

SOCIAL ASSESSMENT OF BANGALORE METRO RAIL PROJECT – LINE R6

1. Socio Economic Profile of the Project Area

1.1 General Profile

Bangalore officially known as Bengaluru, is the capital of the Indian state of Karnataka. It has an urban population of about 9.62 million, making it the third most populous city and fifth most populous urban agglomeration in India. It is located in the Deccan Plateau in the south of India. Its elevation is over 900 m (3,000 ft) above sea level, the highest of India's major cities. Its coordinates are 12.97°N 77.56°E and covers an area of 741 km² (286 sq mt). The majority of the city of Bangalore lies in the Bangalore Urban district of Karnataka and the surrounding rural areas are a part of the Bangalore Rural district. The Government of Karnataka has carved out the new district of Ramanagara from the old Bangalore Rural district. Bangalore is recognized as one of the most vibrant economic metropolitan in India due to the presence of several global IT industries apart from a large number of research institutions of national significance.

1.2 Demography

Bangalore district with a total population of 96, 21,551 is the most populous district in the State. The total area of Bangalore district is 2196 sq. km. and it is the smallest district in the state in terms of area. The district having 15.8 % of the total population has the highest a density of 4,381 and it ranks first in the State. Bangalore has the highest decadal growth rate of 47.2 percent in Karnataka. The district has a second highest literacy rate of 87.7 in the State. Bangalore ranks at second place in terms of female literacy rate. The Scheduled Caste population contributes 12.5 percent and the Scheduled Tribe population contributes 2.0 percent to the total population of the district. The work participation rates for Male and Female population in the district are 62.0 and 24.6 respectively, the female work participation rate being lowest in the state. Among the total workers in the district 90.9 percent are Main workers and 9.1 percent are Marginal workers. The major work force of 92.9 percent is in "Other Workers" category of the Census.

1.3 Economy

Bangalore is under eastern dry agro climatic zones of the State. The total forest area of the district is around 2.3 percent of the total geographical area. The topographical and climatic features of the district are subject to small regional variations and are favorable for the growth of a variety of plants. The soil of Bangalore district consists of red laterite and red fine loamy to clay soils. The primary crops grown in these soils are ragi, rice, paddy, maize, millets, pulses, oil seeds, and vegetables and fruit crops. The irrigation potential is quite low in the district as there are no major rivers flowing in the district. Bangalore (Urban) district has many tanks and most of these have been providing irrigation facilities to small patches of land that come under their respective holdings. The number of marginal holdings below one hectare and small holdings of size 1 to 2 hectares constitute 84.14 % of the total holdings. Only 0.47% land owner have land more than ten hectares. Livestock rearing plays a very vital role in rural economy in supplementing family income from agriculture and also providing employment.

1.4 Trade and Commerce

Bangalore district is industrially the most advanced district in Karnataka. The district

is endowed with minerals such as gneissic rocks, clay, quartz etc. besides machinery industry, and have an amicable environment for the growth and development of industries. Various oilseeds, vegetable and fruits are also raised to a considerable extent. Mulberry cultivation for the support of silk-worms is an important branch of industry in the district. Production of textile goods is the most notable industry. Bangalore carpets were well known for their durability and for the peculiarity of having the same pattern on both the sides. Extraction of oil, tanning, basket making, pot manufacture, weaving etc., were some of the traditional crafts flourishing from ancient times. Metal works in gold, silver, brass and copper were carried on throughout the district. The landscape of the region, which is mostly vast plains, has facilitated good communication system from the earlier centuries which in turn has contributed much for the development of trade and commerce in the district.

2. Project Proposal

The proposed alignment is one of the alignments of Phase II corridors. The alignment starts from Gottigere to Nagavara covering 21.255 km consisting of both elevated and underground sections. The elevated stretch is 7 km, underground is 13.8 km and the ramp area is 480 m. The alignment has 6 elevated stations and 12 underground stations.

3. Project Impact

The proposed Metro project will have a number of positive and negative impacts. In general the proposed Mumbai Metro project shall bring following positive impacts:

- Generate economic growth and employment opportunity,
- Safety & comfort in travelling,
- Traffic decongestion,
- Save fossil fuel and in turn reduce air pollution

The proposed project is not so positive for a section of people / project affected families. The anticipated negative impacts on these people include:

- Loss of Land though minimal due to its linear alignment,
- Disruptions in formal and informal commercial activities,
- Temporary disruptions in traffic,
- Disruptions and re-location of Public Utility structures

2.2.1 Land Requirement and Acquisition

As per the land acquisition proposal prepared by BMRCL, 270,712.07 square meters of land will be required for the Project. Out of the total land requirement, 218,900.2 square meters of land will be acquired permanently and 51,811.87 square meters of land will be temporarily procured through lease for the construction period.

