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- 1. Gazette Notification of Vadodara Mumbai Expressway**
- 2. Social Impact Assessment Report**



भारत का राजपत्र The Gazette of India

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सड़क परिवहन और राजमार्ग मंत्रालय
अधिसूचना

नई दिल्ली, 10 जनवरी, 2020

का.जा. 175(अ).—केन्द्रीय सरकार, राष्ट्रीय राजमार्ग अधिनियम, 1956 (1956 का 48) की धारा 2 की उप-धारा (2) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, निम्नलिखित तालिका के स्तम्भ (2) और (3) में विनिर्दिष्ट प्रत्येक राजमार्ग को राष्ट्रीय राजमार्ग घोषित करती है।

उक्त राजमार्गों, जिन्हें अब राष्ट्रीय राजमार्ग घोषित किया जाना है, को उक्त तालिका के क्रमशः स्तम्भ (1), (2) और (3) में यथा-निर्दिष्ट नई क्रम संख्याओं, नई राष्ट्रीय राजमार्ग संख्याओं तथा राष्ट्रीय राजमार्गों के विवरण के साथ उक्त अधिनियम की अनुसूची में विनिर्दिष्ट किया गया समझा जाएगा।

तालिका

क्र. सं.	नई राष्ट्रीय राजमार्ग सं.	राष्ट्रीय राजमार्ग का विवरण
(1)	(2)	(3)
562	एनई 4	गुजरात राज्य में बड़ोदरा के निकट नई रारा सं. 148एन और एनई-1 के साथ अपने जंक्शन से प्रारंभ होकर भरुच, सूरत, नवसारी, बलसाड, बापी, संघ राज्य क्षेत्र दादर और नागर हुवेली में सिसवास, महाराष्ट्र राज्य में बिरार, भिवंडी, कल्याण, बदलापुर को जोड़ते हुए और जेएनपीटी पर पनवेल के निकट नई रारा सं. 348 के साथ अपने जंक्शन पर समाप्त होने वाला एक्सप्रेसवे (निर्माणाधीन)।

[फा. सं. एनएच-14012/2/2013-पी एच एम]

राजेश गुप्ता, उप सचिव

पाद टिप्पण : राष्ट्रीय राजमार्ग अधिनियम, 1956 (1956 का 48) की अनुसूची भारत के राजपत्र में प्रकाशित अधिसूचना संख्या का.आ. 689 (अ), दिनांकित 4 अप्रैल, 2011 द्वारा प्रतिस्थापित की गई थी और बाद में अधिसूचना सं. का.आ. 4142 (अ), दिनांकित 19 नवंबर, 2019 द्वारा इसमें संशोधन किया गया था।

**MINISTRY OF ROAD TRANSPORT AND HIGHWAYS
NOTIFICATION**

New Delhi, the 10th January, 2020

S.O. 175(E).—In exercise of the powers conferred by sub-section (2) of section 2 of the National Highways Act, 1956 (48 of 1956), the Central Government hereby declares each of the highways specified in columns (2) and (3) of the Table below to be a national highway.

The said highways, now declared to be national highways, shall be deemed to be specified in the Schedule to the said Act with the new serial numbers, the new national highways numbers and the description of the national highways thereof, as indicated in columns (1), (2) and (3) respectively, of the said Table.

TABLE

Sl. No.	New National Highway No.	Description of National Highways
(1)	(2)	(3)
562	NE 4	The Expressway (under construction) starting from its junction with new NH No. 148N and NE-1 near Vadodara connecting Bharuch, Surat, Navasari, Valsad, Vapi in the State of Gujarat, Silvassa in the Union Territory of Dadar and Nagar Haveli, Virar, Bhiwandi, Kalyan, Badlapur and terminating at its junction with new NH No. 348 near Panvel at JNPT in the State of Maharashtra.

[F. No NH-14012/2/2013-P&M]

RAJESH GUPTA, Dy. Secy.

Footnote : The Schedule to the National Highways Act, 1956 (48 of 1956) was substituted *vide* notification number S.O. 689(E), dated 4th April, 2011 published in the Gazette of India, dated the 4th April, 2011 and subsequently amended *vide* notifications number S.O. 4142(E) dated 19th November, 2019.

Social Impact Assessment Report

**Development of Vadodara Mumbai Expressway
(Phase-II) from km.26.320 to km.104.700
(km.390.864 of NH-8) of Main Expressway in
the State of Maharashtra
(MoEFCC F. No. No.10-80/2016-IA-III)**



Project Proponent

NATIONAL HIGHWAYS AUTHORITY OF INDIA
Ministry of Road Transport and Highways, Government of India



EIA Consultant

Intercontinental Consultants and Technocrats Pvt. Ltd.
A-8, Green Park, New Delhi-110016, India

**Sl. No. in QCI's List '1' of Accredited EIA
Consultant (15th October 2019) : 90**

NOVEMBER 2019

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EXECUTIVE SUMMARY

E.1 INTRODUCTION

The social impact assessment study is meant to determine the magnitude of impact on the population due to development of proposed expressway with the objective to ensure the social considerations be given adequate weightage in the selection and design of proposed project. Basic idea is to minimize adverse social impacts with best possible engineering solutions at the optimal cost.

E.2 NEED OF THE PROJECT

The Mumbai–Ahmedabad Corridor is one of the important transport corridors of the country. On one side of this corridor is Mumbai which is the financial capital of the country and on the other side is Vadodara, an important commercial and business city. Many industries like, textile, gems & jewelries, petrochemical & fertilizer etc. have been established along this corridor. This corridor also serves SEZ areas and ports. NH-8 is of great significance for transportation in this corridor between Delhi to Mumbai.

NH8 has been widened to 6 lane but many of the sections have already reached nearly the capacity volume of 6 lane in the year 2015 with average journey speed of 50-60 km/hr. Further widening of NH-8 is not feasible. With rapid economic development taking place in the States of Gujarat and Maharashtra, there is a need to develop an expressway wherein the movement of large volumes of passenger and goods vehicles can take place at a fast pace.

Keeping in view of the importance of the National Highways for the economic development, the construction of about 379 km long proposed Vadodara Mumbai Expressway (VME) including SPUR is envisaged to fulfill this objective. The proposed VME has been divided into three phases for implementation. This SIA Report deals with development of VME Phase II from Km 26+582 to Km 104+700 of main expressway.

E.3 LOCATION OF THE PROJECT

The proposed project is the development of 8 lane access-controlled green-field Vadodara Mumbai Expressway (Phase-II). The expressway starts at proposed chainage 26+582 (at Koshimb village of Vasai Taluka) and ends at proposed chainage 104+700 [km 390+864 of new NH-48 (old NH-8)] at Ibhaddpada village of Talasari Taluka in the state of Maharashtra. Total length of expressway (Phase-II) is **78.118 km**. The proposed alignment is passing through 4 talukas (Vasai, Palghar, Dahanu and Talasari) of Palghar district in the state of Maharashtra.

E.4 SOCIO-ECONOMIC PROFILE

- **Total Population:** population composition of the villages is important to anticipate the extent of project impact. Population details of the 51 villages have been derived

from primary census abstract 2011 and total population is 85,476, out of which 42,390 are male and 43,086 are female.

- **Tribal Population:** Total tribal population of 51 villages is 66,819 (Scheduled Cast – 1,123 and Scheduled Tribes – 65,696), which is 78.2% of the total population. As per Census of India, 2011, 100% population of Chandwad village is Scheduled Tribes. Out of 51 villages, maximum tribal population is observed in Vadavali village (5375 nos.) and in 24 villages, tribal population is more than 90%.
- **Literacy Rate:** Among 51 villages, highest literacy rate is observed in Nagaze village of Palghar Taluka (male – 92.02%, female – 78.88%). Lowest literacy rate among male observed in Dhaniwari village (44.01%) of Dahanu Taluka and among female observed in Ganeshbag village (18.52%) of Dahanu Taluka. In Dhaniwari and Ganeshbag village, tribal population is more than 99%. Overall literacy levels among tribals are lower than that of the general population.
- **Category wise Distribution of Main Workforce:** Agriculture does play an important sector in engaging the workforce in the project area. Majority of main workers are cultivators (42.8%) followed by agricultural labours (33.2%), other workers (22.0%) and only 2.0% population are engaged in household industry such as handloom, weaving, biri rolling, papad making, toy making, etc.

E.5 LAND ACQUISITION AND SOCIAL IMPACT ASSESSMENT

The Greenfield expressway traverses through 51 villages of four Talukas in Palghar district of Maharashtra state. The tentative private land need to be acquired for the project is 710.3247 hectares and forest land proposed to be diverted is 191.5894 ha (data updated till October 2019). Joint Measurement Survey with the concerned department is under progress. Therefore, both non-forest and forest land proposed to be diverted will be updated time to time during the land acquisition and forest clearance process.

As per findings of Joint Measurement Survey (JMS) of affected land and non-land assets, the project impacts can be broadly classified as (i) impacts on private land, (ii) impacts on private structures and; (iii) loss of common property resources. The social impacts of the proposed project are summarized below:

Table E-1 Summary of Project Impacts (Phase-II of Main Alignment)

Sl. No.	Impacts	Number/ Area
1	Total private land acquisition requirement (data updated till November 2019)	≅ 710.3247 ha
2	Total number of private land units/plots affected (No.)	2393
3	Fully displaced land owner (15% of affected land owners) (No.)	359
4	Total number of structures affected of all categories (Including Private, Government, and Religious)	895

Sl. No.	Impacts	Number/ Area
5	Total number of affected private structures	717
6	Number of Fully displaced structure owner (15% of affected structure owners)	108
7	Total number of affected Households Including Land & Structures	3110
8	Total number of Govt. /Communities properties	175
9	Total number of religious properties	3

Source: Field Study 2019

E.6 MITIGATION MEASURES

The basic features of the proposed policy framework and mitigation measures, for implementation of the RFCTLARR Act 2013 and others legal provisions, are detail in Chapter 4.

E.7 PUBLIC CONSULTATION

The task of public consultation has been done in the light of consultation and focus group techniques, which were applied on various groups of stakeholders along the project corridor. It was organized in the form of small groups of potentially affected people as discussed in detail in Chapter 5.

E.8 TENTATIVE R&R BUDGET

The R&R budget for the expressway of phase II is approximately INR **1,594 Crores** which includes the cost of land and structures, relocation or enhancement of religious, government and community structures and involvement of NGO. The summery of the tentative budget are given in **Table E-2**

Table E-2 Tentative R&R Cost

Sl. No.	Component	Cost in Cr.
1	Land Acquisition Cost	1,361.0
2	Cost of Private, Government and Other Communities Structures	85.0
3	Involvement of NGO for RAP Implementation	3.0
Total Sum (1+2+3+4+5)		1,449.0
Contingency @ 10%		144.9
Grand Total (In Cr.)		1,593.9
		Say Rs. 1,594 Cr.

Note: Last updated in the year 2018. May be modified at the time of actual land acquisition based

CHAPTER-1: INTRODUCTION AND METHODOLOGY

1.1 INTRODUCTION

The Mumbai–Ahmedabad Corridor in the western part of the country is one of the important transport corridors of the country. On one side of this corridor is Mumbai which is the financial capital of the country and on the other side is Vadodara, an important commercial and business city. Many industries like, textile, gems & jewelries, petrochemical & fertilizer etc. have been established along this corridor. This corridor also serves SEZ areas and ports. New NH 48 (old NH 8) is of great significance for transportation in this corridor starting from the country's administrative capital of Delhi to financial capital of Mumbai. Present condition and steps taken to develop its speed and safety are as follows:

- The Vehicle Damage Factor (VDF) as assessed on NH8 varies from 2.04 to 5.86 for 2 axle vehicles and varies from 19.48 to 25.69 for 6 axle vehicles.
- The average journey speed in majority part of Mumbai-Vadodara section of NH 8 was found to be in the range of 50-60 km/hr. whereas the designed speed is 100km/hr.
- NH8 has been widened to 6 lane but many of the sections have already reached nearly the capacity volume (LOS E) of 6 lane NH (120,000 PCU) in the year 2015.

Even with six laning or further widening, segregation of long distance and local and / or slow traffic is hard to achieve. Further, NH-8 is not an access controlled highway and is passing through many settlements where land availability and displacement of people would be a major concern for further widening. With rapid economic development taking place in the States of Gujarat and Maharashtra, there is a need to develop an expressway wherein the movement of large volumes of passenger and goods vehicles can take place at a fast pace.

Keeping in view of the importance of the National Highways for the economic development, the Government of India has taken up an ambitious program of development of the National Highways under different phases of National Highway Development Program (NHDP). The construction of about 379 km long proposed Vadodara Mumbai Expressway along with SPUR of about 94 km is envisaged to fulfill this objective and decided to be implemented under NHDP (Phase-VI). The proposed Vadodra - Mumbai Expressway has been divided into **three phases** for implementation (**Figure 1-1**):

- Phase I:** From proposed chainage 104+700 to chainage 378+722 in the State of Gujarat, Maharashtra and Union Territory of Dadra and Nagar Haveli. Environmental Clearance has already obtained from MoEF&CC vide letter dated 11th February 2015 for Phase-I development.

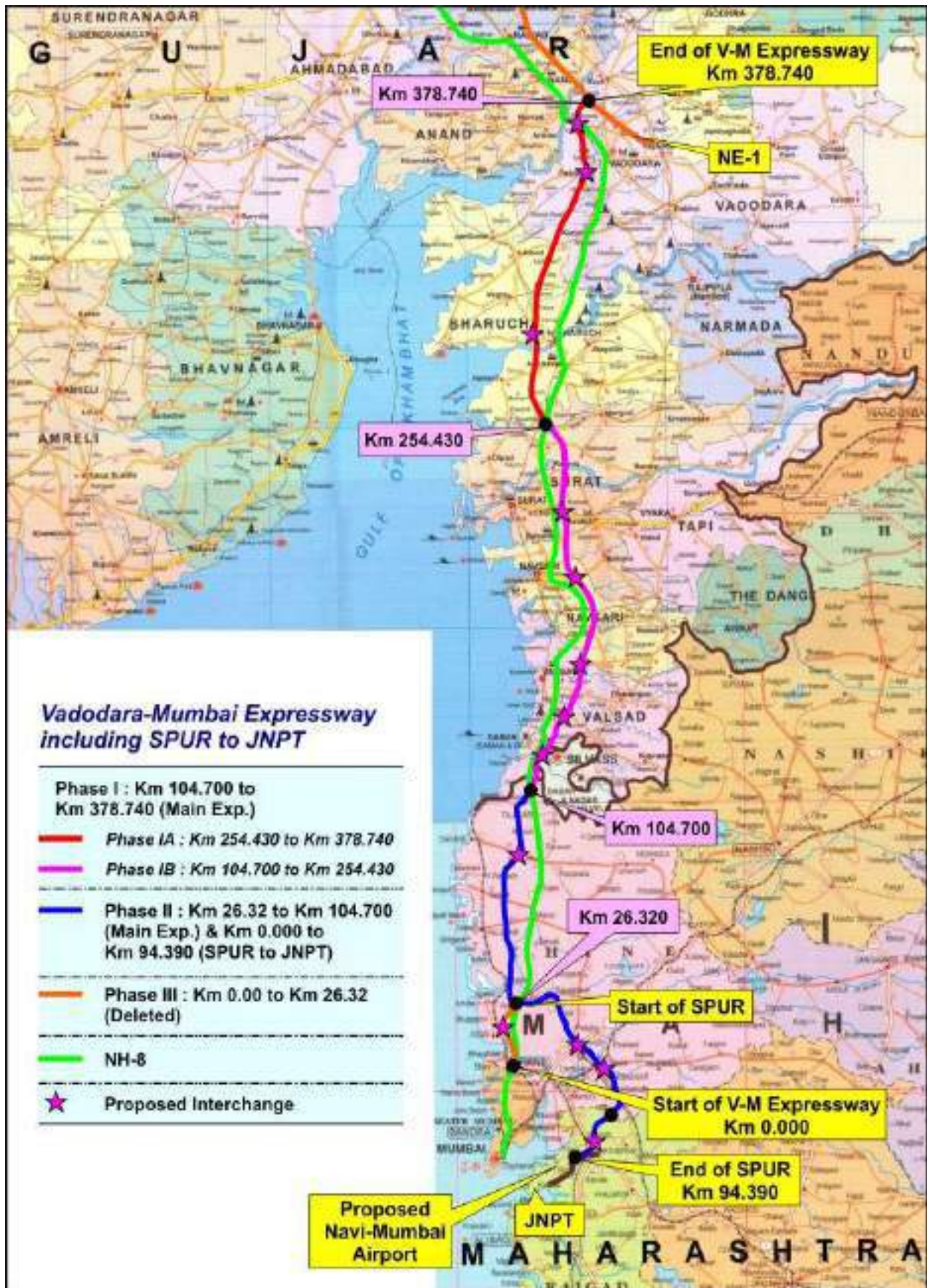


Figure 1-1 Index Map showing various phases of Proposed Vadodara Mumbai Expressway

- B. Phase II (Main Expressway):** This section starts from chainage 26+320 near Vasai (revised to chainage 26+582 in March 2019). It terminates at chainage 104+700 on the junction with new NH-48 [km.390.864 of new NH-48 (old NH-8)]. This **Social Impact Assessment Report deals with development of VME Phase II (Main Expressway).**
- C. Phase II (SPUR):** Start point of SPUR (ch. 0+000) is chainage 26+320 of the main expressway (revised to Ch. 26+582 in March 2019). It ends at chainage 94+390 at km 24.476 of NH-4B near JNPT (length 94.390 km) in the state of Maharashtra.
- D. Phase III:** From proposed chainage 0+000 to 26+320 (26.320 km) in Thane District of Maharashtra. The consultant recommended deletion of this stretch to avoid large scale displacement of people & demolition of residential, commercial and industrial establishments at Mira-Bhaynder & Vasai-Virar Municipal area. This recommendation has been accepted by the PWD, Government of Maharashtra and gave No Objection for exclusion of Phase-III vide letter no. NHP 2014/CR171/N.H.1 dated May 22, 2018.

