkahi-Sahnewal section based on Environmental management framework of DFCCIL prepared during EIA of Bhaupur-Khurja section of EDFC.

### 4. Project Description

The project section from Pilkhani to Sahnewal covers three states starting Pilkhani in Uttar Pradesh passing through Haryana and finally terminating at Sahnewal near Ludhiana city in Punjab covering districts of Saharanpur, Yamunanagar, Ambala, Patiala, Fatehgarh Sahib and Ludhiana.

The DFC rail lines are generally co-planned adjacent to existing rail line except at detours (Ambala, Rajpura and Sirhind) and grade separations (Ambala, Shambhu, and Sirhind). Under this project, an electrified single line of 175 km between Pilkhani and Sahnewal is proposed to be constructed with no surface crossing.

#### 4.1 The key project components and activities:

The key project components and activities involve laying of formation alignment, construction of crossing station, Junctions stations, new bridges , Rail Flyovers (RFOs), RUBs, ROB, level crossings, staff quarters ( at each crossing or junction stations), temporary workshops, offices maintenance yards /depots, flyover/grade separator, signalling, telecommunication, and safety infrastructure. The DFC length in parallel and detours portions is given in Table-1 below:

**Table-1: Lengths in Parallel and Detour Sections Pilkhani- Sahnewal Section of EDFC**

Section	Length in Parallel Section (km)	Length in Detour Section ( km)	Total Length ( km)
Pilkhani- Sahnewal (Ludhiana)	162.21	12.79	175.00

## 5. Environmental Laws and Regulations

Current regulations of Government of India do not require railway project to seek for Environmental Clearance from the Ministry of Environment and Forests (MoEF) and do not require Environmental Impact Assessment (EIA) studies. However, considering the magnitude of activities that are envisaged as part of EDFC, DFCCIL has undertaken an Environmental Assessment (EA) and prepared an Environmental Management Plan (EMP) to mitigate potential negative impacts of the project. Environmental Management Framework (EMF) of DFCCIL developed during earlier EA of Bhaupur-Khurja remains valid for this current Pilkahi-Sahnewal section also.

### 5.1 Key Environmental Laws and Regulations

Following **Table-2** presents key environmental laws and regulations promulgated by the Government of India and relevant to the Pilkahi-Sahnewal Section of EDFC.

**Table 2: Environmental Regulations and Legislations**

S. No.	Act/Rules	Purpose	Applicability	Authority
1	Environment Protection Act-1986	To protect and improve overall environment	The project activities should maintain emission standards	MoEF, GoI; DoE, State Gov. CPCB; SPCB
2	Environmental Impact Assessment Notification- 14th Sep-2006	To provide environmental clearance to new development activities following environmental impact assessment	Railway projects are not included in the Notification of 14th Sep, 2006 and EC under this Act is not applicable. However, as per MoEF's amended notification dated 9.9.2013 mining of minor minerals through borrow / quarry areas of <5 Ha, which will be used in project, require prior environmental clearances	MoEF/SEIAA
3	Notification for use of fly ash,1999	Reuse large quantity of fly ash discharged from thermal power plant to minimize land use for disposal	Possibility of use of fly ash shall be explored in Engineering designs	MoEF
4	The Forest (Conservation) Act 1927 The Forest (Conservation) Act. 1980 The Forest (conservation) Rules, 1981	To check deforestation by restricting conversion of forested areas into non-forested areas	Applicable, Forest land is involved in the project.	MoEF and state Forest Department
5	MoEF circular (1998) on linear Plantation on roadside, canals and railway lines modifying the applicability of provisions of forest (Conversation) Act, to linear Plantation	Protection / planting roadside strip as avenue/strip plantations as these are declared protected forest areas.	Applicability of Forest conservation act to Roadside strip Plantations	MoEF and state forest department
6	Air (Prevention and Control of Pollution) Act, 1981	To control air pollution by specifying the emission standards.	Emissions from construction machinery and vehicle should be checked time to time.	State Pollution Control Boards of Uttar Pradesh, Haryana & Punjab
7	Water Prevention and Control of Pollution) Act , 1974	To control water pollution by controlling discharge of pollutants as per the prescribed standards	Various parameters in Effluents from construction sites and workshops are to be kept below the prescribed standards	State Pollution Control Boards of Uttar Pradesh, Haryana & Punjab
8	Noise Pollution (Regulation and Control Act) , 2000	The standards for noise for day and night have been promulgated by the MoEF for various land uses.	DG sets at construction sites and workshops should be provided with acoustics enclosures.	State Pollution Control Boards of Uttar Pradesh, Haryana & Punjab