2.2.2 Impact on Private Structures

Due to the project proposal and land acquisition requirement, various types of structures will be affected under the Project. As per the preliminary estimation carried out by BMRCL, a total of 698 private structures will be affected due to the Project. Out of the 698 private structures, 642 are title holders and 56 are non-title holders.

2.2.3 Project Affected Households and Persons

The preliminary impact assessment reveals that due to land acquisition and impact on structures including non-titled holders, a total of 838 households will be affected, which includes 712 households linked to commercial units and 126 residential households. In addition, there are 153 tenants including 136 commercial and 17 residential will be affected due to the project. Based on the average household size of city it is estimated that about 3890 persons will be affected by the Project.

2.2.4 Loss of Livelihood

The loss of livelihoods under the project includes business loss by owners (712), loss of rental income by residential owner (17), loss of rental income by commercial owners(136), business loss by commercial tenants(136) and commercial squatters (44).

2.3 R&R Measures

The affected people will be compensated and assisted as per the provisions of Resettlement Policy Framework (RPF) for the proposed Gottigere-Nagavara Corridor of Bangalore Metro Phase II. Since the E&S safeguard of the project is to be implemented with reference to EIB's Environmental and Social principles and Standards, the Bangalore Metro Rail Corporation Ltd. (BMRCL) prepared this RPF to ensure full compliance with the requirements of safeguard policies of both the aforesaid institutions and all applicable national policies.

Resettlement & Rehabilitation activities of BMRP will be governed by the following general principles, which are based on The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.

- In general, land acquisition will be undertaken in such a way that no project affected person, with or without formal title, will be worse off after land acquisition;
- All activities and procedures will be formally documented;
- The property and inheritance rights of project affected persons will be respected;
- If the livelihood of the project affected persons without formal title depends on the public land that they are using, they will be assisted in their effort to improve their livelihoods and standard of living to restore them to pre-displacement levels;
- If project affected person, without legal title, is not satisfied with the above decisions, they can approach the grievance redressal committee;
- In cases where there are persons working on the affected land or businesses, as determined by the social impact assessment, where the project affected person does not have formal title to the land (e.g. wage earners, workers, squatters, encroachers, etc.), then compensation/ assistance should be provided to these project affected persons to ensure no loss, to the extent as determined appropriate by the social impact assessment;
- In cases where land is needed on a temporary basis, project affected persons who have formal title will be compensated to the assessed fair rental price for the period during which the land is used and the land will be returned in the same condition or better as before it was rented;

- If resettlement is unavoidable in addition to the payment of fair market value for all land and immovable property, project affected persons will be provided assistance in relocation and other related expenses (i.e. cost of moving, transportation, administrative costs etc.);
- These rights do not extend to individuals who commence any activities after cut-off date of the project;
- The compensation and eligible resettlement and rehabilitation assistance will be paid prior to taking over of land and other assets for construction purposes;
- All project affected persons (private and public, individual and businesses) entitled to be compensated for land acquired; losses, structures or damages will be offered compensation and assistance in accordance with the provisions of the RPF. Those who accept the compensation amount will be paid prior to taking possession of their land or assets. Those who do not accept it will have their grievance registered or referred to the Grievance Redressal Committee (GRC) / courts as appropriate.

The R&R entitlement framework has been formulated based on the guiding principles outlined in the National Acts and EIB policies. This R&R framework will be adopted to formulate the Resettlement Action Plan. The compensation package is provided as per the relevant laws of the land. The basic principles governing present compensation structure and R&R entitlement matrix includes various components of R&R benefits and tabulated in **Table 1**. This matrix address all categories of people being affected and all categories of impacts accrued to the affected families due to the Project. Table 3.1 indicates the entitlements of all categories of impact as per the RTFCTLARRA 2013 and the EIB guidelines that are applicable for the project. The same can be classified under three major categories of impact, viz. loss of land, loss of structures and loss of livelihood, which covers the entire gamut of the affected population.