1.2 PROJECT DESCRIPTION

The proposed project is the development of 8 lane access-controlled green-field Vadodara Mumbai Expressway (Phase-II). The expressway starts at proposed chainage 26+320 (at Koshimb village of Vasai Taluka) and ends at proposed chainage 104+700 [km 390+864 of new NH-48 (old NH-8)] at Ibhadpada village of Talasari Taluka in the state of Maharashtra (78.380 km).

The proposed SPUR of VME was initially decided to starts from Km 26+320 of main expressway. However, after the decision for deletion of Phase-III of VME (as discussed in Section-1.1) and finalization of development proposal of SPUR; a meeting was held on 22nd March 2019 in the office of Regional Officer (NHAI) Mumbai, where it is decided that the start point of SPUR will be at Km 26.582 of main expressway of VME. Therefore, the start point of Phase-II main expressway is revised from km 26+320 to Km 26+582, which eventually reduces the length of the main expressway by 262 m. **Revised length of the VME (Phase-II) main expressway is 78.118 km.** The proposed alignment is passing through 4 talukas of Palghar district in the state of Maharashtra. The Taluka wise length of proposed expressway is given in **Table 1-1**.

Table 1-1 Taluka wise break-up of Length of Proposed Expressway

District	Taluka	No. of Village	Start Chainage	End Chainage	Length (Km)
Palghar	Vasai	3	26+582	31+000	4.418
	Palghar	27	31+000	68+400	37.400
	Dahanu	15	68+400	96+200	27.800
	Talasari	6	96+200	104+700	8.500
Total		51			78.118

Source: DPR Prepared by the ICT Pvt. Ltd.

The villages / settlements through which the expressway is traversing in Phase II are given in **Table 1-2**.

Table 1-2 Chainage wise List of Villages / Settlements along the Proposed Expressway

Sl. No.	Taluka	Village	Start Chainage	End Chainage	Length (m)
1.	Vasai	Koshimb	26+582	28+375	1,793
2.	Vasai	Khardi	28+375	29+600	1,225
3.	Vasai	Doliv	29+600	31+000	1,400
4.	Palghar	Vadhiv	31+000	31+600	600
5.	Palghar	Navghar	31+600	32+875	1,275
6.	Palghar	Ghateem	32+875	33+800	925
7.	Palghar	Penand	33+800	35+700	1,900
8.	Palghar	Sonave	35+700	37+680	1,980
9.	Palghar	Pargaon	37+680	39+520	1,840
10.	Palghar	Girale	39+520	40+550	1,030
11.	Palghar	Nagav	40+550	41+700	1,150
12.	Palghar	Navje	41+700	43+020	1,320
13.	Palghar	Sakhare	43+020	44+900	1,880
14.	Palghar	Dahisar	44+900	45+000	100
15.	Palghar	Khambloli	45+000	47+350	2,350
16.	Palghar	Dhukthan	47+350	50+300	2,950
17.	Palghar	Govade	50+300	50+450	150
18.	Palghar	Masvan	50+450	51+700	1,250
19.	Palghar	Vandivali	51+700	52+700	1,000
20.	Palghar	Vakadi	52+700	53+350	650
21.	Palghar	Vasroli	53+350	53+420	70
22.	Palghar	Katale	53+420	54+320	900
23.	Palghar	Lovare	54+320	56+550	2,230
24.	Palghar	Nihe	56+550	58+400	1,850
25.	Palghar	Nagzari	58+400	60+020	1,620
26.	Palghar	Lalonde	60+020	61+000	980
27.	Palghar	Kirat	61+000	63+600	2,600
28.	Palghar	Borsheti	63+600	64+700	1,100
29.	Palghar	Ravte	64+700	66+450	1,750
30.	Palghar	Chinchare	66+450	68+400	1,950
31.	Dahanu	Dhabon	68+400	72+200	3,800
32.	Dahanu	Aine	72+200	73+000	800
33.	Dahanu	Rankol	73+000	75+850	2,850
34.	Dahanu	Chandwad	75+850	77+080	1,230
35.	Dahanu	Navnath	77+080	77+330	250
36.	Dahanu	Ganjad	77+330	77+900	570
	Dahanu	Navnath	77+900	79+100	1,200
37.	Dahanu	Somnath	79+100	79+570	470
	Dahanu	Navnath	79+570	81+000	1,430
38.	Dahanu	Ganeshbagh	81+000	82+500	1,500

Sl. No.	Taluka	Village	Start Chainage	End Chainage	Length (m)
39.	Dahanu	Awadhani	82+500	82+850	350
40.	Dahanu	Dhanivari	82+850	86+750	3,900
41.	Dahanu	Chinchale	86+750	89+650	2,900
42.	Dahanu	Talote	89+650	90+480	830
43.	Dahanu	Punjave	90+480	91+140	660
	Dahanu	Talote	91+140	91+215	75
	Dahanu	Punjave	91+215	91+215	0
	Dahanu	Talote	91+215	91+580	365
44.	Dahanu	Bharmanwadi	91+580	93+380	1,800
45.	Dahanu	Vankas	93+380	96+200	2,820
46.	Talasari	Vadavali	96+200	97+900	1,700
47.	Talasari	Savane	97+900	98+300	400
48.	Talasari	Kawad	98+300	98+945	645
49.	Talasari	Awarpada	98+945	99+920	975
	Talasari	Kawad	99+920	101+280	1,360
50.	Talasari	Talasari	101+280	104+200	2,920
51.	Talasari	Ibhadpada	104+200	104+700	500
Total Length					78,118 km

Source: DPR Prepared by the ICT Pvt. Ltd.

1.3 SOCIAL IMPACT ASSESSMENT

The social impact assessment and Resettlement Action Planning component has following elements:

- Enumeration of affected properties and baseline socio-economic survey of the potentially affected Families;
- Consultations with stakeholders at various levels;
- Preparation of a time-bound Resettlement Action Plan (RAP).

The enumeration of properties has been carried out through Joint Measurement survey (JMS) to register and document all the properties in land acquisition area. It is a process to assess the status of the potentially affected population within the project impact area, their assets, and sources of livelihood.

The socio-economic data has been collected from different secondary sources and has been analyzed to understand the demographic profile of affected area. The analysis provides a baseline against which mitigation measures and support has been evaluated & measured. Socio-economic analysis comprehensively assesses people's assets, incomes, important cultural or religious networks or sites, and other sources of support such as common property resources.

1.4 LAND ACQUISITION AND PROJECT IMPACT

In the process, various types of land such as commercial, residential and agricultural would be affected. At this stage, it is estimated that total land requirement for proposed greenfield expressway is around **710.3247 Hectares**. The social assessment also reveals that about 51 villages are falling within the proposed RoW of the expressway and several pucca / kutchha structures are being affected, most of which is the residential structures as detailed in Chapter 3.

1.5 MEASURES TO MINIMIZE IMPACTS

Efforts have been made to minimize the resettlement impact on the existing structures, while finalizing the expressway alignment by adopting appropriate engineering design. An attempt was made at this final stage to minimize the negative social impact, i.e. to save the structured properties, to avoid displacement and to reduce disruption of livelihoods in settlement areas in proposed Greenfield alignment. To take a decision, emphasis was made on minimizing the impacts within the limitations of technical feasibility and cost effectiveness. The options considered for minimizing negative social impacts included design considerations and public consultations.

To make the project peoples' friendly, the role of the NGOs/ CBOs, working in the area, will be very important. However, Public consultation has been carried out during project designing period, which helps in getting better planning and designing inputs towards minimizing negative social impacts.

1.6 BENEFITS TO THE PROJECT REGION POPULACE

The following additional inputs have been taken for improved project design to benefit the expressway users as well as the local populace.

- Provision for adequate traffic signs on the proposed expressway, including cross walks, underpasses;
- Provision for improved infrastructure for expressway side rural markets;
- Public amenities such as rest rooms, telephone booths, and facilities for public conveniences (co-operation of the Private sector would be sought).

The proposed project would also facilitate faster and smooth vehicular movement, ensure safety and will increase the connectivity of interior resource hinterland with the major market centers. With the better connectivity and increased mobility, access to quality consumer products would be ensured. As per the people's perception the improved highway will contribute directly to more vibrant market economy.

In an area of acute underemployment and poverty, some employment will be generated during the expressway construction for the unskilled construction laborers, who migrate

from interior villages. This way they can be assured of employment for a substantial period of 3-4 years as well as for getting an opportunity to enhance their skill.

1.7 OBJECTIVES OF THE SOCIAL IMPACT ASSESSMENT

The report on Social Impact Assessment has been prepared keeping the following broad objectives:

- The negative impact on persons affected by the project would be avoided or minimized.
- Affected people and the beneficiary population will be informed and consulted about the project and its design.
- Where the negative impacts are unavoidable, the project-affected persons will be assisted in improving or regaining their standard of living. Vulnerable groups will be identified and assisted in improving their standard of living.
- People's participation will be undertaken in planning and implementation of the project.
- All information related to prepared documents and implementation will be disclosed to APs (Affected Population).

1.8 DATA COLLECTION FROM PRIMARY AND SECONDARY SOURCES

This report has been based, largely, on primary data collected during field survey but it also includes a review of available secondary data on baseline information. Relevant baseline data on socio-economic and cultural conditions were collected from various available secondary sources, like Census Handbooks and District Gazetteers, Maharashtra Government website maintained by the NIC, etc., to understand the socio-economic context of the proposed project and for providing necessary inputs for social analysis of the project.

1.9 REPORTING REQUIREMENTS

Keeping in mind the above requirement, this report has been organized in following Chapters:

- Chapter-1 : Introduction and Methodology
- Chapter-2 : Socio-Economic Profile of the Project Area
- Chapter-3 : Evaluation of Social Impact and Land Acquisition
- Chapter-4 : Resettlement Policy and Legal Framework
- Chapter-5 : Public Consultations and Stakeholder Analysis
- Chapter-6 : Resettlement Budget

CHAPTER-2: SOCIO-ECONOMIC PROFILE OF THE PROJECT AREA

2.1 INTRODUCTION

The project influence area of the proposed Greenfield expressway in **Phase-II** of main expressway traverses in the district of Palghar of Maharashtra state. The proposed expressway of this phase starts from Km 26+582 and ends at Km 104+700, comprising a total length of 78.118 Km. In the light of above circumstance, the socio-economic profile of the project area will elucidate the details of the district coming in the way of Greenfield expressway.

Main demographic features of the project impacted district have been presented in this chapter. The description of socio-economic features of the district and project affected villages through which the greenfield expressway traverses, comprises the demographic, social and economic aspect of the population, which includes the features of population distribution, density of population, workforce and share of workers in major economic categories and the vulnerable groups. Main socio-economic and demographic features of the project affected district and villages have been delineated in the subsequent paragraph.

2.2 PALGHAR - THE PHYSICAL FEATURES AND THE DISTRICT PROFILE

2.2.1 Area and Location

Palghar District is a district in the state of Maharashtra in Konkan Division. On 1 August 2014, the Maharashtra State government announced the formation of the 36th district of Maharashtra, when a new Palghar District was carved out of the old Thane district. Palghar District starts from Dahanu at the north and ends at Naigaon. It comprises the talukas of Palghar, Vada, Vikramgad, Jawhar, Mokhada, Dahanu, Talasari and Vasai-Virar. In the 2011 Census, the talukas which was made part of Palghar district had a total population of 2,990,116.



Palghar has an urban population of 1,435,210 that is 48% of total population. The district is bounded by Thane and Nashik Districts on the east and northeast, and by Valsad District of Gujarat state and Union Territory of Dadra and Nagar Haveli on the

north. The Arabian Sea forms the western boundary, while Vasai-Virar is part of Mumbai Metropolitan Region.

2.2.2 History of Palghar

The part of the country's largest urban sea-hill of Thane District, divisioned on 1st August 2014 or 36th new district Palghar came into existence. The working time of a new district in the presence of then Chief Minister Prithviraj Chavan and then Revenue Minister Balasaheb Thorat started from 1st August 2014. Palghar is the 36th district of the state. It is spreaded between the west coast of the Arabian Sea and the Sahyadri Mountains rows that are east of the Northern District of Palghar. Total population of Palghar district is around 2,990,116.

Until 1 August 2014, the talukas now comprising Palghar District formed a part of Thane District. After a struggle and demand for almost 25 years, for bifurcation, the creation of the new district was approved by the Cabinet of Maharashtra on 13 June 2014 and the new district of Palghar came into existence on 1 August. Abhijit S. Bangar was the first Collector of the district. Vijay Suryavanshi was the first Chief Executive Officer and Suvez Haq was the first district Superintendent of Police.

2.2.3 Geography

The district is the northern most part of the Konkan lowlands of Maharashtra. It comprises the wide amphitheater like Ulhas basin on the south and hilly Vaitarna valley on the north together with plateaus and the slopes of Sahyadri. From the steep slopes of the Sahyadri in the east, the land falls through a succession of plateaus in the north and center of the district to the Ulhas valley in the south. The distance from the parts of different palaces to headquarters Palghar by road is as follows: Khodala 138 km, Mokhada 112 km, Jawhar 75 km, Vikramgad 60 km.

The main river flowing through the district is the Vaitarna. The river has many tributaries; the most important of them are Barvi and Bhatsa, Pinjal, Surya, Daherja and Tansa. Vaitarna, the largest of Konkan Rivers rises in the Tryambak hills in Nashik district, opposite to the source of Godavari. The river flows across Shahapur, Vada and Palghar talukas and enter the Arabian Sea through a wide estuary off Arnala. Vaitarna River is 154 km long and has a drainage area that practically covers the entire northern part of the district. Ulhas River which flows to Arabian Sea is Vasai creek, district's southern border. Arnala Island is located in Vasai taluka, at the entrance to the Vaitarna estuary.

2.2.4 Climate

Climate of the study area is characterized by high humidity throughout the year, a hot summer followed by well distributed and heavy rainfall during the southwest monsoon season. The normal annual rainfall in the study area ranges from 1900 mm to 2600 mm

and mean annual rainfall during the year 1981 to 2010 is 1874.6 mm.

2.2.5 Flora, Fauna and Forest

The project alignment is running parallel to the west coast. The coastal region is flat and subject to flooding and periodic inundation both by the Arabian Sea and the rivers. In this region, the rivers form marshy estuaries in the broad tidal flats. The marshes support mangrove vegetation - Tiwar (*Avicennia alba*) and Maraudi (*Acanthus ilicifolius*). Plantation of Suru (*Casuarina equisetifolia*) and Coconut (*Cocos nucifera*) is done in the coastal areas. Among tree species, *Tectona grandis*, *Phoenix dactylifera*, *Bombax ceiba*, *Terminalia tomentosa*, *Butea monosperma*, *Acacia catechu* etc. for found in the area.

The fauna of project area is based on direct sighting during field survey, stakeholder consultation, review of Forest working plan of Dahanu Division, Wildlife Management plan of Tungeshwar Wildlife Sanctuary, DNH Wildlife Sanctuary and published literature. The fauna of the project area comprised of Schedule-I and threatened species such as *Panthera pardus*, *Felis chaus*, *Tragulus meminna*, *Axis axis*, *Sus scrofa*, *Antilope cervicapra*, *Muntiacus muntjak*, *Accipiter badius*, *Gyps bengalensis*, *Haliaeetus leucogaster* etc.