S. No.	Act/Rules	Purpose	Applicability	Authority
9	Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010	Conservation of cultural and historical remains found in India	No, as ASI monuments are not affected, but for chance find, if any, to be surrendered to the Competent Authority.	Monuments Authority of India
10	Public Liability and Insurance Act 1991	Protection from hazardous materials and accidents.	Shall be taken as per requirements	State Pollution Control Boards of Uttar Pradesh, Haryana & Punjab
11	The Explosives Act 1884	Safe transportation, storage and use of explosive material	Respective Authorization shall be obtained from CCE	Chief Controller of Explosives (CCoE)
12	Minor Mineral and concession Rules	For opening new borrow pits & quarry.	Quarry Licenses shall be obtained by Contractors.	District Collector
13	Central Motor Vehicle Act 1988 and Central Motor Vehicle Rules 1989	To check vehicular air and noise pollution and authorisation to drive vehicle	All vehicles in Use shall obtain Pollution Control Check certificates and shall be driven by personnel with proper licence.	Motor Vehicle Department
14	The Mining Act	The mining act has been notified for safe and sound mining activity.	Quarry Licenses shall be obtained by Contractors.	Department of mining, GoUP, GoH, GoP
15	Hazardous waste (Management, Handling & Transboundary) Rules, 2008	Management and storage of hazardous waste.	Applicable	State Pollution Control Boards of Uttar Pradesh, Haryana & Punjab / MoEF
16	The Railway (Amendment) Act, 2008	Land acquisition	Applicable	GoI
18	The Petroleum (Amendment) Rules, 2011	Use and storage of petroleum products	Applicable	CCOE /DC

**5.2** The project is to be funded by the World Bank. This will require project to comply with World Bank Operational Policies. The description of these policies and relevance to the project is presented below:

### 5.3 The World Bank Operational Policies

The operational policies of the Bank, both triggers and non-triggers with details of their applicability to the Project are provided in the following **Table-3**. The World Bank Environment Assessment (EA) requirements are based on a three-part classification system such as Category A, Category B and Category C as defined by the World Bank OP 4.01. A Project designated as Category A, requires a full Environmental Assessment (EA) whereas Category B projects require a lesser level of environmental investigation. Category C projects require no environmental analysis beyond that determination.

**Table-3: World Bank Safeguard Policies**

Sl. No.	Safeguard Policy	Subject Category	Triggered	Triggered By	Mitigation Measures	Documentation
1.	OP 4.01	Environment Assessment	Yes	Sensitive areas and impacts on environmental and social components	Mitigation measures incorporated	EIA and EMP prepared
2.	OP 4.11	Physical Cultural Resources	Yes	Risk to cultural properties	Adequate mitigation measures if affected	EMP & RAP prepared
3.	OP 4.36	Forestry	Yes	Diversion of forest land	To be carried out as per Forest (conservation) Act, 1980	Not Applicable
4.	IFC Performance	Labour & Occupational Health	Yes	Labour and construction camp	Compliance of IFC Standards	EIA & EMP prepared; Safety &

Sl. No.	Safeguard Policy	Subject Category	Triggered	Triggered By	Mitigation Measures	Documentation
	Standards					Occupational Health measures during construction will be adequately covered in Contract document & DFCCIL SHE manual will be referred.

Since this is a large scale linear project and likely to have some reversible impacts on environment during construction phases & some impact, not of much significance, during operation, this project is being considered as 'A' category project as per the World Bank safeguard policy. This will help not only in making the construction stage to be more eco-compliant but setting systems to have better and more environment friendly construction in forthcoming railway projects. DFCCIL is committed to establish most efficient and eco-friendly system.

## 6. Baseline Environment

The existing environmental conditions have been studied based on primary and secondary data collection and analysis. For effective analysis, the entire alignment is divided into two stretches i.e. Pilkhani to Ambala and Ambala to Sahnewal and in core zone (within 100 m) and buffer zone (7 km either side).

The primary data were collected through sampling, testing and analysis for physical environment namely- air quality, water, soil, noise & vibration, biological and socio-economic aspects at various locations to assess the baseline status both in the core and buffer zone. The baseline status is summarised below in **Table-4**:

**Table-4: Summary of Environmental Features**

S. No.	Components	Environmental Features	Remarks
1.	Ecological	No ecologically sensitive areas in both core and buffer zone of the study area	The Protected Forest land diversion is 175 Ha. in railway land along existing IR track.
	Tree cover	Poplar, Eucalyptus, Mango, Neem and Shisam are the most dominant species observed. Approximately <b>28617</b> trees need to be cut.	All along the alignment
2.	Archaeological Monuments	No monument falls within 300 m of proposed track	-
3.	National Park, Wildlife Sanctuary, Wetland	None	-
4.	Water Bodies	The surface water quality largely conforms to the CPCB prescribed standards while the groundwater quality conforms to the drinking water standards (BIS: 10500). The alignment passes through over exploited blocks of Jagadhari, Mustafabad, Rajpura, Sirhind and Khanna, critical blocks of Barara and	Crossing Rivers – Yamuna, Markanda, Tangri and Ghaghhar  Crossing Canals – Western Yamuna Canal, Bhakra Canal