Table 1 Entitlement Matrix

I a.	Owner losing land and residential structure totally (Only owner staying in the premises)	<ol style="list-style-type: none"> 1. Compensation as per KIAD for land and structure acquired (Award) or 2. Consent award based on market value of land and building². and 3. Shifting allowance: <ol style="list-style-type: none"> a. Upto 1000 sq. ft. – Rs.10,000 b. 1001 sq. ft. – 1500 sq. ft. – Rs.12,500 4. Inconvenience Allowance: One time payment of Rs.30,000 5. Transitional Allowance: <ol style="list-style-type: none"> a. Upto 1000 sq. ft. – Rs.60,000 b. 1001 sq. ft. – 1500 sq. ft. – Rs.75,000 c. > 1501 sq. ft. – Rs.90,000 6. Right to salvage material totally
I b.	Owner losing land and residential structure totally (owner and tenant staying in the same building premises in separate parts)	<ol style="list-style-type: none"> 1. Same as in I a(1-6) Rental income lost in respect of rental area lost (Rs.10 per sq. ft. pm, for 6 months, for residential): <ol style="list-style-type: none"> a. Upto 1000 sq. ft. – Rs.60,000 b. 1001 sq. ft. – 1500 sq. ft. – Rs.75,000 c. > 1501 sq. ft. – Rs.90,000
I c.	Owner losing land and residential structure partially but continues to remain in the balance portion of	<ol style="list-style-type: none"> 1. Compensation as per KIADB for land and structure acquired (Award) or 2. Consent award based on market value of

	the same premises	land and building ³ and 3. Inconvenience Allowance One time payment of Rs.24,000
I d.	Owner losing land and residential structure partially and willing to surrender the same completely to Project Authority.	1. Owner has the option of giving up the remaining part of the property to the Project Authority. (A separate notification will be given for the remaining area) 2. Compensation and Entitlements will be the same as in Category I a. (1-6) or I b. as the case may be for the area lost including 1 above.
II a.	Owner losing land and commercial structure totally (owner operating own business in the acquired premises)	1. Compensation as per KIADB for land and structure acquired (Award) or 2. Consent award based on market value of land and building ⁴ 3. Shifting Allowance: a. Upto 150 sq. ft. – Rs.10,000 b. 151 sq. ft. to 300 sq. ft. – Rs.15,000 c. > 301 sq. ft. – Rs.20,000 4. Business loss: a. Payment of ST / VAT upto and including Rs.5000 will be paid Rs.50,000. b. Payment of ST / VAT between Rs.5001 to Rs.15,000 will be paid Rs.75,000. c. Payment of ST / VAT above Rs.15001 will be paid Rs.1,00,000. d. If without ST / VAT documentation, will be paid Rs.25,000. 5. Business premises re-establishment allowance: Rs.240 per sq. ft. of area lost. 6. Right to salvage material totally
II b.	Owner losing land and commercial structure partially but continues to run business in the same premises	1. Compensation as per KIADB for land and structure acquired (Award) or 2. Consent award based on market value of land and building ⁵ 3. Business loss: In respect of, a. Payment of ST / VAT upto and including Rs.5000 will be paid Rs.50,000. b. Payment of ST / VAT between Rs.5001 to Rs.15,000 will be paid Rs.75,000. c. Payment of ST / VAT above Rs.15001 will be paid Rs.1,00,000. d. If without ST / VAT documentation will be paid Rs.25,000. 4. Right to Salvage material
II c.	Owner losing land and commercial structure partially and unwilling to continue in the same premises	1. Owner has the option of giving up the remaining part of the property to the Project Authority. (Separate notification will be given for the additional area). 2. Compensation and Entitlements will be the same as in Category II a.
II d.	Owner losing land and commercial structure, but structure fully rented out	1. Compensation for the land and structure acquired as per KIADB for land and structure Award or 2. Consent award based on market value of land and building ⁶ and