The Forests of Dhanu Division are classified into following categories as per the Classification of Indian Forest Types by Champion and Seth (1968).

- A. Tropical Southern moist Teak bearing Forests
- B. Tropical Southern moist mixed deciduous Forests
- C. Western sub-tropical Hill Forests
- D. Mangrove Scrub Forests

The proposed expressway does not pass through any Wildlife Sanctuary, National Park etc. it is located at a distance of 1.28 km from the boundary of Tungareshwar Wildlife Sanctuary and at a distance of 0.456 km from the notified Eco-Sensitive Zone boundary of Tungareshwar Wildlife Sanctuary i.e. outside the Eco-Sensitive Zone. Approx. 27.745 km stretch of the proposed expressway is traversing through Dahanu Taluka Ecologically Sensitive Area (proposed km 68+455 to Km 96+200).

2.2.6 Land Use Pattern

The total geographic area of Palghar district is 5,17,634 ha. According to 2011 Census the Land use patterns indicate that 42% is under cultivation while 37% is under forest. The 4% is cultivable waste land. While 1% is current fallow land of the total geographical area.

- **Land Use within PROW (100m-120m):** Agricultural and allied uses occupied largest part amounting 73.13% of the total area, followed by open scrub (13.41%), barren land (6.48%), reserved forest (2.71%), surface water bodies (2.12%), settlements (1.37%), mangrove forest (0.36%), open mixed forest (0.24%), mudflats (0.15%) and marshy land (0.04%)
- **Land Use within Study Area:** Total study area is 3027.325 ha. Agriculture land occupied major part (48.27%) of the total area, followed by reserved forest (31.39%), settlement (both urban and rural) (5.83%), surface water bodies (3.66%), marshy land (22.82%), open scrub (2.57%), open mixed jungle (1.83%), industrial (1.1%), mangrove forest (0.85%), salt pan (0.71%), barren land (0.64%), mudflats (0.34%).

2.2.7 Agriculture

Agriculture is the main occupation of the people residing in project area. Paddy (*Oryza sativa*) is grown in the low lying areas and nagli (*Eleusine coracana*) and warai (*Panicum sumatrense*) in the hilly tract. Pulses (cowpea, blackgram, pigeon pea, chick pea), and ground nut are also cultivated. Farms of Chickoo (*Manilkara zapota*), Naryal (*Cocus nucifera*), Papaya (*Carica papaya*) and Banana (*Musa sps*) are located in the area. Taal (*Borassus flabellifer*), Teak (*Tectona grandis*), Chinch (*Tamarindus indica*), Mango (*Mangifera indica*), Neem (*Azadirachta indica*), Khajoor (*Phoenix dactylifera*), Karanj (*Pongamia pinnata*), Pipal (*Ficus religiosa*), Umber (*Ficus glomerata*), Palash (*Butea monosperma*), Khair (*Acacia cataechu*), Drumstick (*Moringa oleifera*) and Gulmohar (*Delonix regia*) are commonly found in the area

2.2.8 Economy

Palghar has India's first atomic power plant located at Tarapur. The industrial town of Boisar is also home to one of Maharashtra's largest industrial areas at Tarapur MIDC. However, Palghar district has 5757 small registered Industries, 1883 temporary small registered industries and 427 large / medium industries. Maharashtra's largest fishing port is Satpati, Dahanu, Arnala, Vasai and Datiware are also major fishing ports. Dahanu is best known for their chickoo production in the whole of India. A special Chickoo festival is held every year at Bordi beach in Dahanu.

2.2.9 Culture, Fair and Festivals

Although the culture of Thane/ Palghar is greatly influenced by the cosmopolitan lifestyle of Mumbai, it aptly maintains its traditional heritage. The most popular dance form here is Lavani, supplemented by other traditional dance styles like Bharatnatyam, Kathak, Odissi as well as modern dances like Ballet. Coming to festivals, Thane/ Palghar observes Ganesh Chaturthi with full gusto and enthusiasm as in all of Maharashtra. Apart from this, Holi, Diwali, Gudhi Padwa, Durga Puja, Janmashtami, Navratri, Dahi

Handi and Shivaji Jayanti are also celebrated with equal fervour. Thane/ Palghar offer the best of street foods across India, the signature dishes being Vada Pao and Pav Bhaji. The city specialises in Konkani cuisine along with its much known indulgence in snacks particularly 'Bhajjiyas' and 'Pakodas'. The folk art and craft of Thane/ Palghar is another marker of its rich cultural heritage.

Janmashtami, the birthday of Shri Krishna, is celebrated with great splendour. Rows of lights are lit everywhere, Kirtans and Bhajans are sung, sermons are delivered and Krishna is worshipped in his infant form. Krishna is Lord Vishnu's eighth avatar (incarnation) on earth.

Diwali which leads us into Truth and Light is celebrated on a nation-wide scale on Amavasya - the 15th day of the dark fortnight of the Hindu month of Ashwin (October/ November) every year. It symbolizes that age-old culture of our country which teaches us to vanquish ignorance that subdues humanity and to drive away darkness that engulfs the light of knowledge. Diwali, the festival of lights even to-day in this modern world projects the rich and glorious past of our country and teaches us to uphold the true values of life. This festival is essentially religious in nature. It is celebrated with true devotion in the various temples dedicated to the Mother, or Mataji, as she is familiarly called. In some homes, images of the Mother are worshipped in accordance with accepted practice. This is also true of the temples, which usually have a constant stream of visitors from morning to night.

Holi in Maharashtra is one of the festivals that celebrate the vibrant spirit of the people. Holi is a festival of color and happiness, and on this day it is a custom to resolve all differences with everybody, including enemies. The festival, Holi has its origin in the legend of Lord Krishna. Lord Krishna used to take active part in Holi. During this festival, it is also customary to drink buttermilk, as it was the favorite drink of Lord Krishna. On the eve of Holi, a beautiful bonfire is decorated with flowers and fruits. Many people also offer home cooked food or other edibles such as raw mangoes, coconut, corn, toys made up of sugar or khoya (a milk product) to the bonfire as their offerings to the Goddess Holika. It is also a ritual to put a vermilion mark on each other's forehead and hug each other on this day.

2.2.10 Rail Transport

Palghar has its own Railway Station named as Palghar Railway Station which is connected to the major cities of Maharashtra. It is linked with the cities like New Delhi, Bangalore, Mysore, Jamnagar, Chennai, Kanyakumari, Puri, Nasik, Surat, Ahmedabad and Jaipur through Dehradun Express, Lok Shakti Express, Ahmedabad Passenger, Ranakpur Express and Saurashtra Express.

2.2.11 Road Transport

Palghar is 90 Kms from Thane, 106 Kms from Mumbai, 162 Kms from Nasik, 216 Kms from Surat, 237 Kms from Pune, 460 Kms from Ahmedabad, 797 Kms from Hyderabad and is well connected through Maharashtra State Road Transport Corporation (MSRTC) and some private travel services.

2.2.12 Air Transport

The nearest International Airport is Chhatrapati Shivaji International Airport, Mumbai, roughly two hour drive from Palghar. It is well connected to a spectrum of cities in the country such as Bhopal, Bhubaneswar, Ahmedabad, Aurangabad, Bangalore, Chandigarh, Delhi, Goa, Gwalior, Jaipur, Jamnagar, Hyderabad, Indore and Jodhpur through Air India, Air France, Air China, Air Arabia and Air India Express.

2.2.13 Tourism

Jawhar Rajwada: Jawhar is a small hill station municipal council situated on a plateau of sahyadris between rift valleys in Palghar district. It is located at a distance of 42 km from Palghar district. It is also known as the 'Mahabaleshwar of Palghar District'. As one of the lesser known hill stations of Maharashtra, the place is gifted with exotic valleys, thick rich forests and pleasant climate. The monsoons are the best time to visit Jawhar when a thick fog envelopes the village and the surrounding hills. Jawhar is popular for its lively Warli paintings. This hill station is one of the few tribal kingdoms in Maharashtra that offers a unique opportunity to expose and enlighten with the tribal way of life. Unspoiled and mostly unexplored waterfalls are the prominent tourist attractions in Jawhar. Jawhar is highly enriched with natural beauties and manmade marvels.



Arnala Fort: Arnala is one of the best forts from coastal forts. It is located in Arnala village of Vasai taluka. Arnala Fort is also known as 'Jaldurg' or 'Janjire Arnala'. The Arnala was captured by many empires such as Mughals, Marathas, Portuguese, and lastly Peshwas. The sultan Mahmud Begda originally constructed the fort in 1516. There is no source of food but water is available in the well on the fort. This fort is rectangular in shape and almost surrounded by water. There are many temples such



as Tryambakeshwar, Bhavani Mata, Kalika Mata and Mahadev. There are three entrances out of which one entrance has big bastions on both sides which are at north side of fort.

Vasai Fort: Vasai, also called Bassein, lies about 45 kms of Palghar City. It is located in Vasai taluka. The Portuguese built the Vasai Fort to strengthen their naval superiority over the Arabian Sea. The coastal land-fort of Vasai was surrounded by sea on three sides and to the landslide it had a moat which was filled by sea-water. Its 4.5 kms long strong stone wall had 11 bastions. The fort had two gates- the westward land-gate. There was also a small citadel in the fort well-equipped with water-tanks, store-houses, armory, etc., the fort also had fields for growing grains and vegetables. All the old structures inside the wall are now in ruins. Vasai was the main naval base and sort of ship-building centre of the Portuguese.



Gambhirgad: Gambhir in Marathi means 'serious'. So, Gambhirgad and its environment is according to its name quite 'serious'. It is situated in Dahanu taluka of Palghar district and on Gujarat border. Approaching the fort, one first reaches the plateau which is the machi of the fort. It has lot of uncontrolled growth of wild plants. There is nothing much to see on the machi. A beautiful water tank comes along the way to climb the fort. There is a temple of a goddess located here. Mahalakshmi pinnacle and forts namely Asheri and Adsul are visible from this fort.



Tarapur Fort: The Tarapur Fort, with wells and gardens within, was given in gift by the Peshwa to Vikaji Mehrji, for a hundred years, and is still held by his heirs, and is currently in custody of Chorge family. It is located in Boisar village of Palghar taluka. Another beautiful site is the Chinchani beach, one and a half kilometers north of the fort. The fort was surrounded by a wall with round bastions, and besides quarters for the garrison, it had a church, a Dominican monastery, and a hospital. In 1739, the fort was attacked by the Marathas under Chimnaji Apa. Four mines were laid, of which two succeeded in making great breaches in a bastion and curtain. Inside the fort were some inferior buildings. There were two granaries and a guard-room, with some inferior buildings and several wells containing



abundant and excellent water. Vasai was the main naval base and sort of ship-building center of the Portuguese.

Kaldurga: Kaldurga fort is hill type fort and is located in Palghar District. The height of this fort is about 1550 feet. The fort range is Palghar and grade is medium. The Palghar range contains many hill forts and Kaldurga is one of them. The top of the fort is rectangular. Due to this rectangular shape of fort one can easily locate it from a distance. There is no sign which states that this is a fort. There are large numbers of forest trees on the fort so healthy population of tribes is on the fort. But standard of living is poor. The fort is divided due to this rectangular rock as fort above the rock and fort below the rock. There are two to three steps which separate these two parts.



Kelva Fort: Kelva Fort, a historically important fort constructed by Portuguese during 16th century, is located at the southern end of the beautiful and serene Kelva Lake. The fort was used by Chhatrapati Shivaji Maharaja during his Maratha rule. The fort offer exquisite panoramic views of the natural surroundings covered by greenish Suru trees. The fort, surrounded all the sides by the water, provide enchanting eye catching experience during the tidal procession and recessions. During low tide periods this is accessible and visible perfectly and local country boat facility is available to approach the fort.

Kamandurg: Kamandurg is situated in Vasai taluka of Palghar district. People residing in Belkadi belong to Adivasi community-Varli and are very helpful. One has to cross 4 water streams and the 3rd stream is 40feet wide. There are 5 water cisterns on the plateau and a stone with image of an idol carved on it. The entire region is covered with thick forest and looks green. A beautiful view of Vasai creek can be seen. There are 2 peaks and one has to descend and make a traverse and then climb from the other side to reach on the second peak.



Shirgaon Fort: Shirgaon fort is located at one side of Shirgaon beach in Palghar. The fort was used by great Maratha King Chhatrapati Shivaji as a place to keep a watch on enemies coming through Arabian Sea. The ancient fort is in ruins now. The Portuguese had



dominance over this fort before Marathas. In 1818, the British captured this fort from the Marathas. The fort stands about 200 feet tall and spans more than 150 feet. The Portuguese renovated this fort and increased its area while keeping the original brick and red stone construction intact. The five feet cannon on the northwest of citadel marks the history of the battles that took place over here. The picturesque environs of the fort and cleanliness attract many historians apart from the regular tourists. The most exciting bit is the palm tree with six to seven branches, a rarity. Shirgaon fort is well fortified and the walls are in good condition. There are many hidden caves in the walls of the fort.

2.3 DEMOGRAPHIC AND SOCIO-ECONOMIC FEATURES OF PROJECT INFLUENCE DISTRICT

2.3.1 Total Population

The total population of project impacted district is nearly 2.9 million. The population percentage of the project influence district is presented in the following **Table 2-1**.

Table 2-1 Population Likely to be benefited by Project Implementation

Name of State/District	Population	Percentage
Maharashtra	112374333	100
Palghar	2990116	2.66

Source: PCA 2011 & <https://palghar.gov.in/about-district/>

2.3.2 Population Density

The district has been incorporated in the year 1st August 2014. Hence now decadal comparison is not available. The present density of the Palghar district is 578/ km² which is greater than the state (370/ km²). This is evident from the following **Table 2-2**.

Table 2-2 Population Density

Name of State/District	Persons per km ²
	2011
Maharashtra	370
Palghar	578

Source: PCA 2011 & <https://palghar.gov.in/about-district/>

2.3.3 Vulnerable Population

As per the Land Acquisition, Rehabilitation and Resettlement (LARR) Act 2013, people belonging to Scheduled Castes & Scheduled Tribes are to be considered as vulnerable population and are eligible for special assistance under law. The census data summarizes the numbers of SC and ST population of project influence Palghar district in the following **Table 2-3**.

Table 2-3 Tribal and SC Population

Project Influence State / District	Total Population	SC Population	ST Population
Maharashtra	11,23,74,333	1,32,75,898	1,05,10,213
Palghar	29,90,116	86,978	11,18,008

Source: PCA 2011 & <https://palghar.gov.in/about-district/>

2.3.4 Literacy Rate

It is also clear from the **Table 2-4** that the literacy rate of Palghar district is less than the state literacy rate.

Table 2-4 Literacy Rate

Project Influence State / District	Literacy Rate (Percentage)
Maharashtra	82.34%
Palghar	66.65%

Source: PCA 2011 & <https://Palghar.gov.in>about-district>

2.3.5 Distribution of Population by Workers and Non-Workers and Occupation

It has been revealed from the primary census data 2011 that most of the populations of the project influence talukas of Palghar district are largely engaged in agriculture and allied activities. However, the agriculture is the main occupation of its inhabitants in the project influenced talukas of district as it is evident from **Table 2-5**.

Table 2-5 Distribution of Population by Workers and Non-workers

State/Talukas of District	Working Population	Male	Female	Total
Maharashtra	Main Workers	29989314	13773576	43762890
	Marginal Workers	2627561	3037427	5664988
	Non- Workers	25626181	37320274	62946455
	Total	58243056	54131277	112374333
Vasai-Virar	Main Workers	379419	113989	493408
	Marginal Workers	28833	24468	53301
	Non- Workers	301519	495174	796693
	Total	709771	633631	1343402
Palghar	Main Workers	145151	46826	191977
	Marginal Workers	25577	21543	47120
	Non- Workers	117786	193283	311069
	Total	288514	261652	550166
Dahanu	Main Workers	90031	55556	145587

State/Talukas of District	Working Population	Male	Female	Total
	Marginal Workers	17492	22960	40452
	Non- Workers	92051	124005	216056
	Total	199574	202521	402095
Talasari	Main Workers	27171	14859	42030
	Marginal Workers	9872	12145	22017
	Non- Workers	39374	51397	90771
	Total	76417	78401	154818
Jawhar	Main Workers	24761	19808	44569
	Marginal Workers	12029	13963	25992
	Non- Workers	32543	37083	69626
	Total	69333	70854	140187
Mokhada	Main Workers	18722	15805	34527
	Marginal Workers	4118	5542	9660
	Non- Workers	18851	20415	39266
	Total	41691	41762	83453
Vada	Main Workers	39699	19073	58772
	Marginal Workers	13202	12850	26052
	Non- Workers	39089	54457	93546
	Total	91990	86380	178370
Vikramgad	Main Workers	30909	26723	57632
	Marginal Workers	7064	9708	16772
	Non- Workers	30516	32705	63221
	Total	68489	69136	137625

Source: Census of India 2011

Table 2-6 contains occupational structure of work force in the project affected talukas of Palghar district. Talukas wise breakup suggests that occupation in agricultural sector is greater than other sector in all talukas of Palghar district and more workers who are involved in agricultural and allied activities whereas the rest of them are involved in either HH industries or other kind of work.