S. No.	Components	Environmental Features	Remarks
		Doraha and semi-critical blocks of Saharanpur district	
5.	Land-use	Primarily agricultural (62%) followed by settlement area (17.3%), water bodies (0.7%), open land (18%), vegetation (1.8%), barren land (0.2%).	-
6.	Socio-Economic	Agriculture Dominated Area. Presence of large no of industries, Plots affected: 2341 Structures affected 324 Small & marginal farmers: 2341 PAPs : 3051	-

## 7. Public Consultation and Disclosure

The proponents consulted are of the view that the proposed project activities are not likely to cause any significant environmental impacts. Public consultations were organised in 2009-10 & again in 2011-12. However, they are appreciative of the possible impacts during the construction and operation phases of the proposed project and have shown their willingness to implement suggested mitigation measures in the EIA. The project received over-whelming support and consent from all local people including PAPs, provided adequate compensation is paid. Summary of views & concerns expressed during PCM are as follows:-

- Impact on environment, forest, national park/ wildlife sanctuary, afforestation policy
- Air/ water / soil pollution and noise / vibration issues
- Access through level crossings, underpasses, FOB, traffic congestion, drainage
- Possibility of accident due to DFC alignment's close proximity to habitation
- Loss of livelihood due to land acquisition, job to landless families

During discussions, project proponent DFCCIL clarified and explained proposed measures to be taken in design stage, construction phase as well as operation phase to either eliminate or reduce the issues to acceptable level. Participants were satisfied with response of project authority & Consultants. The main point of concern of the villagers, residents in the encroached area was pertaining to compensation against loss of land and the mode of payment. People are looking forward for quick compensation and start of work. The Government Regulators like Forest Department, Pollution Boards, Municipal Authorities and Local NGOs also supported and favoured the project.

All the concerns of public consultations have been addressed in Resettlement Action Plan and Environmental management Plan.

## 8. Alternative Analysis

Since development is proposed along the existing railway track, the alternative analysis was carried out for 'with' and 'without' project options and detour areas. 'With-project' option is deemed as the optimal solution, as far as its feasibility and sustainability during its project life and beyond can be ascertained. It will generate overall positive social, environmental, and economic impacts. In the 'without project' scenario, additional pressure will increase on our already stressed roads, which will further deteriorate the air quality and noise levels due to idling of vehicles. Further, the project area will be deprived of benefits such as the timely and faster movement of coal, steel, fertilizers and agricultural products to market places, resulting in substantial employment and business opportunities of the area.

Alternatives alignment for detours at Ambala, Rajpura and Sirhind were evaluated with respect to land use change, rehabilitation and resettlement, ecological aspects, environmental impacts, traffic management, public acceptability, and technical feasibility. The Detour alignments proposed by DFCCIL were found best suited and acceptable from environmental perspective.

**Table-5 : Detour details**

<b>Detour</b>	<b>Length (km)</b>
Ambala	4.39
Rajpura	4.00
Sirhind	4.40
<b>Total</b>	<b>12.79</b>

### 8.1 Social Impact

Total 355 Ha land needs to be acquired, out of which 325 Ha is private land, and balance 30 Ha is Govt. land. Detailed Resettlement Action Plan (RAP) report has been prepared in separate cover.

### 9. Potential Impacts

The project is unlikely to cause significant environmental impacts. The environmental impacts will be temporary during construction and EMP provides mitigation measures. Brief details of identified potential impacts associated with this project are given below:

- a) Diversion of 175 Ha. protected forest on railway land;
- b) Cutting of about 28617 trees;
- c) Earth work of 0.18 million m<sup>3</sup> in cutting, 0.73 million m<sup>3</sup> in embankment and 0.1 million m<sup>3</sup> of ballast;
- d) Increased noise & vibration levels in Sensitive Receptors (SRs) located close to the alignment; 13 SRs within RoW are proposed for noise barrier/ relocation.
- e) Health & safety issues during construction activities;
- f) Alignment passes over one perennial river Yamuna, three major rivers & Yamuna canals.
- g) Compensatory afforestation shall be undertaken as per the forest clearance conditions and the conditions of tree felling as laid down by the State Government.
- h) Access to community structures/resources shall not get affected during any stage of the project.
- i) 34 CPRs. to be relocated.