		<ol style="list-style-type: none"> 3. Commercial Rental income lost (Rs.20 per sq. ft. pm for 6 months, twice of residential) <ol style="list-style-type: none"> a. Upto 1000 sq. ft. – Rs.1,20,000 b. 1001 sq. ft. – 1500 sq. ft. – Rs.1,50,000 c. > 1501 sq. ft. – Rs.1,80,000 4. Right to Salvage material
II e.	Owner losing land and commercial structure partially, but structure fully rented out.	<ol style="list-style-type: none"> 1. Compensation as per KIADB for land and structure acquired (Award) or 2. Consent award based on market value of land and building⁷ and 3. Right to Salvage material 4. Commercial Rental income lost, in respect of area lost (Rs.20 per sq. ft. pm for 6 months, twice of residential). <ol style="list-style-type: none"> a. Upto 1000 sq. ft. – Rs.1,20,000 b. 1001 sq. ft. – 1500 sq. ft. – Rs.1,50,000 c. > 1501 sq. ft. – Rs.1,80,000
II f.	Owner losing land and commercial structure fully, commercial activity being run by owner as well as tenant.	<ol style="list-style-type: none"> 1. Compensation as per KIADB for land and structure acquired (Award) or 2. Consent Award based on market value of land and building⁸. and 3. Shifting Allowance: <ol style="list-style-type: none"> a. Upto 150 sq. ft. – Rs.10,000 b. 151 sq. ft. to 300 sq. ft. – Rs.15,000 c. > 301 sq. ft. – Rs.20,000 4. Business loss: In respect of, <ol style="list-style-type: none"> a. Payment of ST / VAT upto and including Rs.5000 will be paid Rs.50,000 b. Payment of ST / VAT between Rs.5001 to Rs.15,000 will be paid Rs.75,000 c. Payment of ST / VAT above Rs.15001 will be paid Rs.1,00,000 d. If without ST / VAT documentation will be paid Rs.25,000 5. Business premises re-establishment allowance; Rs.240 per sq. ft. of area lost 6. Commercial Rental income lost (Rs.20 per sq. ft. for 6 months, twice of residential) <ol style="list-style-type: none"> a. Upto 1000 sq. ft. – Rs.1,20,000 b. 1001 sq. ft. – 1500 sq. ft. – Rs.1,50,000 c. > 1501 sq. ft. – Rs.1,80,000 7. Right to Salvage material
III	Owner losing land and residential cum commercial structure (both totally)	<ol style="list-style-type: none"> 1. Compensation for the land and structure acquired as per KIADB for land and structure or 2. Consent award based on market value of land and building⁹ 3. Shifting Allowance: For commercial: <ol style="list-style-type: none"> a. Upto 150 sq. ft. – Rs.10,000 b. 151 sq. ft. to 300 sq. ft. – Rs.15,000 c. > 301 sq. ft. – Rs.20,000 For residential: <ol style="list-style-type: none"> a. Upto 1000 sq. ft. – Rs.10,000 b. 1001 sq. ft. to 1500 sq. ft. – Rs.12,500 c. > 1501 sq. ft. – Rs.15,000 4. Inconvenience Allowance:

		<p>One time payment of Rs.30,000</p> <p>5. Business loss: In case of;</p> <p>a. Payment of ST / VAT upto and including Rs.5000 will be paid Rs.50,000</p> <p>b. Payment of ST / VAT between Rs.5001 to Rs.15,000 will be paid Rs.75,000</p> <p>c. Payment of ST / VAT above Rs.15001 will be paid Rs.1,00,000.</p> <p>d. If without ST / VAT documentation will be paid Rs.25,000.</p> <p>6. Business premises re-establishment</p> <p>a. 240 per sq. ft. in respect of commercial portion only.</p> <p>7. Right to salvage material totally.</p>
IV	Owner Losing only land	<p>1. Compensation for the land and structure acquired as per KIADB (Award) or</p> <p>2. Consent award based on market value of land and building¹⁰</p>
V	Tenant – Residential ¹¹	<p>1. Shifting allowance per tenant single / family tenants</p> <p>a. Rs.12,500</p> <p>2. Inconvenience Allowance</p> <p>a. Rs.30,000 per tenant family.</p> <p>b. Rs.15,000 for tenant single</p>
VI	Tenant – Commercial	<p>1. Shifting allowance per tenant:</p> <p>a. Rs.15,000</p> <p>2. Business loss per tenant:</p> <p>a. Payment of ST / VAT upto and including Rs.5000 will be paid Rs.50,000</p> <p>b. Payment of ST / VAT between Rs.5001 to Rs.15,000 will be paid Rs.75,000</p> <p>c. Payment of ST / VAT above Rs.15001 will be paid Rs.1,00,000</p> <p>d. Without ST / VAT documentation will be paid Rs.25,000</p> <p>3. Business premises reestablishment per tenant (12 months): Rs.240 per sq. ft.</p>
VII	Tenant – Residential cum Commercial	<p>A. For residential:</p> <p>1. Shifting allowance per residential tenant</p> <p>a. Rs.12,500</p> <p>2. Inconvenience Allowance:</p> <p>a. Rs.30,000 per tenant family</p> <p>b. Rs.15,000 for tenant single</p> <p>B. For commercial:</p> <p>1. Shifting allowance per tenant</p> <p>a. Rs.15,000</p> <p>2. Business loss per tenant:</p> <p>a. Payment of ST / VAT upto and including Rs.5000 will be paid Rs.50,000</p> <p>b. Payment of ST / VAT between Rs.5001 to Rs.15,000 will be paid Rs.75,000</p> <p>c. Payment of ST / VAT above Rs.15001 will be paid Rs.1,00,000</p> <p>d. Without ST / VAT documentation will be paid Rs.25,000.</p> <p>3. Business premises re-establishment per tenant (12 months) Rs.240 per sq. ft.</p>