Table 2-6 Categories of Workers

State / Talukas of Palghar District	Categories	Male	Female	Total
Maharashtra	Cultivators	7181136	4296939	11478075
	Agricultural Laborers	5846810	5222118	11068928
	HH industries	606540	384770	991310

State / Talukas of Palghar District	Categories	Male	Female	Total
	Other Workers	16354828	3869749	20224577
	Total	2,99,89,314	1,37,73,576	4,37,62,890
Vasai-Virar	Cultivators	4599	2272	6871
	Agricultural Laborers	6414	4063	10477
	HH industries	8051	4349	12400
	Other Workers	328489	87037	415526
	Total	3,47,553	97,721	4,45,274
Palghar	Cultivators	15771	8115	23886
	Agricultural Laborers	17338	12628	29966
	HH industries	3355	1699	5054
	Other Workers	108687	24384	133071
	Total	1,45,151	46,826	1,91,977
Dahanu	Cultivators	23615	17365	40980
	Agricultural Laborers	23025	21215	44240
	HH industries	3450	1736	5186
	Other Workers	39941	15240	55181
	Total	90,031	55,556	1,45,587
Talasari	Cultivators	9331	5363	14694
	Agricultural Laborers	5484	5150	10634
	HH industries	552	390	942
	Other Workers	11804	3956	15760
	Total	27,171	14,859	42,030
Jawhar	Cultivators	9775	8770	18545
	Agricultural Laborers	10008	9215	19223
	HH industries	329	245	574
	Other Workers	4649	1578	6227
	Total	24,761	19,808	44,569
Mokhada	Cultivators	6370	4941	11311
	Agricultural Laborers	10122	9867	19989
	HH industries	230	189	419
	Other Workers	2000	808	2808
	Total	18,722	15,805	34,527
Vada	Cultivators	9076	5032	14108

State / Talukas of Palghar District	Categories	Male	Female	Total
	Agricultural Laborers	12509	9416	21925
	HH industries	768	458	1226
	Other Workers	17346	4167	21513
	Total	39,699	19,073	58,772
Vikramgad	Cultivators	16617	14489	31106
	Agricultural Laborers	10067	10196	20263
	HH industries	295	313	608
	Other Workers	3930	1725	5655
	Total	30,909	26,723	57,632

Source: Census of India 2011

2.4 SOCIO ECONOMIC PROFILE OF THE PROJECT AREA

2.4.1 Social and Demographic Profile of the Affected Villages

A social and demographic profile of the project-affected area/population is essential to create database and develop indicators for the evaluation of the SIA/RAP. To understand the social context of the proposed project and for providing necessary inputs for social analysis of the project, relevant baseline data on social, economic and cultural conditions were collected from various available primary and secondary sources. Due to the implementation of project, 51 settlements in the affected Palghar district are likely to be affected. Those settlements/ villages have been identified through primary and secondary sources and the same has been documented in the report. The important demographic features of the villages, i.e., population, social categories, literacy level and economy of the village are described as a part of baseline data in the following section.

2.4.2 Population

The population composition of any village is important to anticipate the extent of project impact. Keeping in mind the importance of demographic profile, the population of 51 affected villages was computed as per the data available in the primary census abstract 2011. The composition of population with respect to male and female population of potentially affected villages/ settlements is shown in **Table 2-7**.

Table 2-7 Distribution of the Population of Different Villages with Sex Composition

Sr. No	District	Taluka	Village Name	Male	Female	Total
1	Palghar	Vasai	Koshimbe*	NA	NA	NA
2			Khardi	655	638	1293

Sr. No	District	Taluka	Village Name	Male	Female	Total
3			Doliv	345	345	690
4			Wadhiv Saravali	396	376	772
5			Navghar	594	585	1179
6			Ghatim	342	367	709
7			Penand	615	591	1206
8			Sonave	1348	1302	2650
9			Pargaon	798	799	1597
10			Girale	489	461	950
11			Nagave	261	281	542
12			Navaje	997	1001	1998
13			Sakhare	820	832	1652
14			Dahisar T Manor	1267	1290	2557
15			Khamloli	769	765	1534
16			Dhuktan	1410	1440	2850
17		Palghar	Gowade	521	521	1042
18			Maswan	825	842	1667
19			Wandivali	265	279	544
20			Wakadi	162	149	311
21			Wasaroli	123	109	232
22			Katale	634	607	1241
23			Loware	563	555	1118
24			Nihe	1147	1099	2246
25			Nagzari	964	847	1811
26			Lalonde	690	797	1487
27			Kirat	878	839	1717
28			Borsheti	974	975	1949
29			Ravate	472	455	927
30			Chichare	461	452	913
31			Dabhon	1742	1702	3444
32			Aine	657	698	1355
33			Rankol	1436	1481	2917
34			Chandwad	622	660	1282
35			Navnath	821	930	1751
36		Dahanu	Ganjad	954	1012	1966
37			Somnath	989	951	1940
38			Ganeshbag	673	692	1365
39			Awadhani	1027	1110	2137
40			Dhaniwari	655	735	1390

Sr. No	District	Taluka	Village Name	Male	Female	Total	
41			Chinchale	749	700	1449	
42			Talothe	238	291	529	
43			Punjave	232	235	467	
44			Bramhanwadi	430	441	871	
45			Vankas	1903	2116	4019	
46		Talasari	Vadavali	2783	3108	5891	
47			Sawane	1652	1356	3008	
48			Kawade	1495	1632	3127	
49			Awarpada	767	795	1562	
50			Talasari	2166	2208	4374	
51			Ibhadpada	614	634	1248	
Total				42,390	43,086	85,476	

Source: Census of India, 2011

*As per PCA 2011, Population of Koshimbe village has been included in the Vasai-Virar City Municipal Corporation.

2.4.3 Social Classification

It is very important to identify vulnerable population during Social Impact Assessment. Social baseline data was applied to understand the social classification in affected settlements/ villages. Total tribal population of 51 villages is 67, 312 (Scheduled Cast – 1,377 and Scheduled Tribes – 65,935), which is 78.1% of the total population. As per Census of India, 2011, 100% population of Chandwad village is Scheduled Tribes. Out of 51 villages, maximum tribal population is observed in Vadavali village (5375 nos.). The assessment of the population under different social categories in the concerned settlements/ villages is discussed in **Table 2-8**.

Table 2-8 Social Classification in Villages

Sr. No	District	Taluka	Village Name	SC	ST
1	Palghar	Vasai	Koshimbe*	NA	NA
2			Khardi	0	60
3			Doliv	0	2
4		Palghar	Wadhiv Saravali	0	0
5			Navghar	4	309
6			Ghatim	0	387
7			Penand	0	1113
8			Sonave	16	1900
9			Pargaon	35	430
10			Girale	51	397
11			Nagave	0	16
12			Navaze	11	754
13			Sakhare	14	737

Sr. No	District	Taluka	Village Name	SC	ST
14			Dahisar T. Manor	83	1481
15			Khamloli	17	574
16			Dhuktan	86	2174
17			Gowade	19	623
18			Maswan	33	1249
19			Wandivali	0	523
20			Wakadi	18	286
21			Wasaroli	6	200
22			Katale	13	489
23			Loware	11	651
24			Nihe	0	1592
25			Nagzari	75	685
26			Lalonde	45	882
27			Kirat	0	1393
28			Borsheti	0	1641
29			Ravate	0	868
30			Chichare	0	909
31			Dabhon	10	3335
32			Aine	1	1273
33			Rankol	0	2508
34			Chandwad	0	1282
35			Navnath	3	1522
36			Ganjad	1	1782
37			Somnath	0	1938
38		Dahanu	Ganeshbag	4	1352
39			Awadhani	0	2126
40			Dhaniwari	0	1389
41			chinchale	0	1379
42			Talothe	0	528
43			Punjave	6	458
44			Bramhanwadi	0	855
45			Vankas	0	4005
46			Vadavali	21	5354
47			Sawane	0	2967
48		Talasari	Kawade	0	3116
49			Awarpada	540	1018
50			Talasari	0	4009
51			lbhadpada	0	1175
Total				1,123	65,696

Source: Census of India, 2011

*As per PCA 2011, Population of Koshimbe village has been included in the Vasai-Virar City Municipal Corporation

2.4.4 Educational Status

As per the Census 2011 data, in general, the numbers of male literates are higher than the female literates. Among 51 villages, highest literacy rate is observed in Vedhi village of Palghar Taluka (male – 93.34%, female – 79.88%). Lowest literacy rate among male observed in Dhaniwari village (44.01%) of Dahanu Taluka and among female observed in Ganeshbag village (18.52%) of Dahanu Taluka. In Dhaniwari and Ganeshbag village, tribal population is more than 99%. Overall literacy levels among tribals are lower than that of the general population and a gap is still exists between tribals vis-à-vis the total population. The latest Maharashtra Human Development Report admits that the condition of tribal population is far behind that of the other types of population in terms of most human development Indicators. The following **Table 2-9** delineates the literate population of the villages/ settlements.

Table 2-9 Number of Literates and Illiterates in the Project Influence Villages

Sr No.	District	Taluka	Villages	Literates			Illiterates			Literacy Rate	
				Male	Female	Total Literates	Male	Female	Total Illiterates	Male %	Female %
1	Palghar	Vasai	Koshimbe	NA	NA	NA	NA	NA	NA	NA	NA
2	Palghar	Vasai	Khardi	545	381	926	110	257	367	90.53	65.80
3	Palghar	Vasai	Doliv	260	194	454	85	151	236	83.60	64.24
4	Palghar	Palghar	Wadhiv Saravali	339	249	588	57	127	184	91.87	71.55
5	Palghar	Palghar	Navghar	462	388	850	132	197	329	86.84	72.93
6	Palghar	Palghar	Ghatim	228	201	429	114	166	280	79.17	66.56
7	Palghar	Palghar	Penand	424	312	736	191	279	470	78.66	59.88
8	Palghar	Palghar	Sonave	830	555	1385	518	747	1265	73.52	51.34
9	Palghar	Palghar	Pargaon	615	534	1149	183	265	448	86.86	75.32
10	Palghar	Palghar	Girale	327	249	576	162	212	374	77.30	61.79
11	Palghar	Palghar	Nagave	219	198	417	42	83	125	92.02	78.88
12	Palghar	Palghar	Navaze	738	582	1320	259	419	678	85.42	67.44
13	Palghar	Palghar	Sakhare	591	480	1071	229	352	581	84.19	66.12
14	Palghar	Palghar	Dahisar T. Manor	815	645	1460	452	645	1097	75.18	58.37
15	Palghar	Palghar	Khamloli	547	440	987	222	325	547	81.28	64.33
16	Palghar	Palghar	Dhuktan	999	756	1755	411	684	1095	81.02	60.67
17	Palghar	Palghar	Gowade	369	314	683	152	207	359	82.92	69.93
18	Palghar	Palghar	Maswan	573	520	1093	252	322	574	79.92	70.46
19	Palghar	Palghar	Wandivali	157	104	261	108	175	283	69.47	45.02
20	Palghar	Palghar	Wakadi	113	91	204	49	58	107	83.70	72.22
21	Palghar	Palghar	Wasaroli	84	69	153	39	40	79	88.42	68.32
22	Palghar	Palghar	Katale	450	343	793	184	264	448	82.57	65.96
23	Palghar	Palghar	Loware	369	294	663	314	337	651	77.04	61.76
24	Palghar	Palghar	Nihe	687	440	1127	460	659	1119	70.97	48.14
25	Palghar	Palghar	Nagzari	715	518	1233	249	329	578	83.63	69.34
26	Palghar	Palghar	Lalonde	442	320	762	248	477	725	76.21	47.48

Sr No.	District	Taluka	Villages	Literates			Illiterates			Literacy Rate	
				Male	Female	Total Literates	Male	Female	Total Illiterates	Male %	Female %
27	Palghar	Palghar	Kirat	492	339	831	386	500	886	68.72	46.37
28	Palghar	Palghar	Borsheti	558	340	898	416	635	1051	67.64	41.56
29	Palghar	Palghar	Ravate	245	160	405	227	295	522	63.97	42.11
30	Palghar	Palghar	Chinchare	211	130	341	250	322	572	58.29	36.52
31	Palghar	Dahanu	Dhabon	813	445	1258	929	1257	2186	58.74	32.01
32	Palghar	Dahanu	Aine	289	167	456	368	531	899	56.78	30.64
33	Palghar	Dahanu	Rankol	805	547	1352	631	934	1565	64.45	42.80
34	Palghar	Dahanu	Chandwad	248	174	422	374	486	860	49.90	31.41
35	Palghar	Dahanu	Navnath	320	180	500	501	750	1251	48.34	23.41
36	Palghar	Dahanu	Ganjad	575	456	1031	379	556	935	70.73	52.78
37	Palghar	Dahanu	Somnath	382	204	586	607	747	1354	51.90	27.79
38	Palghar	Dahanu	Ganeshbag	265	100	365	408	592	1000	48.89	18.52
39	Palghar	Dahanu	Awadhani	448	198	646	579	912	1491	52.40	21.83
40	Palghar	Dahanu	Dhaniwari	235	155	390	420	580	1000	44.01	25.04
41	Palghar	Dahanu	Chinchale	434	271	705	315	429	744	67.39	46.01
42	Palghar	Dahanu	Taloth	107	54	161	131	237	368	56.02	24.11
43	Palghar	Dahanu	Punjave	108	77	185	124	158	282	55.38	39.29
44	Palghar	Dahanu	Bramhanwadi	206	103	309	224	338	562	57.54	29.51
45	Palghar	Dahanu	Vankas	709	380	1089	1194	1736	2930	47.68	22.97
46	Palghar	Talasari	Vadavali	1562	1135	2697	1221	1973	3194	69.42	44.76
47	Palghar	Talasari	Sawane	937	288	1225	715	1068	1783	66.69	27.17
48	Palghar	Talasari	Kawade	661	393	1054	834	1239	2073	54.85	29.53
49	Palghar	Talasari	Awarpada	341	211	552	426	584	1010	54.21	32.36
50	Palghar	Talasari	Talasari	989	599	1588	1177	1609	2786	56.55	33.35
51	Palghar	Talasari	Ibhadpada	293	198	491	321	436	757	61.95	38.00

Source: Census of India, 2011

2.4.5 Workforce in Project affected villages

In general, majority of work force belongs to the category of main workers followed by the category of marginal workforce, however, in some cases; the numbers of marginal workers are more in comparison to main workers. The details of workforce of the affected villages are summarized in **Table 2-10**.