### 10. Measures for the Mitigation of Environmental Impacts

Mitigation measures have been proposed for countering potential impacts. These are as follows:

- a) Compensatory afforestation against protected forest land acquired as per condition of MoEF while granting permission;
- b) Plantation of about 80,000 trees along the alignment;
- c) Dust suppression measures are proposed during earthwork.
- d) Permission will be obtained from concerned authority for quarrying and necessary conditions complied with;
- e) Noise suppression & suitable noise barriers are proposed for sensitive receptors; 17 sensitive receptors will require either relocation or noise barrier. However, all sensitive receptors within RoW required re-location.
- f) Vibration control measures during design stage of track and locomotive & rakes besides vibration suppression measures like plantation are proposed for the identified sensitive receptors;
- g) Relocation of affected CPRs;
- h) Occupational Health & safety measures for workers during construction activities and at labour camps;
- i) Water quality of only perennial river Yamuna & other canals crossing the DFC alignment will be monitored and maintained;
- j) Suitable drainage will be provided.



- k) Discharge of wastewater during construction phase will be as per EMP and suitable oil catch pits will be provided where necessary.

## 11. Environmental Management Plan

Environmental Management Plan describes specific mitigation measures. These include following:

- i. About 28617 trees along the alignment will be felled. Plantation would be taken up as per the statute.
- ii. Afforestation against about 175 Ha. protected forest land to be diverted;
- iii. Rehabilitation plan for borrow areas/quarry sites;
- iv. Noise barriers of various degrees or relocation for 13 number of sensitive receptors;
- v. Borrow area management plan to control degradation of surrounding landscape for excavation work following of standard IRC-10:1961;
- vi. Specific safety and silicosis exposure reduction strategy during construction;
- vii. Soil protection measures;
- viii. Temporary drainage during construction;
- ix. Permission will be obtained for tree cutting with suitable compensation;
- x. Crossing passage for wildlife near forest area, ponds will be provided for wildlife in forest area, if required;
- xi. Measures to be taken for archaeologically important chance finds, if any, as per ASI Act.
- xii. Estimated cost for Environmental Management is Rs. 9338 million including land acquisition cost.
- xiii. Silicosis exposure reduction strategy is given for reference.
- xiv. DFCCIL has a Social and Environmental Management Unit (SEMU) headed by General Manager (SEMU) for EDFC, supported by a GM/Env. & Environmental Consultant. Field unit is headed by Chief Project Manager (CPM), supported by Deputy CPM and designated APM/Env. SEMU together with the field unit will ensure implementation of EMP during pre-construction, construction and operation phases.

## DRAFT SOCIAL ASSESSMENT EXECUTIVE SUMMARY

### E.1 THE PROJECT

a) Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL), a Special Purpose Vehicle (SPV) of the Ministry of Railways, Government of India has planned Implementation of Dedicated Freight Corridors connecting Delhi with Mumbai on the Western side and Ludhiana with Kolkata on the Eastern side. DFCCIL has sought World Bank Loan assistance for Implementation of part of Eastern Dedicated Freight Corridor (EDFC). The whole section is divided in three phases. EDFC-1 is 343 kilometer long from Khurja to Bhaupur section, EDFC-2 is 393 kilometer long from Bhaupur to Mughalsarai section and EDFC-3 is 401 from Sahnewal (Ludhiana) to Pilakhni to Khurja –Section. Khurja-Dadri section of 47 Kms is planned to be incorporated in EDFC-1 as part of project restructuring. Draft RAP for this section has been prepared. As part of the project preparation for EDFC-1, a Resettlement Policy Framework (RPF) was prepared and has been updated. In case of EDFC-3, the Project corridor is divided into two stretches: (i) Pilakhni-Sahnewal (175 kilometers with two detours of total 12.79 kilometers) and Khurja-Pilakhni (226 kilometers with three detours of total 111 kilometers). This is the draft Resettlement Action Plan (RAP) for Pilakhni-Sahnewal section. The RAP for the Khurja-Pilakhni stretch, where land survey is underway, will be prepared as per the RPF approved with the World Bank. This section provides a summary of the RAP for Sahnewal-Pilkhani Section (EDFC-3), which is in line with the approved RPF.

b) The Land Acquisition details for the three EDFC projects including EDFC-3 are given below.

EDFC- Sections	Length in km	No. of Villages affected	LA required (in ha)	No. of Affected land owners	No. of Affected Structures	Community Prosperities Affected	Land Compensation Awarded as on Dec 31, 2014 (in ha)
EDFC-1 Khurja-Bhaupur	343	287	1410	29253	585	78	1340 (96%)
EDFC-2 Bhaupur-Allahabad	393	369	1475	27205	1752	55	1401 (95%)
<b>EDFC-3 Impact Details</b>							
EDFC-3 (301) (Pilakhni-Sahnewal)	175	138	355.34	3051	324	8	325.8 (91%)
EDFC-3 (303) Khurja- Pilakhni	226	143	802	NA	NA	NA	90.2 (11%)
<b>EDFC-3 Total</b>	<b>401</b>	<b>301</b>	<b>1157</b>	<b>3051+</b>	<b>324+</b>	<b>8+</b>	<b>426 (36%)</b>

Resettlement Action Plan (RAP) for this section contains the magnitude of Land Acquisition, Resettlement issues and the Mitigation of Impacts. The report also includes the baseline socio-economic characteristics of the Project Affected Families (PAFs) & Project Affected Person (PAPs), the R&R policy provisions & entitlements, outcome of the consultations held with the communities, implementation and monitoring mechanisms. It also contains budget for the implementing the R&R provisions.

c) Total length of the Sahnewal-Pilkhani Corridor is 175 Kms; out of which 12.79 Kms are in two detour sections and the balance 162.21- Kms run parallel to the existing Northern Railway tracks. The proposed EDFC-3 section traverses through one district of Uttar Pradesh, two Districts of Haryana and three Districts of Punjab. Right of Way (ROW) width is around 10-30

meters in the parallel sections and 40-60 meters in the detour stretches. The complete section is under the management oversight of Chief Project Manager (CPM)-Ambala.

## E.2 SIA Methodology

a) This RAP is project specific resettlement plan and has been guided by the, World Bank OP 4.12, NRRP 2007 and The Railways (Amendment) Act 2008, the Entitlement Matrix approved by Railway Board, Ministry of Railways. This RAP also incorporates relevant provisions relating to compensation and Resettlement and rehabilitation (R&R) benefits payable as per the Right to Fair Compensation and transparency in Land acquisition, Resettlement and Rehabilitation Act, 2013 (RFCT-LARR) along with RFCT-LARR ordinance of December 2014. The RAP objectives include:

- To prepare an action plan for the project affected people for improving or at least retaining the living standards in the post resettlement period.
- To outline the entitlements for the affected persons for payment of compensation and assistance for establishing the livelihoods
- To Develop communication mechanism to establish harmonious relationship between DFCCIL and Project Affected Persons(PAPs)
- To ensure adequate mechanism and expeditious implementation of R&R

## R&R POLICY AND ENTITLEMENT FRAMEWORK

**E.3** The Resettlement and Rehabilitation policy is based on the basic principle that the project affected persons should improve their living standards in the post resettlement period and share the benefits of the project. The RAP has been prepared as per the provisions laid down in RAA 2008 and the Entitlement Matrix as approved by Railway Board. Due care has been taken to avoid or minimize land acquisition and involuntary resettlement impacts by exploring all viable alternatives and to ensure adequate rehabilitation package and expeditious implementation of rehabilitation process with the active participation of affected families. RAP aims at providing additional assistance to take special care for weaker sections like SC/ST/Vulnerable groups.

A Socio Economic Survey was conducted covering all the villages along the alignment using participatory methodology. The sample was based on 2001 census information covering large medium and small villages. During the study all stake holders were enabled into sharing their views by field visits, community consultations, Gender analysis, socio economic survey, meeting with NGOs, focus group discussions and finally analysis of data to ascertain the various categories of impact.

**E.4** The entitlements and options for each impact category have been provided in the detailed Entitlement Matrix (Table 3.2 and 3.2A in Chapter-3). Key impacts are presented in the Table E.1.As mentioned in Table the project requires about 355.34 ha of land which in turn, would affect 3051 PAPs.

Table E 1: Key Impacts in Sanehwal Pilkhani Section

Sl.No.	Item	Number
1	Land Acquisition in Ha.	355.34
2	No. of PAPs	3051
3	Landless	25

4	Marginal	1231
5	Small	228
6	Residential (TH)	134
7	Commercial (TH)	51
8	Residential(NTH)*	83
9	Commercial (NTH)*	56
10	Tenants	0
11	Kiosks	0
12	Below Poverty Level	95
13	Structure	324
14	Vulnerable PAPs	54
15	CPRs	8

\*The non-title holders inhabiting on abadi deh category of land (legally recognized traditional settlements) are entitled to receive land compensation equivalent to land owners whereas those inhabiting village common lands will get resettlement site allowance/sites in coordination with Village Panchayats out of the compensation paid to the latter for common lands.

## LAND ACQUISITION AND RESETTLEMENT IMPACTS

**E.5 Loss of assets:** The proposed project stretch will involve acquisition of about 355.34 ha of land, out of which 330.91 ha is private land which is approximately 93.15%. The project will require very less (approximately 2.10 ha) built-up area which includes residential, commercial or residence-cum commercial land use. At many built-up locations land width has been reduced to as less as 17 meters which has resulted in reducing impact on residential as well as commercial structures.

**E.6** Due to the project, total 3051 PAPs are affected. Out of this, agriculture land of 2341 PAPs is going to be affected, while structures of 324 PAPs are going to be affected. Of these, major impact due to structure loss will be on all 324 PAFs, Major impacts are where the PAF is either displaced due to the loss of house or livelihood, agricultural or commercial; this category also includes those likely to become small/marginal/landless farmers due to the impact of the project. When the families lose only a small part of their asset, and are able to maintain the living standards, as it was prior to the project without any assistance, the impact is called minor. Minor impact in case of asset includes boundary wall, steps, partial structure, etc.