Table 2-10 Workers in the Project-Affected Villages

Sl. No.	District	Taluka	Village	Main Workers			Marginal Workers			Total Workers		
				Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Palghar	Vasai	Koshimbe	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	Palghar	Vasai	Khardi	152	123	275	29	34	63	181	157	338
3	Palghar	Vasai	Doliv	210	147	357	8	30	38	218	177	395
4	Palghar	Palghar	Wadhiv Saravali	255	12	267	4	1	5	259	13	272
5	Palghar	Palghar	Navghar	50	7	57	280	45	325	330	52	382

Sl. No.	District	Taluka	Village	Main Workers			Marginal Workers			Total Workers		
				Male	Female	Total	Male	Female	Total	Male	Female	Total
6	Palghar	Palghar	Ghatim	147	58	205	71	43	114	218	101	319
7	Palghar	Palghar	Penand	265	94	359	100	214	314	365	308	673
8	Palghar	Palghar	Sonave	596	317	913	141	249	390	737	566	1303
9	Palghar	Palghar	Pargaon	343	131	474	191	233	424	534	364	898
10	Palghar	Palghar	Girale	265	105	370	6	2	8	271	107	378
11	Palghar	Palghar	Nagave	99	13	112	61	14	75	160	27	187
12	Palghar	Palghar	Navaze	457	212	669	129	162	291	586	374	960
13	Palghar	Palghar	Sakhare	268	125	393	259	294	553	527	419	946
14	Palghar	Palghar	Dahisar T. Manor	613	514	1127	175	190	365	788	704	1492
15	Palghar	Palghar	Khamloli	448	410	858	7	1	8	455	411	866
16	Palghar	Palghar	Dhuktan	484	121	605	342	333	675	826	454	1280
17	Palghar	Palghar	Gowade	158	87	245	128	124	252	286	211	497
18	Palghar	Palghar	Maswan	284	117	401	216	249	465	500	366	866
19	Palghar	Palghar	Wandivali	141	110	251	3	2	5	144	112	256
20	Palghar	Palghar	Wakadi	6	6	12	88	30	118	94	36	130
21	Palghar	Palghar	Wasaroli	58	23	81	5	9	14	63	32	95
22	Palghar	Palghar	Katale	361	113	474	9	44	53	370	157	527
23	Palghar	Palghar	Loware	283	176	459	57	151	208	340	327	667
24	Palghar	Palghar	Nihe	659	582	1241	11	9	20	670	591	1261
25	Palghar	Palghar	Nagzari	219	60	279	172	153	325	391	213	604
26	Palghar	Palghar	Lalonde	400	226	626	42	63	105	442	289	731
27	Palghar	Palghar	Kirat	434	310	744	45	117	162	479	427	906
28	Palghar	Palghar	Borsheti	478	169	647	44	141	185	522	310	832
29	Palghar	Palghar	Ravate	268	263	531	11	7	18	279	270	549
30	Palghar	Palghar	Chinchare	218	211	429	20	21	41	238	232	470
31	Palghar	Dahanu	Dhabon	721	689	1410	199	148	347	920	837	1757
32	Palghar	Dahanu	Aine	307	230	537	38	36	74	345	266	611
33	Palghar	Dahanu	Rankol	438	491	929	139	155	294	577	646	1223
34	Palghar	Dahanu	Chandwad	309	334	643	42	38	80	351	372	723
35	Palghar	Dahanu	Navnath	358	373	731	11	33	44	369	406	775
36	Palghar	Dahanu	Ganjad	263	101	364	124	207	331	387	308	695
37	Palghar	Dahanu	Somnath	458	439	897	16	26	42	474	465	939
38	Palghar	Dahanu	Ganeshbag	197	180	377	168	214	382	365	394	759
39	Palghar	Dahanu	Awadhani	569	449	1018	79	241	320	648	690	1338
40	Palghar	Dahanu	DhaniwFari	328	352	680	2	11	13	330	363	693
41	Palghar	Dahanu	Chinchale	141	167	308	72	90	162	213	257	470
42	Palghar	Dahanu	Talothe	143	192	335	13	6	19	156	198	354
43	Palghar	Dahanu	Punjave	132	141	273	0	2	2	132	143	275
44	Palghar	Dahanu	Bramhanwadi	159	6	165	78	246	324	237	252	489
45	Palghar	Dahanu	Vankas	580	400	980	384	708	1092	964	1108	2072
46	Palghar	Talasar	Vadavali	718	504	1222	536	679	1215	1254	1183	2437

Sl. No.	District	Taluka	Village	Main Workers			Marginal Workers			Total Workers		
				Male	Female	Total	Male	Female	Total	Male	Female	Total
47	Palghar	Talasari	Sawane	485	177	662	136	304	440	621	481	1102
48	Palghar	Talasari	Kawade	696	631	1327	88	13	101	784	644	1428
49	Palghar	Talasari	Awarpada	141	27	168	271	154	425	412	181	593
50	Palghar	Talasari	Talasari	659	296	955	362	478	840	1021	774	1795
51	Palghar	Talasari	Ibhadpada	278	200	478	38	117	155	316	317	633

Source: Census of India, 2011

2.4.6 Category wise Distribution of Main Workforce

It is evident from the below table that people of the likely affected villages are engaged in agriculture, household industries and other work. However, agriculture does play an important sector in engaging the workforce as is shown in **Table 2-11**.

Table 2-11 Distribution of Main Workforce in Project Affected Villages

Sl. No.	District	Taluka	Villages	Cultivators			Agricultural Laborers			Household Industries			Other Workers			Non Workers			Total		Total
				Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
1	Palghar	Vasai	Koshimbe	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	Palghar	Vasai	Khardi	117	111	228	6	6	12	6	0	6	23	6	29	474	481	955	626	604	1230
3	Palghar	Vasai	Doliv	17	22	39	4	1	5	95	73	168	94	51	145	127	168	295	337	315	652
4	Palghar	Palghar	Wadhiv Saravali	30	7	37	65	39	104	8	7	15	90	21	111	137	363	500	330	475	767
5	Palghar	Palghar	Navghar	1	1	2	0	0	0	2	1	3	47	5	52	264	533	797	314	540	854
6	Palghar	Palghar	Ghatim	41	15	56	50	22	72	0	0	0	56	21	77	124	266	390	271	324	595
7	Palghar	Palghar	Penand	85	35	120	103	31	134	8	7	15	69	21	90	250	283	533	515	377	892
8	Palghar	Palghar	Sonave	201	31	232	233	196	429	3	2	5	159	88	247	611	736	1347	1207	1053	2260
9	Palghar	Palghar	Pargaon	133	48	181	89	40	129	22	17	39	99	26	125	264	435	699	607	566	1173
10	Palghar	Palghar	Girale	119	65	184	113	30	143	1	1	2	32	9	41	218	354	572	483	459	942
11	Palghar	Palghar	Nagave	1	1	2	0	1	1	3	0	3	95	11	106	101	254	355	200	267	467
12	Palghar	Palghar	Navaze	193	86	279	151	104	255	3	0	3	110	22	132	411	627	1038	868	839	1707
13	Palghar	Palghar	Sakhare	79	39	118	47	40	87	3	2	5	139	44	183	874	782	1656	1142	907	2049
14	Palghar	Palghar	Dahisar T Manor	100	69	169	222	217	439	44	30	74	247	198	445	479	586	1065	1092	1100	2192
15	Palghar	Palghar	Khamloli	211	196	407	171	193	364	2	0	2	64	21	85	314	354	668	762	764	1526
16	Palghar	Palghar	Dhuktan	136	31	167	171	39	210	12	5	17	165	46	211	293	413	706	777	534	1311
17	Palghar	Palghar	Gowade	52	24	76	62	40	102	4	7	11	40	16	56	235	310	545	393	397	790
18	Palghar	Palghar	Maswan	51	7	58	67	25	92	3	1	4	163	84	247	325	476	801	609	593	1202
19	Palghar	Palghar	Wandivali	1	1	2	122	105	227	0	0	0	18	4	22	121	167	288	262	277	539

Sl. No.	District	Taluka	Villages	Cultivators			Agricultural Laborers			Household Industries			Other Workers			Non Workers			Total		Total
				Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
20	Palghar	Palghar	Wakadi	0	0	0	0	0	0	1	0	1	5	6	11	68	113	181	74	119	193
21	Palghar	Palghar	Warsaroli	0	0	0	40	15	55	0	0	0	18	8	26	60	77	137	118	100	218
22	Palghar	Palghar	Katale	127	40	167	29	17	46	4	0	4	201	56	257	264	450	714	625	563	1188
23	Palghar	Palghar	Loware	158	150	308	68	14	82	3	1	4	54	11	65	223	228	451	506	404	910
24	Palghar	Palghar	Nihe	223	181	404	208	212	420	7	6	13	221	183	404	477	508	985	1136	1090	2226
25	Palghar	Palghar	Nagzari	4	2	6	11	6	17	3	2	5	201	50	251	379	420	799	598	480	1078
26	Palghar	Palghar	Lalonde	107	68	175	169	134	303	0	0	0	124	24	148	248	508	756	648	734	1382
27	Palghar	Palghar	Kirat	124	106	230	125	128	253	4	1	5	181	75	256	399	412	811	833	722	1555
28	Palghar	Palghar	Borsheti	140	56	196	179	80	259	2	3	5	157	30	187	452	665	1117	930	834	1764
29	Palghar	Palghar	Ravate	76	74	150	174	181	355	2	0	2	16	8	24	193	185	378	461	448	909
30	Palghar	Palghar	Chinchare	70	74	144	109	126	235	0	0	0	39	11	50	223	220	443	441	431	872
31	Palghar	Dahanu	Dhabon	351	319	670	282	295	577	11	16	27	77	59	136	822	865	1687	1543	1554	3097
32	Palghar	Dahanu	Aine	88	45	133	130	163	293	6	4	10	83	18	101	312	432	744	619	662	1281
33	Palghar	Dahanu	Rankol	183	205	388	167	214	381	3	2	5	85	70	155	859	835	1694	1297	1326	2623
34	Palghar	Dahanu	Chandwad	192	208	400	105	123	228	0	0	0	12	3	15	271	288	559	580	622	1202
35	Palghar	Dahanu	Navnath	184	229	413	90	106	196	6	3	9	78	35	113	452	524	976	810	897	1707
36	Palghar	Dahanu	Ganjad	99	28	127	49	40	89	18	6	24	97	27	124	567	704	1271	830	805	1635
37	Palghar	Dahanu	Somnath	90	62	152	277	366	643	0	3	3	91	8	99	515	486	1001	973	925	1898
38	Palghar	Dahanu	Ganeshbag	29	16	45	149	148	297	1	1	2	18	15	33	308	298	606	505	478	983
39	Palghar	Dahanu	Awadhani	389	281	670	169	162	331	1	2	3	10	4	14	379	420	799	948	869	1817

Sl. No.	District	Taluka	Villages	Cultivators			Agricultural Laborers			Household Industries			Other Workers			Non Workers			Total		Total
				Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
40	Palghar	Dahanu	Dhaniwari	257	236	493	60	102	162	4	0	4	7	14	21	325	372	697	653	724	1377
41	Palghar	Dahanu	Chinchale	99	122	221	22	30	52	10	2	12	10	13	23	536	443	979	677	610	1287
42	Palghar	Dahanu	Talothe	128	189	317	2	0	2	0	0	0	13	3	16	82	93	175	225	285	510
43	Palghar	Dahanu	Punjave	19	19	38	86	98	184	0	0	0	27	24	51	100	92	192	232	233	465
44	Palghar	Dahanu	Bramhanwadi	145	4	149	10	1	11	1	0	1	3	1	4	193	189	382	352	195	547
45	Palghar	Dahanu	Vankas	276	190	466	104	134	238	9	3	12	191	73	264	939	1008	1947	1519	1408	2927
46	Palghar	Talasari	Vadavali	422	345	767	121	82	203	0	3	3	175	74	249	1529	1925	3454	2247	2429	4676
47	Palghar	Talasari	Sawane	241	23	264	85	126	211	9	3	12	150	25	175	1031	875	1906	1516	1052	2568
48	Palghar	Talasari	Kawade	597	525	1122	16	73	89	0	1	1	83	32	115	711	988	1699	1407	1619	3026
49	Palghar	Talasari	Awarpada	13	7	20	76	10	86	1	1	2	51	9	60	355	614	969	496	641	1137
50	Palghar	Talasari	Talasari	446	205	651	115	37	152	3	4	7	95	50	145	1145	1434	2579	1804	1730	3534
51	Palghar	Talasari	Ibhadpada	152	148	300	13	11	24	0	0	0	113	41	154	298	317	615	576	517	1093

Source: Census of India, 2011

2.5 CONCLUSION

Overall, it can be concluded that in the project influence villages, majority of the population are Scheduled Tribe and agriculture sector is the main source of employment. One of the distinct features of the area is poor industrialization; as a result large scale population engaged in farming and allied activities. Literacy of male population is higher than female population. Overall literacy levels among tribals are lower than that of the general population and a gap is still exists between tribals vis-à-vis the total population. The gaps are substantial, and their persistence is a serious social and ethical problem. The latest Maharashtra Human Development Report admits that the condition of tribal population is far behind that of the total population in terms of most human development Indicators.

The proposed project will provide better connectivity of villages, talukas, districts and with other part of the state; establish linkages between distant cities; increase employment opportunity and thereby enhance the quality of life. The construction of the expressway will also help the farmers in getting good prices of their produce by way of quick and fast transportation of perishable goods to the market places. The expressway connectivity will also help in import of new techniques of agriculture to the backward areas.

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CHAPTER-3: EVALUATION OF SOCIAL IMPACT AND LAND ACQUISITION

3.1 INTRODUCTION

The social impact assessment and resettlement study is meant to determine the magnitude of actual and potential impact on the population due to construction of proposed expressway with the objective to ensure the social considerations be given adequate weightage in the selection and design of proposed expressway construction. Basic idea is to minimize adverse social impacts with best possible engineering solutions at the optimal cost. The main features and findings of this report are discussed below. It needs to be mentioned that the present report considered those persons who are affected directly and indirectly, whose structures and lands are to be affected due to the construction of the expressway

3.2 SUMMARY OF LAND ACQUISITION AND SOCIAL IMPACT

This report will assess the social impacts and land acquisition requirement for construction of Vadodara Mumbai Expressway (**Phase II**). The alignment traverses through Talasari, Dahanu, Palghar, and Vasai Taluka in the district of Palghar of Maharashtra state. The report deals with affected persons, who are losing either their structures or land, due to project implementation. The land compensation has been calculated for **51** villages of all four Talukas. The detail of project impact summary is briefed here.

As per findings of Joint Measurement Survey (JMS) of affected land and non-land assets, the project impacts can be broadly classified as (i) impacts on private land, (ii) impacts on private structures and; (iii) loss of common property resources. From the analysis of impacts, it is noted that almost 2393 land units/plots (all private land units) and 895 structures including 717 private structures will be affected due to the project. As per the JMS survey (up to November 2019), total 3110 households will be affected in the project. The details of project impacts are presented in the **Table 3-1**.

Table 3-1 Summary of Project Impacts (Phase-II of Main Alignment)

Sl. No.	Impacts	Number/ Area
1	Total private land acquisition requirement (data updated till November 2019)	≅ 710.3247 ha
2	Total number of private land units/plots affected (No.)	2393
3	Fully displaced land owner (15% of affected land owners) (No.)	359
4	Total number of structures affected of all categories (Including Private, Government, and Religious)	895
5	Total number of affected private structures	717
6	Number of Fully displaced structure owner (15% of affected structure owners)	108
7	Total number of affected Households Including Land & Structures	3110

Sl. No.	Impacts	Number/ Area
8	Total number of Govt. /Communities properties	175
9	Total number of religious properties	3

Source: Field Study 2019

3.3 LAND ACQUISITION

Due to construction of greenway expressway, the scope of land acquisition is quite significant. The Greenfield expressway traverses through 51 villages of four Talukas in Palghar district of Maharashtra state. The tentative private land need to be acquired for the project is 710.3247 hectares and forest land proposed to be diverted is 191.5894 ha (**data updated till October 2019**). Joint Measurement Survey with the concerned department is under progress. Therefore, both non-forest and forest land proposed to be diverted will be updated time to time during the land acquisition and forest clearance process. The village wise details of tentative land acquisition are briefed in **Table 3-2**.