**E.7 Land acquisition requirements:** The proposed project stretch will involve acquisition of about 355.34 ha of land, of which approximately 330.91 ha. (93.12 %) of private land and 24.43 ha (6.88%) of Government Land.

**E.8 Loss of structures:** The project affects 324 PAFs private built-up properties of which 185 PAFs are Title Holders (TH) and 139 PAFs are Non-Title Holders (NTH). The area of the structure affected is 2.10 ha. All 324 families are required to be relocated. These PAFs are losing more than 25% of their structure. These displaced families will be compensated at replacement value; income restoration scheme will be done as per provisions of EM. The facilitating NGOs will be assisting in income generation activities of these displaced families.

## MEASURES TAKEN TO MINIMISE RESETTLEMENT IMPACTS

**E.9** Minimum land acquisition and disturbance to existing features has been a prime objective of the design. Socially sensitive stretches have been avoided through selection of alternative links, provision of bypass around settlements and realignments. Along the existing tracks, changes were made in the designs as far as feasible thereby resulting in reduction, if not elimination of impacts. Minimization of impacts within the limitations of technical requirements and cost effectiveness was emphasized during entire course of Resettlement Action Plan Preparation.

#### **Key socio-economic findings**

**E.10** The census and socio-economic survey reveals that amongst the affected people, below the poverty line constitutes about 4.78%. About 47.82% of the affected people are small & marginal land owners owning less than one hectare of land. About 15.56% is illiterates and only about 18.22 % are graduates. ***The social impact assessment study indicated that there are no tribal habitats in the proposed corridor.***

**E.11 Loss of community resources:** 8 community properties are being displaced because of the project intervention. These include Temples, Samadhi, Hand pumps etc.

#### **CONSULTATIONS**

**E.12** Consultations with PAFs and PAPs during Base Line Socio Economic Survey (BSES) were conducted to understand the perception, concern and response from them during the census survey. A total of 71 meetings were held with the local communities. The outputs obtained from these meetings helped in formulating strategies for minimizing impacts. Detailed public consultation meetings conducted from March 2012 to May 2013

**E.13 Follow-up consultations:** Stakeholders workshops as follow-up consultation with the stakeholder's including the PAFs & PAPs will be conducted at the local level. These follow-up sessions provided DFCCIL an opportunity to explain to the community the manner in which the concerns raised during earlier consultations had been incorporated in R&R policy framework of DFCCIL. Suggestions of the community during these sessions have been incorporated into the project design to the maximum extent possible. However more consultations are planned in the RAP during R&R implementation stage for strengthening participation. These facilitating NGOs will assist CPM office in these consultations. Finding outcome of these consultations will be discussed and plausible solution to issues raised during preparatory phase will be undertaken. A separate Annex to this RAP has been added to provide a detailed picture of the consultations and issues discussed therein for reference.

#### **IMPLEMENTATION PLAN**

**E.14 Institutional Arrangement:** Managing Director, DFCCIL is over all responsible for safeguards compliance as head of the Organization. DFCCIL has already set up Chief Project Manager's Offices (CPM office) to act as Project Management Unit (PMU) at Ambala. The project will be implemented by the office of Chief Project Manager (CPM) assisted by NGOs and APMs office. **CPM as Chief Resettlement Officer will be responsible for implementing the RAP.** Besides, regular staffs of the office, the CPM will be assisted by APM (Social) – one in each package along with their staff.

While SEMU at HQ will be providing technical and logistics support to CPM offices, implementation of RAP including disbursement of compensation and R&R assistance has been done by CPM through its Competent Authority/Administrator. The CPM is responsible for coordinating completion of LA and R&R. There is a Deputy CPM (Social) to assist the CPM in overall planning, implementation and monitoring of the LA and R&R activities. The handing over of site will be considered as complete only when compensation at replacement value and R&R assistance as per provision of EM has been given to eligible PAFs. The CPM will certify the site readiness for handing over the stretch to the contractor, which includes date and time of compensation and R&R assistance are given, grievance(if any) are resolved, and Transfer certificate (in the prescribed format) from Competent Authority awarding the land for construction.

**E.15 Grievance Redress:** There shall be grievance redress/R&R committees to hear and redress the grievances, if any, of the PAFS & PAPs at field and Head Quarter levels. The Field level grievance committee (FLC) shall be convened by CPM where the District Collector shall be the Chairperson, and other members will be the President, Zilla Parishad (District Council) and a representative from a reputed local NGO. The HQ level grievance committee (HLC) is convened by GM/SEMU where the Director, Project and Planning is the member. Arbitrators to hear grievance cases relating to payment of compensation for land to be acquired under RAA, 2008 have already been appointed. An Ombudsman has been appointed for hearing cases not resolved to the satisfaction of the aggrieved PAP/PAF at the levels mentioned above, including cases directly referred by the DFCCIL.