Table 3-2 Details of village wise Land being acquired for the Project

Taluka	Village	Forest Land (Ha)	Non-forest Land (Ha)	Total Area (Ha)#
Vasai	Koshimb	5.3146	27.5316	32.8462
Vasai	Khardi	0.0000	11.4406	11.4406
Vasai	Doliv	3.3498	11.2698	14.6196
Palghar	Vadhiv	1.6171	1.4493	3.0664
Palghar	Navghar	1.4817	10.3785	11.8602
Palghar	Ghateem	0.0000	9.9044	9.9044
Palghar	Penand	7.5269	13.4203	20.9472
Palghar	Sonave	15.9512	7.2356	23.1868
Palghar	Pargaon	0.2032	21.9772	22.1804
Palghar	Girale	0.0000	12.1014	12.1014
Palghar	Nagav	0.0000	24.5884	24.5884
Palghar	Navje	3.2338	7.9481	11.1819
Palghar	Sakhare	9.7748	12.0781	21.8529
Palghar	Dahisar	0.0000	1.6589	1.6589
Palghar	Khambholi	2.5410	23.0980	25.6390
Palghar	Dhukthan	6.5880	28.2973	34.8853
Palghar	Govade	0.0383	2.0135	2.0518
Palghar	Masvan	2.1348	11.0566	13.1914
Palghar	Vandivali	0.0000	9.9064	9.9064
Palghar	Vakadi	2.0715	8.6336	10.7051
Palghar	Vasroli	0.0000	0.9580	0.9580
Palghar	Katale	1.2055	9.4996	10.7051
Palghar	Lovare	6.9338	19.6267	26.5605
Palghar	Nihe	0.0000	21.2324	21.2324

Taluka	Village	Forest Land (Ha)	Non-forest Land (Ha)	Total Area (Ha)#
Palghar	Nagzari	0.0000	20.1600	20.1600
Palghar	Lalonde	0.0000	9.7844	9.7844
Palghar	Kirat	7.1570	19.8757	27.0327
Palghar	Borsheti	0.0000	12.2602	12.2602
Palghar	Ravte	7.9344	10.3676	18.3020
Palghar	Chinchare	0.0000	20.5053	20.5053
Dahanu	Dhabon	11.5849	28.6545	40.2394
Dahanu	Aine	0.0105	10.0421	10.0526
Dahanu	Rankol	25.4256	8.8438	34.2694
Dahanu	Chandwad	5.7481	8.6578	14.4059
Dahanu	Navnath	10.9101	26.8338	37.7439
Dahanu	Ganjad	2.6130	7.9374	10.5504
Dahanu	Somnath	4.9328	0.0000	4.9328
Dahanu	Ganeshbagh	7.2151	10.7800	17.9951
Dahanu	Awadhani	2.0512	1.6428	3.6940
Dahanu	Dhanivari	23.5527	17.6691	41.2218
Dahanu	Chinchale	12.4880	19.3631	31.8511
Dahanu	Talote	0.0000	19.5209	19.5209
Dahanu	Punjave	0.0000	6.9611	6.9611
Dahanu	Bharmanwadi	0.0000	18.0207	18.0207
Dahanu	Vankas	0.0000	32.9607	32.9607
Talasari	Vadavali	0.0000	16.5124	16.5124
Talasari	Savane	0.0000	4.2371	4.2371
Talasari	Kawad	0.0000	22.4033	22.4033
Talasari	Awarpada	0.0000	10.3800	10.3800
Talasari	Talasari	0.0000	38.6466	38.6466
		191.5894	710.3247	901.9141

Source: Field Study 2019, land records, forest records & JMS

**Note: land proposed to be diverted may change after completion of Joint Measurement Survey with the concerned departments. The same will be updated time to time during the land acquisition and forest clearance process

3.4 AFFECTED HOUSEHOLDS

Due to loss of structures and land many people will be losing their properties / livelihoods and will be adversely affected. As per the data received from compensation award list, field survey and JMS, 2393 land owners are affected as per the available compensation award data, and 717 private structures owners will be affected in the proposed alignment. The data reveals that a total number of 3110 households are getting affected due to the project. The details for the same are shown in **Table 3-3**.

Table 3-3 Number of Affected Households

SI. No.	Affected Livelihoods	Category of AHs	Total	%
1	Land Owner	Owner	2393	76.95%
2	Structures Only	Owner	717	23.05%
Total			3110	100%

Source: Field Study 2019 & JMS

3.5 PROPERTIES TO BE AFFECTED

The properties to be affected by the proposed expressway include houses, shops, religious establishments, community halls or any other structures. The survey team attempted to get the details of various structures that are located within the proposed RoW of the project alignment.

The census survey carries out to enumerate the properties, falling within proposed ROW. The finding of the study revealed that **895** structures are going to be affected within the proposed right of way, out of which **717** are private structures. Total structures include the private properties, religious properties, community properties, government properties. The following sections deals with the details of the affected structures within the project alignment.

3.5.1 Ownership of Affected Properties

The total numbers of affected properties under different categories in terms of its uses, such as private, religious, public / government and communities structures are tentatively 895, out of which 717 are private properties (80.11%) followed by Government /CPRs (19.55%), and religious properties (0.34%). The ownership details of total affected properties are tabulated in **Table 3-4**.

Table 3-4 Ownership of Properties to be affected

SI. No.	Type of Properties	Total	Percentage
1	Private	717	80.11
2	Religious	3	0.34
3	Government/CPRs	175	19.55
Total		895	100.00

Source: Field Study 2019 & JMS

3.5.2 Type of Construction of the Structures

As per field survey and JMS, 701 (97.77%) structures are Pucca and 16 are Kutcha (2.23%). Types of constructions of the structures are tabulated in **Table 3-5**.

Table 3-5 Type of Construction of Private Structures

Sl. No.	Type of Construction	Total	Percentage
1	Pucca	701	97.77
2	Semi-Pucca	0	0.00
3	Kutchra	16	2.23
Total		717	100

Source: Field Study 2019 & JMS

3.5.3 Legal Status of the Ownership of the Properties/ Structures

Due to loss of structures and land many people will be losing their properties / livelihoods and will be economically affected. As per the field survey and JMS, tentatively 3110 households will be losing their properties / livelihood due to loss of structures and land under titleholders' category. The details of the affected households are shown in **Table 3-6**.

Table 3-6 Entitlement of Properties

Sl. No.	Category of Affected Households	Description	Number of Affected Households (AHs)	Total AHs
1	Title Holders	Structures only	717	3110
		Land Owner	2393	
2	Non- titleholders	Squatters	0	0
		Encroachers	0	
3	Tenants	Commercial	0	0
4	Employees	Commercial	0	0
Total			3110	3110

Source: Field Study 2019 & JMS

3.5.4 Impact on Affected Private Structures

The level of impact has been considered under two categories namely, partial displaced and fully displaced. The structures, which are getting partially affected and remaining part of the structures are usable, are 85%, whereas 15% structures are fully impacted and leads to physical displacement, detailed are tabulated in **Table 3-7**.

Table 3-7 Impact Level on Structures

Sl. No.	Percentage of Impact on (Structure Owners)	No. of Households (Structure Owners)	Impact Level	%
1	Up to 10%	0	609 Partially Displacement	85%
2	10% to 20%	0		
3	20% to 30%	609		
4	30% to 40%	0	108 Fully Displacement	15%
5	40% to 50%	0		

Sl. No.	Percentage of Impact on (Structure Owners)	No. of Households (Structure Owners)	Impact Level	%
6	50% to 60%	0		
7	60% to 70%	0		
8	70% to 80%	108		
9	80% to 90%	0		
10	90% to 100%	0		
11	NA/NR	0		
Total		717	717	100%

Source: Field Study 2019 & JMS

3.5.5 Impact on Affected Land Holders

The level of impact has been considered under two categories namely, partial impact and fully impact. The land holders, which are getting partially affected are 85%, whereas 15% land holders are fully impacted and leads to physical displacement, detailed in **Table 3-8**.

Table 3-8 Impact level on Land

Sl. No.	Percentage of Impact on (Land Owners)	No. of Households (Land Owners)	Impact Level	%
1	Up to 10%	0	2034 Partially Displacement	85%
2	10% to 20%	0		
3	20% to 30%	2034		
4	30% to 40%	0	359 Fully Displacement	15%
5	40% to 50%	0		
6	50% to 60%	0		
7	60% to 70%	0		
8	70% to 80%	359		
9	80% to 90%	0		
10	90% to 100%	0		
11	NA/NR	0		
Total		2393	2393	100%

Source: Field Study 2019 & JMS

3.6 GOVERNMENT PROPERTIES AND OTHER CPRs TO BE AFFECTED

Tentatively, 175 government / CPRs properties are to be affected due to the Greenfield expressway. Details of such properties are tabulated in **Table 3-9**.

Table 3-9 Type of Government Properties and other CPRs to be affected

Sl. No.	Type of Government Properties/ CPRs	No. of Structures	Percentage
1	Water Closet	32	18.29
2	Water Tank	14	8.00
3	Pump House	11	6.29
4	Compound Wall	11	6.29
5	Hand Pump	7	4.00
6	Bore well	52	29.71
7	Well	39	22.29
8	Toilet	9	5.14
Total		175	100

Source: Field Study 2019 & JMS

3.7 RELIGIOUS PROPERTIES TO BE AFFECTED ALONG THE ALIGNMENT

The impacts on religious structures are generally considered as an area of concern due to its association with the religious sentiments of the people. The total numbers of religious properties to be affected due to this project are **3**, which includes only Temple.

3.8 CONCLUSION

The socio-economic analysis of the project affected persons reveals their dependency on the project corridor. This dependency is either in the form of place for residence or for livelihood generation. Construction of the Greenfield expressway will lead to the involuntary resettlement of affected population. It is of utmost importance to resettle and rehabilitate them as per the provisions of LARR Act 2013; however, the process of land acquisition will be followed by NH Act 1956. Affected people shall be consulted at every stage of the project planning and implementation. Their worries and suggestions shall be taken into account and the negative impacts shall be mitigated.

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CHAPTER-4: RESETTLEMENT POLICY, LEGAL FRAMEWORK AND MITIGATION MEASURES

4.1 POLICIES AND LEGAL FRAMEWORK

A road-upgrading project often involves the acquisition of land where the existing right of way is not adequate to accommodate the improved road requirements. This process leads to the involuntary displacement of the affected people and loss of their livelihoods (both temporary and permanent), culminating in a process of impoverishment. The country and the State have administrative, policy and legal framework to counter this process, including the Indian *Land Acquisition Act 1896/ 1984*, the *National Highways Act 1956*, the Indian *Ministry of Environment and Forests Guidelines 1989*, and the Indian '*The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013*'¹. An overview of these laws and policies are attempted in this chapter in the context of the social impact of the present project.

4.2 THE INDIAN LEGAL FRAMEWORK

4.2.1 Ministry of Environment and Forests Guidelines, 1989

As this project will require acquisition of land, structures and other assets and cause displacement of people as a consequence, the social impact requirement of the Government of India refers to the Relocation section in the Environmental Guidelines for Rail/Road/Highway Projects. The Guidelines recommend the following mitigation measures for social impacts, including a special programme for squatters:

Advance notification of enough (say, two years) time must be given to enable the relocatees to find a suitable place. At the same time, the Project Authorities could arrange for public relations through television, radio, and advertisement on the need for the project and how land acquisition and compensation will be effected.

- Advance realistic payment should be available in some form for the relocatees to secure a new unit.
- The estimation of compensation for land and property should be based on the fair market value. The term *fair market value* is defined as being the amount at which the property would exchange between a willing buyer and a willing seller and both parties should have reasonable knowledge of all relevant facts.
- The choice of replacement of a living unit organized by the Project Authority may be made available for the relocatees who are not satisfied with the compensation amount or who cannot find a suitable house.
- Re-establishment cost must be carefully considered to offset the loss in income, increase in expenditure resulting from disconnection of public utility services and

¹Published in the Gazette of India, Extraordinary, Part 1, Section 1, dated the 26th September, 2013.

moving cost. Special attention must be paid to the possible loss of jobs or business that cannot be re-established.

- In case of any squatters, a special programme for construction of a low cost housing unit (the labour provided by relocatees) may be set up.
- A social work subsection should be established in the PIU to follow up and monitor the problems faced by the relocatees. This sub-section should also be entrusted with the responsibility to ensure that individual households relocated receive sufficient compensation with enough lead time to secure a living unit.

Discussion: While the land acquisition process according to the Land Acquisition Act spans a minimum of 2-3 years because of the lengthy procedures and possible litigation involved, the relocation parameters of the Environmental Guidelines makes a modest suggestion of giving at least two years notice to the affected persons whose land will be acquired by the Government. The provision of assistance to the encroachers and squatters is a good consideration of the Guidelines.

4.2.2 National Highway Act 1956

The National Highways Authority of India acquires land for a public purpose by invoking Section 3 (and its sub-sections) of the National Highways Act 1956. The Land Acquisition Act of 1894 does not apply when the National Highways Act 1956 is invoked. The NH Act 1956 provides for acquiring land through competent authority, which means any person or authority authorized by the Central Government by notification in the official Gazette to perform functions of the competent authority for such areas as may be specified in the notifications. Like the Land Acquisition Act, 1894, the National Highways Act, 1956, too does not per se provide for mitigation measures, but the Competent Authority under this Act determines the amount payable as compensation.

For the purpose of land acquisition, the NH Act defines the various procedures as follows:

- Section 3A: Intention of Central Government to acquire land
- Section 3B: Power to enter for survey
- Section 3C: Hearing of objections
- Section 3D: Declaration of acquisition
- Section 3E: Power to take possession,
- Section 3F: Power to enter into the land where land has vested in the central government
- Section 3G: Determination of compensation and
- Section 3H: Deposit and payment of the amount

The Act requires that the processes must be completed within a year from 3A to 3D.

Although the NH Act significantly reduces the timeframe for acquisition, the rules and principles of compensation have been derived from the LARR Act of 2013.

As indicated before, the existing laws do not address many of the social and economic issues associated with displacement and resettlement, which will be addressed in this project with a project specific resettlement and rehabilitation policy framework.

4.2.3 The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 has been effective from January 1, 2014 after receiving the assent of the President of Republic of India. The Act replaced the Land Acquisition Act, 1894. The Act has since late December 2014 been amended to make it more flexible and the description of the amendment is described below.

The aims and objectives of the act include is to ensure, in consultation with institutions of local self-government and Gram Sabhas established under the Constitution of India, a humane, participative, informed and transparent process for land acquisition for industrialization, development of essential infrastructural facilities and urbanization with the least disturbance to the owners of the land and other affected families. It provides for compensation and resettlement assistance to the affected families whose land or other assets are affected by the project. A few of key features that are revised from the old Act include the recognition of non-title holders to compensations if they have lived in the area proposed to be acquired in the past three years as well as compensations for loss of livelihood.

Section 26 of the Act defines the method by which market value of the land shall be computed under the proposed act. Schedule I outlines the proposed minimum compensation based on a multiple factor of market value. Schedule II through VI outline the resettlement and rehabilitation entitlements to land owners and livelihood losers, which shall be in addition to the minimum compensation per Schedule I.

An Amendment Ordinance to the Act was promulgated on December 31, 2014. The Ordinance provides exemptions for five categories of projects from the certain requirements: (i) Defence; (ii) Rural infrastructure; (iii) Affordable housing; (iv) Industrial corridors; (v) Infrastructure projects including Public Private Partnership (PPP) projects where the central government owns the land. These 5 categories of projects are exempted from the requirement of consent of 80% of land owners to be obtained for private projects and that the consent of 70% of land owners be obtained for PPP projects as well as conducting the Social Impact Assessment through a notification.

In the context of this project, it is likely to fall within one of the categories exempted from the Social Impact Assessment (category "Infrastructure projects including Public Private

Partnership (PPP) projects where the central government owns the land”). An SIA will still be conducted as it is required by the ADB SPS, but without following the LARR guidelines.

4.2.4 The Provisions of the Panchayats (Extension to Scheduled Areas) Act (PESA), 1996

PESA is a law enacted by the Government of India for ensuring self-governance through traditional Gram Sabhas for people living in the Scheduled Areas of India. Scheduled Areas are areas identified by the Fifth Schedule of the Constitution of India. Scheduled Areas are found in ten states of India including Maharashtra, which have predominant population of tribal communities. The Scheduled Areas were not covered by the 73rd Constitutional Amendment or Panchayati Raj Act of the Indian Constitution as provided in the Part IX of the Constitution. PESA was enacted on 24 December 1996 to extend the provisions of Part IX of the Constitution to Scheduled Areas, with certain exceptions and modifications. PESA sought to enable the Panchayats at appropriate levels and Gram Sabhas to implement a system of self-governance with respect to a number of issues such as customary resources, minor forest produce, minor minerals, minor water bodies, selection of beneficiaries, sanction of projects, and control over local institutions.

PESA is an Act to provide for the extension of the provisions of Part IX of the Constitution relating to the Panchayats and the Scheduled Areas.

PESA was viewed as a positive development for tribal communities in Scheduled Areas who had earlier suffered tremendously from engagement with modern development processes and from the operation of both colonial laws and statutes made in independent India. The loss of access to forest, land, and other community resources had increased their vulnerability. Rampant land acquisition and displacement due to development projects had led to large scale distress in tribal communities living in Scheduled Areas. PESA was seen as a panacea for many of these vulnerabilities and sought to introduce a new paradigm of development where the tribal communities in such Scheduled Areas were to decide by themselves the pace and priorities of their development.

4.3 THE ENTITLEMENT MATRIX AND MITIGATION MEASURES

The basic features of the proposed policy framework and mitigation measures, for implementation of the RFCTLARR Act 2013 and others legal provisions, are the following:

Sl. No.	Category / Target Group	Provisions in RFCT-LARR Act 2013
A. APPLICABILITY		
1	Infrastructural Project	<p>3 (o) “infrastructure project” shall include any one or more of the following, namely:—</p> <p>(i.) any project relating to generation, transmission or supply of electricity;</p> <p>(ii.) any project relating to telecommunication services;</p> <p>(iii.) construction of roads, highways, Defense projects, bridges, airports, ports, rail systems or mining activities, educational, sports, health care, tourism, transportation, inland waterways, inland port, space programme, projects involving agro-processing and supply of inputs to agriculture, projects for preservation and storage of processed agro-products and perishable agricultural commodities and housing for such income groups, as may be specified from time to time by the appropriate Government;</p> <p>(iv.) water supply project, irrigation project, water harvesting and water conservation structures, water treatment system, sanitation and sewerage system, solid waste management system;</p> <p>(v.) any other project or public facility as may be notified in this regard by the Central Government;</p>
B. POLICY DEFINITIONS		
1	Project	3 (z) “project” means a project for which land is being acquired, irrespective of the number of persons affected;
2	Family	3 (m) “family” includes a person, his or her spouse, minor children, minor brothers and minor sisters dependent on him;
3	Displaced Family/ Involuntary displacement	Defined in clause 3.c (i) (ii) (iii) (iv) (v) & (vi) of affected family.
4	Project affected family/ Affected Family	<p>3.c The definition of '<i>Affected family</i>' has been defines as:</p> <p>3c (i) A family whose land or other immovable property has been acquired or who have been permanently displaced from their land or immovable property;</p>

Sl. No.	Category / Target Group	Provisions in RFCT-LARR Act 2013
		<p>3.c (ii) A family which does not own any land but a member or members of such family may be agricultural labourers, tenants, share-croppers or artisans or may be working in the affected area for three years prior to the acquisition of the land, whose primary source of livelihood stand affected by the acquisition of land;</p> <p>3.c (iii) Tribal and other traditional forest dwellers who have lost any of their traditional rights recognized under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 due to acquisition of land;</p> <p>3c (iv) Family whose primary source of livelihood for three years prior to the gatherers of forest produce, hunters, fisher folk and boatmen and such livelihood is affected due to acquisition of land;</p> <p>3c (v) A member of the family who has been assigned land by the State Government or the Central Government under any of its schemes and such land is under acquisition;</p> <p>3.c (vi) A family residing on any land in the urban areas for preceding three years prior to the acquisition of the land or whose primary source of livelihood for three years prior to the acquisition of the land is affected by the acquisition of such land.</p>
5	Affected Zone/ Affected Area	3 (zc) “ <i>Resettlement Area</i> ” means an area where the affected families who have been displaced as a result of land acquisition are resettled by the appropriate Government;
6	Marginal farmer	3 (t) “marginal farmer” means a cultivator with an un-irrigated land holding up to one hectare or irrigated land holding up to one-half hectare;
7	Khatedar	Not mention in the policy
8	Requiring body	3 (zb) “ <i>Requiring Body</i> ” means a company, a body corporate, an institution, or any other organisation for whom land is to be acquired by the appropriate Government, and includes the Appropriate Government, if the acquisition of land is for such Government either for its own use or for subsequent transfer of such land in public
9	Appropriate Government	3 (e) “ <i>Appropriate Government</i> ” means,—

Sl. No.	Category / Target Group	Provisions in RFCT-LARR Act 2013
		(i) in relation to acquisition of land situated within the territory of, a State, the State Government; (ii) in relation to acquisition of land situated within a Union territory (except Puducherry), the Central Government; (iii) in relation to acquisition of land situated within the Union territory of Puducherry, the Government of Union territory of Puducherry; (iv) in relation to acquisition of land for public purpose in more than one State, the Central Government; and (v) in relation to the acquisition of land for the purpose of the Union as may be specified by notification, the Central Government; interest to a company, body corporate, an institution, or any other organisation, as the case may be, under lease, license or through any other mode of transfer of land
10	Small Farmer	3(ze) "small farmer" means a cultivator with an un-irrigated land holding up to two hectares or with an irrigated land holding up to one hectare, but more than the holding of a marginal farmer.
11	Holding	3 (n) "holding of land" means the total land held by a person as an owner, occupant or tenant or otherwise;
C. HOMESTEAD LAND/ HOUSE CONSTRUCTION ASSISTANCE		
1	Project Affected Family/ Displaced Family	If a dwelling unit is acquire, amount prescribed in Pradhan Mantri Gramin Awaas Yojana (for rural areas) or Pradhan Mantri Awaas Yojana (for urban areas) will be paid subject to a minimum of Rs. 1.50 Lakh, in addition to the compensation amount for land & structures paid to them.
D. AGRICULTURAL LAND		
1	Project Affected Family / Displaced Family owning agriculture land	Land will be acquired by the CALA (Competent Authority for Land Acquisition) in accordance with the provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013 under the National Highways Act, 1956 Compensation will be determined in accordance with First Schedule, rehabilitation and resettlement assistance specified in the Second & Third Schedule of RFCTLARR Act, 2013 applicable to the land

Sl. No.	Category / Target Group	Provisions in RFCT-LARR Act 2013
		acquisition under the National Highways Act, 1956
E. CONSTRUCTION OF CATTLE SHED/ PETTY SHOPS		
1	Project Affected Family/Displaced Family	One-time financial assistance of Rs. 25,000/- or the amount as decided by the appropriate government would be payable
F. SHIFTING/TRANSPORTATION ALLOWANCE		
1	Project Affected Family/ Displaced Family	Applicable in cases where a family is displaced and is compelled to change its place of residence to any other location and the amount would be payable as per RFCTLARR Act, 2013.
G. SUBSISTENCE GRANT		
1	Project Affected Family / Displaced Family	This provision would be applicable in cases where the family whose land is acquired, or the landless family whose source of livelihood is dependent on such landowning displaced family. In each such case, an amount of Rs. 36,000/- would be payable. Further, if such displacement of any family from the Scheduled Castes and the Scheduled Tribes takes place in the Scheduled Areas, an additional amount of Rs. 50,000/- would be payable.
H. ANNUITY POLICIES		
1	Each Project Affected Family/Displaced Family	<p>The scheme of "Rehabilitation and Resettlement" is applicable in cases where the landowner, whose land is acquired, and the landless family whose source of livelihood is dependent upon such landowner, is dislocated and compelled to change his place of residence or business due to such acquisition. This situation normally does not occur in the case of acquisition of land for linear projects like National Highways, unless a person's entire landholding is acquired.</p> <p>The Second Schedule refers to Sections 31(1), 38(1), and 105(3) of the RFCTLARR Act and these sections do not contain any provision in respect of this component of "Choice of Annuity or Employment".</p>

Sl. No.	Category / Target Group	Provisions in RFCT-LARR Act 2013
		Secondly, this component has multiple options, which have to be specified by the appropriate government. It is beyond the Competent Authority or the Collector to make an Award in this behalf in the absence of any provision by the Appropriate Government.
I. ONE-TIME RESETTLEMENT ALLOWANCE		
1	Each Affected Family/ Displaced Family	This provision would apply only where an affected family is displaced and has to re-settle somewhere else due to acquisition of his / her land
J. R & R BENEFITS TO SCHEDULED CASTE & SCHEDULED TRIBE FAMILIES		
1	Each Tribal Project Affected Families/ Schedule Tribe Displaced Families	<p>(1) In case of land being acquired from members of the Scheduled Castes or the Scheduled Tribes, at least one-third of the compensation amount due shall be paid to the affected families at the outset as first instalment and the rest shall precede the taking over of the possession of the land U/S-41 (6) of RFCTLARR Act, 2013</p> <p>(2) The Scheduled Tribes affected families shall be resettled preferably in the same Scheduled Area in a compact block, so that they can retain their ethnic, linguistic and cultural identity U/S-41 (7) of RFCTLARR Act, 2013</p> <p>(3) Any alienation of tribal lands or lands belonging to members of the Scheduled Castes in disregard of the laws and regulations for the time being in force shall be treated as null and void; and in the case of acquisition of such lands, the R&R benefits shall be available to the original tribal land owners or land owners belonging to the Scheduled Castes U/S-41 (9) of RFCTLARR Act, 2013</p> <p>(4) Where the affected families belonging to the Scheduled Castes and Scheduled Tribes are relocated outside of the district, then, they shall be paid an additional R&R benefits to which they are entitled in monetary terms along with a one-time entitlement U/S-41 (11) of RFCTLARR Act, 2013</p>

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CHAPTER 5: PUBLIC CONSULTATION

5.1 IDENTIFICATION OF STAKEHOLDERS

Consultations with many stakeholders were carried out during various phases of project preparation. The primary stakeholders are Project Affected Person (PAPs) and Executing Agency, especially the officials of NHAI. Additionally, the concerned district magistrate and the revenue officials are also considered to be the primary stakeholders. Secondary stakeholders in the project include Gram Panchayats, village administrative officers, farmers, business communities, people living along the proposed alignment, and other vulnerable communities like the scheduled caste (SC), scheduled tribe (ST) and BPL families.

5.2 METHODS OF PUBLIC CONSULTATION

During the course of the social assessment, consultation meetings were held to inform the communities and population about the positive as well as negative impacts of the proposed project construction. Consultations and discussions were held along the project influence area with the affected households and other stakeholders including village heads, gram panchayat members, head of households, shopkeepers etc. These meetings were used to get wider public input from both the primary and secondary stakeholders. The consultation methods followed to elicit required information (their views & opinions) are detailed below in **Table 5.1**.

Table 5-1 Methods of Public Consultations

Stakeholders	Consultation Method
Displaced Persons (DPs)	Individual consultation
Village Sarpanch / Representative of APs	Public / Stakeholders Consultation
Local communities	Public / Stakeholders Consultation
Executive Agency (EA)	Individual interview, discussion, joint field visit
Line Departments (Revenue Officials)	Individual meeting/interview, discussion

5.3 SCOPE OF CONSULTATION

During the consultation process efforts were made by the study teams to:

- Ascertain the views of the APs, with reference to land acquisition and widening of the expressway ;
- Understand views of the community on land acquisition, resettlement issues and rehabilitation options;
- Identify and assess the major socio-economic characteristics of the villages to enable

effective planning and implementation;

- Obtain opinion of the community on issues related to the impacts on community property and relocation of the same;
- Examine AP's opinion on problems and prospects of expressway related issues;
- Identify people's expectations from project and their absorbing capacity;
- Finally, to establish an understanding for identification of overall developmental goals and benefits of the sub-project.

5.4 DATE AND LOCATION OF PUBLIC CONSULTATION

Consultations with several stakeholders were carried out at various levels in the project area and gram panchayat. Key stakeholders consulted including affected people as well as other community members directly or indirectly affected in the area. Moreover, revenue officials, village heads, head of Gram Panchayat, and village administrative officers were also consulted. Date of consultation, locations and number of people participated are summarized in **Table 5.2**.

Table 5-2 Village wise Public Consultations (PC)

Sl. No.	Date	Village Name	No. of Participants
1	20/03/2013	Vankash	28
2	20/03/2013	Talote	35
3	03/12/2014	Chinchara	30
Total			93

5.5 FINDINGS OF PUBLIC CONSULTATIONS

Consultation with Project Affected Persons: During the social survey, the consultations were conducted in three villages along the project alignment keeping in mind the building of confidence among land losers. The participants in these consultations were not limited to the DPs but also village elders, local leaders and the local residents from nearby small villages. A total of 93 persons were present in three consultation meetings. Some of the major issues that were discussed and feedback received from the affected persons, who are losing their land and or properties, during the course of the consultations and measures taken are summarized in the **Table 5-3**.

Table 5-3: Issues Discussed and Outcome of Consultations

Sl. No.	Date and Location	Issues Discussed	Outcome/Suggestions of the Consultation	Action Taken
1	Date 20/3/2013 Place: Vankash Taluk: Dahanu District: Palghar No. of Participants-28	<ul style="list-style-type: none"> ▪ Awareness about the project. ▪ Safety Measures ▪ Connectivity from one side to other ▪ Mitigation Measures ▪ Avoiding potential adverse impacts on people. ▪ Employment opportunities to be provided. ▪ Fair and appropriate compensation. ▪ Other issues 	<ul style="list-style-type: none"> ▪ People were aware about the project. The consultant briefed them in details about the project and proposed alignment. ▪ People consider it as a good development initiative and supported the project as good expressway will reduce the time. ▪ According to people expressway development is as financial development of their area as new expressway will lead to new business opportunity for them to start business along the expressway. ▪ People want both side connecting with road and also, cross connectivity from the expressway ▪ People asked about employment opportunities during construction to be provided to each family those who are losing their livelihood. ▪ People asked for maximum compensation for affected land and structure 	<ul style="list-style-type: none"> ▪ Consultant briefed them about the Compensation system and told them, that they will be paid as per the LARR Act 2013 & Rules of Govt. of India. ▪ Stakeholders Input and suggestion has been provided to design team for consideration and appropriate mitigation measures to be taken with best engineering solution.
2	Date 20/3/2013 Place: Talote Taluk: Dahanu District: Palghar No. of Participants-35			
3	Date 03/12/2014 Place: Chinchara Taluk: Palghar District: Palghar No. of Participants-30			



5.6 INFORMATION DISCLOSURE AND DISSEMINATION

The disclosure will be done as per the provision and process listed in RFCTLARRA 2013. It is pertinent to mention here that the effectiveness and success of the social assessment will depend to a large extent on the consultation and communication measures undertaken during project preparation.

Several additional rounds of consultations with PAPs will form part of project implementation, which is conducted by NHAI and facilitated by the RAP implementing Consultant which include the followings:

- Key information to use in the leaflet include: Project information; Key project impacts; Eligibility and cut-off date; summarized and key information from the EM; Contact number and location of local Grievance Redress Committee; Contact number of NHAI.
- Disclosure of the RAP on NHAI and the Executing Agency (EA)'s websites and hard copies made available in local administration offices.
- Information dissemination, through public meetings, dissemination of leaflets, public announcements, disclosure in the local media and RAPs made available in relevant Panchayat, government agencies (including the DC's office), and PIU offices.
- Setting-up posters with contact information of local safeguards officer and local grievance redress in key locations.
- APs will be informed of any change in alignment through consultations and be consulted to minimize resettlement impacts.
- Information dissemination sessions will be conducted.
- Public meetings will be organized at different stages of implementation to appraise the communities about the progress of civil works, compensation and assistance.
- Consultation and focus group discussions with vulnerable groups like women, SC, ST, and elderly will be conducted to ensure that their needs are taken into consideration.
- Efforts will be made to ensure that women are properly consulted during the implementation of the RAP. This will be monitored and reported on in the semi-annual monitoring reports during implementation.

5.7 TERMS OF REFERENCES FOR THE NGO TO IMPLEMENT THE RESETTLEMENT PLAN

To assist NHAI in the implementation of the RAP, NHAI shall invite the services of eligible NGOs to be procured under quality-based lump sum contracts. The NGO shall be responsible for the following, according to the Resettlement Plan:

- Educating the Displaced Persons (DPs) on their rights to entitlements and obligations.
- To ensure that the DPs are given the full entitlements due to them, according to the entitlements in the RP.
- To provide support and information to DPs for income restoration.
- Assist the DPs in relocation and rehabilitation, including counseling, and coordination with local authorities.
- Assist the DPs in redressing their grievances (through the grievance redress committee set up by the subproject)
- Impart information to all the DPs about the functional aspects of the various set up

by the project, and assist them in benefiting from such institutional mechanisms.

- To assist the Project Implementation Unit (PIU) with social responsibilities of the sub-project, such as compliance with labour laws, prohibition of child labour, and gender issues.
- To conduct awareness program for HIV/AIDs, Human Trafficking.
- To collect data and submit progress reports on a monthly and quarterly basis for Authority Engineer and EA to monitor the progress of RP implementation.

5.7.1 Scope of Work

The NGO shall play the role of a secondary stakeholder in implementation of the RP and in mitigating adverse effects of the project. The NGO shall be responsible for the development of a comprehensive livelihood restoration system to facilitate the DPs to take advantage of the options available (as per the RP).

5.7.2 Administrative Responsibilities of the NGO

The administrative responsibilities of the NGO will include:

- Working in co-ordination with the Project Resettlement Officer (RO) in the PIU and Authority Engineer (AE);
- Assist the RO in carrying out the implementation of the RP;
- To co-ordinate with the GRCs in implementing the RP;
- Assist the AE and RO in conducting all public meetings, information campaigns at the commencement of the project and give full information to the affected community;
- Translate the summary RP in local language to implement actions for mitigating adverse impacts on the DPs;
- To assist the PIU / Authority Engineer to ensure that the Contracts comply with the applicable labour laws (including prohibition of child labour) and gender issues;
- To assist the PIU and /or the Engineers in ensuring compliance with the safety, health and hygiene norms, and the conduct HIV/AIDS and Human Trafficking awareness / prevention campaigns.
- Report to the RO on a monthly and quarterly basis. The report should include physical and financial progress, both in quantitative and qualitative terms. The report should prominently feature the problems and issues addressed and tackled with the DPs and the solutions found. The report should have a separate chapter on women's issues, their problems and what has been done (within the framework of the RP) to ensure their participation in decision-making as well as the options made available to them to access economic opportunities, marketing and credit. The report should clearly indicate the number of field visits made by the NGO staff and the outcome of consultations with people.
- Data base management of the DPs.
- The displaced persons will be assisted in the Income Generation Scheme training

through the NGO i.e. the provision made for training will be best utilized through the active support and involvement of the NGO.