**E.16 The Project Level R&R Committee** has been constituted as per provisions of NRRP 2007, comprising the Director, Project and Planning, General Manager, Social and Environment Management Unit (SEMU) assisted by the Social Specialist with Environmental Specialists. The Committee is chaired by Director/ Project & Planning. The R&R committee will oversee the work done by CPM office. The committee will also redress grievances not resolved at CPM office level.

**E.17 Monitoring and Evaluation:** The performance monitoring of the RAP implementation will be done by internal oversight mechanisms of the DFCCIL SEMU and CPM office with the help of the PMC and the facilitating NGOs. Quality and impact monitoring will be done by independent Social & Environment Safeguard Monitoring and Review Consultant (SESRMC) consultants.

**E.18 Relocation of CPRs:** Common Properties Resources (CPRs) have been identified and shall be replaced in consultation with the local community.

**E.19 R&R Costs and Budget:** The budget for the implementation of the R&R provisions and other associated costs of implementing the RAP has been estimated to be **INR 1025.58 Crores.**

## RESETTLEMENT POLICY FRAMEWORK

(Addendum to RPF of 2011)

### EXECUTIVE SUMMARY

#### E.1 THE PROJECT

a) Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL), a Special Purpose Vehicle (SPV) of the Ministry of Railways, Government of India has planned Implementation of Dedicated Freight Corridors connecting Delhi with Mumbai on the Western side and Ludhiana with Kolkata on the Eastern side. DFCCIL has sought World Bank Loan assistance for Implementation of part of Eastern Dedicated Freight Corridor (EDFC). The whole section is divided in three phases. EDFC-1 is 343 kilometer long from Khurja to Bhaupur section, EDFC-2 is 393 kilometer long from Bhaupur to Mughalsarai section and EDFC-3 is 401 from Sahnewal (Ludhiana) to Pilakhni to Khurja –Section. Khurja-Dadri section of 47 Kms is planned to be incorporated in EDFC-1 as part of project restructuring. Draft RAP for this section has been prepared. As part of the project preparation for EDFC-1, a Resettlement Policy Framework (RPF) was prepared and has been updated. In case of EDFC-3, the Project corridor is divided into two stretches: (i) Pilakhni-Sahnewal (175 kilometers with two detours of total 12.79 kilometers) and Khurja-Pilakhni (226 kilometers with three detours of total 111 kilometers). The draft Resettlement Action Plan (RAP) for Pilakhni-Sahnewal section has been prepared and disclosed. The RAP for the Khurja-Pilakhni (226 km) has not been prepared due to change in alignment with new detours. This addendum to the Resettlement Policy Framework (RPF) of September 2011 has been prepared to provide guidelines for preparing the RAP for the Khurja-Pilakhni stretch, where land survey is underway.

b) The Land Acquisition details for the three EDFC projects including EDFC-3 are given below.

EDFC- Sections	Length in km	No. of Villages affected	LA required (in ha)	No. of Affected land owners	No. of Affected Structures	Community Prosperities Affected	Land Compensation Awarded as on Dec 31, 2014 (in ha)
EDFC-1 Khurja-Bhaupur	343	287	1410	29253	585	78	1340 (96%)
EDFC-2 Bhaupur-Allahabad	393	369	1475	27205	1752	55	1401 (95%)
<b>EDFC-3 Impact Details</b>							
EDFC-3 (301) (Pilakhni-Sahnewal)	175	138	355.34	3051	324	8	325.8 (91%)
EDFC-3 (303) Khurja- Pilakhni	226	143	802	NA	NA	NA	90.2 (11%)
<b>EDFC-3 Total</b>	<b>401</b>	<b>301</b>	<b>1157</b>	<b>3051+</b>	<b>324+</b>	<b>8+</b>	<b>426 (36%)</b>

#### E.2 SIA Methodology

a) The RPF provides for social impact assessment and preparation of RAP in line with the World Bank OP 4.12, NRRP 2007 and The Railways (Amendment) Act 2008, the Entitlement Matrix approved by Railway Board, Ministry of Railways. This RPF incorporates relevant provisions relating to compensation and Resettlement and rehabilitation (R&R) benefits payable as per the Right to Fair Compensation and transparency in Land acquisition, Resettlement and Rehabilitation Act, 2013 (RFCT-LARR) along with RFCT-LARR ordinance of December 2014. The RPF objectives include:

- To provide guidelines for preparing RAP for the project affected people for improving or at least retaining the living standards in the post resettlement period.
- To outline the entitlements for the affected persons for payment of compensation and assistance for establishing the livelihoods
- To provide in detail implementation arrangements including SIA, preparation of RAP, consultation, grievance redress, disbursement of compensation and resettlement and rehabilitation benefits, and monitoring and implementation,
- To set out communication mechanism to establish harmonious relationship between DFCCIL and Project Affected Persons(PAPs)
- To provide guidelines for expeditious implementation of R&R with adequate budget