5.7.3 Implementation of the Resettlement Plan

Identification DPs and Verification of Database from RP

- NGO shall verify the information already contained in the RP and the individual losses of the DPs. They should validate the data provided in the RP and make suitable changes if required. The NGO shall establish rapport with DPs, consult and provide information to them about the respective entitlements as proposed under the RP, and distribute entitlement cum Identity Cards to the eligible DPs. The identity card should include a photograph of the DP, the extent of loss suffered due to the project, and the choice of the DP with regard to the mode of compensation and assistance.
- The NGO shall develop rapport between the DPs and the Project Authority, particularly the AE and RO. This will be achieved through regular meetings with both the RO and the DPs. Meetings with the RO will be held at least fortnightly, and meetings with the DPs will be held monthly, during the entire duration of the assignment. All meetings and decisions taken shall be documented by the NGO.
- Prepare monthly action plans with targets in consultation with the RO.
- The NGO shall prepare a list of the project-displaced persons/families for relocation, enlisting the losses and the entitlements, after verification. It shall also prepare a list of the displaced persons (DPs) enlisting the losses and the entitlement as per the RP, after verification. Verification shall include actual measurement of the extent of total property loss/damage, and valuation of the loss/damage/affect along with the RO. The NGO shall display the list of eligible DPs in prominent public places like villages, Panchayat Offices, Block/Tehsil headquarters, and the District Headquarters.
- During the identification and verification of the eligible DPs, the NGO shall ensure that each of the DPs are contacted and consulted either in groups or individually. The NGO shall specially ensure consultation with women from the DP families especially women headed households.
- Participatory methods should be adopted in assessing the needs of the DPs, especially with regard to the vulnerable groups of DPs. The methods of contact may include village level meetings, gender participation through group's interactions, and Individual meetings and interactions.
- While finalizing the entitled persons (EPs) for compensation/assistance the NGO shall make a list of entitled DPs, and distribute Identity Cards to each and every verified eligible DP.

Counseling the Entitled Persons

The counseling shall include the following activities:

- The NGO shall explain to the DPs the provisions of the policy and the entitlements under the RP. This shall include communication to the expressway side squatters and encroachers about the need for their eviction, the timeframe for their removal and their entitlements.
- The NGO shall disseminate information to the DPs on the possible consequences of the project on the communities' livelihood systems and the options available, so that they do not remain ignorant.
- The NGO shall prepare micro-level plans for income restoration, in consultation with the DPs. Women's perceptions are important to be incorporated in the development of these plans.
- NGO will monitor the involvement of child labour in the civil construction work in each package.

In all of these, the NGO shall consider women as a special focus group, and deal with them with care and sympathy.

Disbursing the Assistance

- Prepare micro plans indicating category of entitlement.
- Prepare micro plans for livelihood indicating alternative livelihood options, land identification, skills up grading and institutions responsible for training for eligible DPs.
- The NGO shall assist the project authorities in ensuring a smooth transition (during the part or full relocation of the DPs), helping the DPs to take salvaged materials and shift. In close consultation with the DPs, the NGO shall inform the RO about the shifting dates agreed with the DPs in writing and the arrangements desired by the DPs with respect to their entitlements.
- The NGO shall assist the DPs in opening bank accounts explaining the implications, the rules and the obligations of a joint account and how s/he can access the resources s/he is entitled to.
- The NGO shall ensure proper utilization of the R&R budget available for each of the packages. The NGO shall ensure that the DPs have found economic investment options and are able to restore the losses of land and other productive assets. The NGO shall identify means and advise the RO to disburse the entitlements to the eligible persons/families in a manner that is transparent, and shall report to the EA on the level of transparency achieved in the project.

Accompanying and Representing the EPs at the Grievance Committee Meetings

- The NGO shall nominate a suitable person (from the staff of the NGO) to be a

member of the GRCs for the respective contract packages.

- The NGO shall make the DPs aware of the Grievance Redress Committees (GRCs)
- The NGO shall train the DPs on the procedure to file a grievance application and to confirm that a statement of claim from the concerned DP accompanies each grievance application. The NGO shall help the DPs in filling the grievance application and also in clearing their doubts about the procedure as well as the context of the GRC award.
- The NGO shall record the grievance and bring it to the notice of the GRCs within seven days of receipt of the grievance from the DPs. It shall submit a draft resolution with respect to the particular grievance of the affected person, suggesting multiple solutions, if possible, and deliberate on the same in the GRC meeting through the NGO representative in the GRC.
- To accompany the DPs to the GRC meeting on the decided date, help the DP to express his/her grievance in a formal manner if requested by the GRC and again inform the DPs of the decisions taken by the GRC within 3 days of receiving a decision from the GRC. (The time frame for the GRC to take a decision is 15 days).

Assisting the EPs and the RO to Identify and Negotiate for New Land for Resettlement

As part of the RP, it is proposed that a sizable number among the eligible DPs will receive alternative land (commercial) building structures. Some of the more vulnerable among the DPs will be eligible to receive these free of cost. Regarding these the NGO shall,

- Obtain the DPs choice in terms of Land identification, Site for relocation, Shifting plan and arrangements, Grant utilization plan and Community asset building plan and institutional arrangements in maintaining the assets.
- Assist squatters whose structures needs to be shifted to the remaining government land for continuation of earning their livelihood before construction of expressway starts.
- Assist the DPs/ RO in identifying suitable land for relocation and for agriculture, ensuring the replacement of the land lost in terms of quality and quantity.
- Identify suitable government land in consultation with the Revenue Department officials and assist in negotiating its transfer to the DPs/ RO at reasonable prices and motivate them to appreciate and welcome the new neighbours.

Assisting Eligible DPs to take advantage of the existing Government Housing and Employment Schemes

With regard to the above, the NGO shall,

- Co-ordinate (and impart wherever required) the training and capacity building of the DPs, for upgrading their skills for income restoration. This will include the training to be given by the NGO to women self-help-group members in accounting, record maintenance, skill acquisition in the chosen enterprise, and marketing, etc.

- Help the DPs in realizing and optimizing the indigenous technology knowledge (ITK) through use of local resources.
- Define, evolve, and explore alternative methods of livelihood using the local skill and resources.
- Establish linkages with the district administration to ensure that the DPs are benefited from the schemes available and those they are entitled to. The focus for this component of the NGO work shall be the vulnerable DPs for their income restoration. The NGO shall maintain a detailed record of such facilitation.

Inter-Agency Linkages for Income Restoration and other R&R Services

The NGO shall be responsible for establishing linkages with,

- Financial institutions to assist the DPs to access credit.
- Government departments, district administration, etc., to ensure that the DPs are included in the development schemes, as applicable;
- Training institutes to impart skills and management training for enterprise creation and development.
- NGO shall conduct training programmes for income restoration for DPs.
- NGO should prepare an income restoration plan.

Assisting the Authority Engineer with the Project's Social Responsibilities

The NGO shall assist the Authority Engineer (AE) to ensure that the Contractors are abiding by the various provisions of the applicable laws, concerning the worker's safety, health and hygiene; women's issues and the child labour issues. The applicable laws include (A) the maternity benefit Act, 1951; (B) the Contract Labour (Regulation and Abolition) Act, 1948; (C) the Minimum Wagers act, 1948. (D) The Equal Remuneration Act, 1979. (E) the Industrial Employment (Standing Order) Act, 1946; (F) the Child Labour (Prohibition and Regulation) Act, 1986; (G) the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996; (H) the Cess Act of 1996 and (I) the Factories Act, 1948. Any divergence from the (workers welfare and remuneration, safety, health, hygiene, women's issues, and child labour issues) provisions of these laws should be brought to the notice of the AE and the RO.

According to these laws, there are specifications regarding the facilities/requirements at the construction camp/site, including basic health care facilities, Mother and Child Welfare units and facilities for vaccinations, day crèche facilities, etc. The NGO shall work in co-ordination of the Lady Inspector of Works or the Resident engineers of the Contractor, or any other representative of the Contractors, to ensure these facilities are provided in a satisfactory manner, and all social responsibilities of the Contract is implemented satisfactorily.

Coordinate with the Sr. Environmental Specialist of AE to facilitate consultation on rehabilitation of borrow areas.

Assisting the PIU / Authority Engineer in HIV/AIDS awareness / prevention campaigns

Information campaigns / advertisements in collaboration with line agencies (such as NACO, DFID, etc), including provision of signage/hoardings at suitable locations, distribution of vehicle stickers, and provision of condom vending machines at suitable locations (rest areas, truck parking lay-byes, etc.). The NGO shall assist the PIU/ AE to implement these measures, including collaboration with the line agencies.

The contractors are required to provide condom vending machines at the construction camps, provide for medical facilities and regular medical checkups especially for detecting / curing STD / AIDS. The NGO shall ensure, in collaboration with the AE that such facilities and medical checkups are provided to the workers at the construction camps.

Monitoring and Reporting

The RP includes provision for monthly internal monitoring by NGO/ RO and quarterly, mid-term, and post-project monitoring and Reporting by external agency. The NGO involved in the implementation of the RP will be required to supply all information, documents to the external monitoring and Reporting consultants. To this end, the NGO shall keep proper documentation of their work and the R&R process involved in the project, and shall be responsible for the upkeep and updating of such documents periodically and regularly. The documentation shall include photographs and videotapes of the pre-intervention and post-intervention scenario of all the properties, structures, and assets affected by the project.

Recommending Improvement of R&R Services

- Extend all services recommended by any additional studies to be undertaken by the project, in respect to the R&R services to be provided as part of the project.
- Recommend and suggest techniques and methods for improvement of services extended by the concerned government departments and other agencies and committees in disbursement/extension of R&R services in the project.
- Document implementation of the R&R process and services, including difficulties faced and corresponding solutions.
- Discuss, with the PIU on contingency management and other improvement of R&R services, within the project period.
- Documenting of tasks carried out by the NGO and Reporting of the achievements of RP.

5.7.4 Documentation and Reporting by NGO

The NGO selected for the assignments shall be responsible to:

- Submit an inception report within three weeks; on signing up of the contract including a work plan for the whole contract period, staffing and personnel deployment plan, and a withdrawal plan at the end of the period of contract. The withdrawal plan shall be detailed and reflect how the DPs will maintain the assets created and transferred to the DPs.
- Prepare monthly progress reports to be submitted to the RO, with weekly progress and work charts as against the scheduled timeframe of RP implementation.
- Prepare and submit quarterly reports on a regular basis, to be submitted to the RO.
- Submit a completion report at the end of the contract period summarizing the actions taken during the project, the methods and personnel used to carry out the assignment, and a summary of support / assistance given to the DPs.
- All other reports/documentation as described in these terms of reference.
- Record minutes of all meetings.

All progress reports shall include data on input and output indicators as required by the RO. Reporting in writing as well as photographs, videotapes etc., taken during the assignment shall be submitted in support of the reports, along with an electronic copy of the documents in a CD or pen drive. All reports should be in English (translational of the report in local language is optional). Accounts reports both on expenditure on administration as well as training and other heads shall be submitted with the quarterly and the completion reports.

In addition to these above, the NGO shall prepare and submit separate descriptive reports on participatory micro-plans with full details of the Participatory Rapid Appraisal exercises conducted.

The NGO shall document in full detail, the consultation/counseling processes, the process of identification of the resettlement sites, and a full description of the training imparted (on facilitated) as part of the assignment. This documentation shall be submitted to the EA as annual reports.

5.7.5 Condition of Services

The NGO shall ensure that the RP is implemented in an effective and proper manner. The prime responsibility of the NGO shall be to ensure that each and every eligible DP receives appropriate and due entitlement (within the Entitlement Framework) and that, at the end of the project R&R services, the eligible DPs have improved (or at least restored) their previous standard of living. Additionally the NGO shall help the PIU in all other matters deemed to be required to implement the RP in its spirit and entirely including activities involving some financial implications.

All documents created, generated or collected during the period of contract, in carrying out the services under this assignment will be the property of the PIU. No information gathered or generated during and in carrying out this assignment shall be disclosed by the NGO without explicit permission of the PIU.

5.7.6 Timeframe for Services

The NGO will be contracted for a period of 30 months from the date of commencement, with a withdrawal methodology built in to the proposals from the NGO.

5.7.7 Data, Services and Facilities to be provided by the Client

The PIU will provide to the NGO the copies of the SIA report / DPs' Census, the RP, the strip plan final design report and any other relevant reports/data prepared by the project preparation consultants. The PIU will assist the NGO in collaborating with the Authority Engineer. All facilities required in the performance of the assignment, including office space, office stationery, transportation and accommodation for staff of the NGO, etc., shall be arranged by the NGO.

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CHAPTER 6: RESETTLEMENT BUDGET

6.1 INTRODUCTION

A consolidated overview of the budget is provided and the cost estimates given below shall be viewed accordingly. The cost estimates for structures are based on the findings, emerges from the joint measurement survey, which is equivalent to replacement cost. In addition, the cost of the land to be acquired has been estimated by taking the cost from award compensation and tentative land rates taken from award compensation for the villages where the award has not been declared yet. In the Resettlement Budget, the provision for compensation and R&R assistance to the affected people is made as per the entitlement framework based on *The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013*.

The budget is indicative of outlays for the different expenditure categories and will be updated and adjusted to the inflation rate as the project continues. The budget is to be modified based on the decision of the Competent Authority of Land Acquisition (CALA) at the time of acquisition.

6.2 ESTIMATED R&R BUDGET

The R&R budget includes a tentative cost of acquisition of land, built-up properties such as residential and commercial units, religious, community buildings, government properties and boundary wall etc. In addition, the budget also includes the cost of R&R assistance, administrative expenses, NGOs involvement and Monitoring and Evaluation (M&E). The following tables show the item wise tentative cost estimates of resettlement.

6.2.1 Cost of the Land

The basic land rate has been collected from DLC rate. Under the policy guidelines (RFCTLARR Act, 2013), the compensation of land has to be paid on replacement value of the land. It is comparatively reasonable cost of the land to be paid to the affected people. Depending upon the available rates of land, an estimate of land cost was done and is reflected in the **Table 6-1**.

Table 6-1 Tentative cost of Land Acquisition

Sl. No.	Item	Eligibility	Quantity (Hectare)	Unit Rate	Total
1	Cost of land	Title Holder	710.3247	As per applicable Rate	Rs. 1,361 Cr.

Note: Last updated in the year 2018. May be modified at the time of actual land acquisition based on the decision of CALA

6.2.2 Cost of Structure

All structures were enumerated and cost estimates were done to meet the replacement

value of the affected properties. The estimated cost of the properties / structures being affected has been delineated in the following **Table 6.2**.

Table 6.2: Valuation of Structures

Sl. No.	Item	No of Structures	Amount (Rs. in Cr.)	100% Solatium	Total (Rs. in Cr.)
A	Cost of Private Structures	717	41.3	41.3	82.6
B	Cost of Government and Communities Structures	175	1.9	Not Applicable	1.9
C	Religious Properties	3	0.03		0.03
Grand Total					84.53
Say Rs. 85.0 Cr.					

Note: Last updated in the year 2018. May be modified at the time of actual land acquisition based on the decision of CALA

6.2.3 Cost of NGOs Involvement

The involvement of NGOs is required to help in implementation of the project, especially when the compensation is distributed among the affected household. The NGO will be selected on a normative and transparent manner (the TOR for the NGO is attached) through technical and financial competitive bidding. The experience, expertise and credibility of the NGO will be taken into consideration while selecting them. The lump sum budget which includes salary of the key professionals, sub-professionals, office staff, field staff, vehicle cost, vehicle running cost, training and workshop expenses, conducting HIV and AIDS awareness programs, office equipment expenses, rent of the office, stationery, overhead expenses and miscellaneous expenses etc. for one NGO is **Rs. 3.0 Cr.** for the project road.

6.2.4 Tentative R&R Cost

The R&R budget for the expressway of phase II is approximately INR **1,594 Crores** which includes the cost of land and structures, relocation or enhancement of religious, government and community structures and involvement of NGO. The summary of the tentative budget are given in **Table 6-3**

Table 6-3 Tentative R&R Cost

Sl. No.	Component	Cost in Cr.
1	Land Acquisition Cost	1,361.0
2	Cost of Private, Government and Other Communities Structures	85.0
3	Involvement of NGO for RAP Implementation	3.0
Total Sum (1+2+3+4+5)		1,449.0
Contingency @ 10%		144.9
Grand Total (In Cr.)		1,593.9

Sl. No.	Component	Cost in Cr.
		Say Rs. 1,594 Cr.

Note: Last updated in the year 2018. May be modified at the time of actual land acquisition based on the decision of CALA

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