### **R&R POLICY AND ENTITLEMENT FRAMEWORK**

**E.3** The Resettlement and Rehabilitation Policy is based on the basic principle that the project affected persons should improve their living standards in the post resettlement period and share the benefits of the project. The RAP has been prepared as per the provisions laid down in RAA 2008 and the Entitlement Matrix as approved by Railway Board. The Draft Entitlement Matrix (at Table 3.2A) has been prepared in line with the RFCT-LARR, 2013 effective from January 1, 2015. Due care has been taken to avoid or minimize land acquisition and involuntary resettlement impacts by exploring all viable alternatives and to ensure adequate rehabilitation package and expeditious implementation of rehabilitation process with the active participation of affected families. RAP aims at providing additional assistance to take special care for weaker sections like SC/ST/Vulnerable groups. **The RPF has provisions to support resettlement and rehabilitation of the affected tenants and sharecroppers, squatters and other PAFs.**

**E.4 Land acquisition requirements:** The LA requirements for EDFC-3 is a total of 1127 hectares of which land required for Khurja-Pilakhni stretch is 401 A total of 301 villages are affected of which 143 villages are affected by Khurja-Pilakhni stretch for which detail SIA will be undertaken and RAP prepared.

### **MEASURES TO MINIMISE RESETTLEMENT IMPACTS**

**E.5** Minimum land acquisition and disturbance to existing features will be a prime objective of the design. Socially sensitive stretches will be avoided through selection of alternative links, with providing bypass around settlements and realignments. Along the existing tracks, changes will be made in the designs as far as feasible thereby resulting in reduction, if not elimination of impacts. Minimization of impacts within the limitations of technical requirements and cost effectiveness will be emphasized during entire course.

### **CONSULTATIONS Framework**

**E.6** Consultations with PAFs and PAPs will be carried out during Base Line Socio Economic Survey (BSES) to understand the perception, concern and response from



them during the census survey. The outputs obtained from these meetings will be used for minimizing impacts. The RAP will document all consultations and will prepare a framework for follow up con

## **IMPLEMENTATION Arrangemnts**

**E.7 Institutional Arrangement:** DFCCIL has set up Chief Project Manager's Offices (CPM office) to act as Project Management Unit (PMU) at field levels. The Chief Project Manager (CPM) will be the **Chief Resettlement Officer** for implementing the RAP. CPM will be assisted by NGOs and APMs office. Besides, regular staffs of the office, the CPM will be assisted by APM (Social) – one in each package along with their staff. While SEMU at HQ will be providing technical and logistics support to CPM offices, implementation of RAP including disbursement of compensation and R&R assistance has been done by CPM though it's Competent Authority/Administrator. The CPM is responsible for coordinating completion of LA and R&R. There is a Deputy CPM (Social) to assist the CPM in overall planning, implementation and monitoring of the LA and R&R activities. The handing over of site will be considered as complete only when compensation at replacement value and R&R assistance as per provision of EM has been given to eligible PAFs. The CPM will certify the site readiness for handing over the stretch to the contractor, which includes date and time of compensation and R&R assistance are given, grievance(if any) are resolved, and Transfer certificate (in the prescribed format) from Competent Authority awarding the land for construction.

**E.8 Grievance Redress:** There shall be grievance redress/R&R committees to hear and redress the grievances, if any, of the PAFS & PAPs at field and Head Quarter levels. The Field level grievance committee (FLC) shall be convened by CPM where the District Collector shall be the Chairperson, and other members will be the President, Zilla Parishad (District Council) and a representative from a reputed local NGO. The HQ level grievance committee (HLC) is convened by GM/SEMUR where the Director, Project and Planning is the member. Arbitrators to hear grievance cases relating to payment of compensation for land to be acquired under RAA, 2008 have already been appointed. An Ombudsman has been appointed for hearing cases not resolved to the satisfaction of the aggrieved PAP/PAF at the levels mentioned above, including cases directly referred by the DFCCIL.

**E.9 Monitoring and Evaluation:** The performance monitoring of the RAP implementation will be done by internal oversight mechanisms of the DFCCIL SEMUR and CPM office with the help of the PMC and the facilitating NGOs. Quality and impact monitoring will be done by independent Social & Environment Safeguard Monitoring and Review Consultant (SESURMC) consultants.

**E.10 Relocation of CPRs:** Common Properties Resources (CPRs) will be identified and shall be replaced in consultation with the local community.

**E.11 R&R Costs and Budget:** The RAP shall provide a budget for the implementation of the R&R provisions and other associated costs of implementing the RAP.