VIII	Common Property resources	Project authority will compensate / replace for affected portion of schools, hospitals, parks, religious structures, etc.
IX	Any other impact not identified	Unforeseen impacts shall be documented and mitigated based on the principles provided in this package.

2.3 R&R Cost

Based on the anticipated social impacts due to land acquisition and displacement, an approximate R&R cost has been estimated for the Project. The units and rates taken for calculation of the R&R cost is based on replacement cost derived from market rates. A contingency amount of 10% is added to the total cost to cover up any change in the requirement subsequent to verification by the acquiring authority and this preliminary cost estimate will be updated during the Social Impact Assessment process before implementation. The total R&R cost estimate (including compensation for land acquisition) presented in **Table: 2** is approximately Rs. 2310 crores (Rupees Two thousand Three hundred and Ten crores).

Table: 2 R&R Cost Estimate

SI. No.	Item	Unit	Area/No	Unit Rate	Cost
A	Compensation				
A-1	Compensation for Land (Permanent)	Sq. Mtr	218900.20	90000	19701018000
A-2	lease for Temporary use of Land	Sq. Mtr	51811.87	2842	147265396
A-2	Compensation for Permanent Structure	Sq. Mtr	21041	As per Act	472694073
A-3	Compensation for Semi-Permanent Structure	Sq. Mtr	7930	As per Act	178150468
A-4	Compensation for Temporary Structure	Sq. Mtr	14243	As per Act	319974416
A-5	Cost of Non-titleholder Structure (Temporary)	Sq. Mtr	150	As per Act	3369807
A-6	Compensation for Tree	Number	540	20000	10800000
Sub-Total (A)					20833272161
B	Assistance				
B-1	Shifting Allowance to Residential Owner	Number	126	15000	1890000
B-2	Inconvenience Allowance to Owner	Number	126	30000	3780000
B-3	Transitional Allowance to Residential Owner	Number	126	90000	11340000
B-4	Rental Income Loss to Residential Owner	Number	17	90000	1530000
B-5	Business Loss Allowance to Commercial Owner	Number	712	75000	53400000
B-6	Business Reestablishment Allowance to Owner	Sq. Mtr	39027	240	9366480
B-7	Rental Income Loss to Commercial Owner	Number	136	180000	24480000
B-8	Shifting Allowance to Commercial Owner	Number	712	20000	14240000
B-9	Shifting Allowance to Residential Tenant	Number	17	12500	212500
B-10	Inconvenience Allowance to residential Tenant	Number	17	30000	510000
B-11	Shifting Allowance to Commercial Tenant	Number	136	15000	2040000
B-12	Business Loss Allowance to	Number	136	75000	10200000

Sl. No.	Item	Unit	Area/No	Unit Rate	Cost
	Commercial Tenant				
B-13	Business Reestablishment Allowance to Tenant	Sq. Mtr	5337	240	1280880
B-14	Shifting Allowance to Residential Squatters	Number	12	12500	150000
B-15	Subsistence Allowance to Residential Squatters	Number	12	30000	360000
B-16	Shifting Allowance to Residential Squatters	Number	12	12500	150000
B-17	Subsistence Allowance to Residential Squatters	Number	12	30000	360000
B-18	Business Loss Allowance to Commercial Squatters + Kiosk	Number	44	50000	2200000
B-19	Structure for Notified Slum Dweller	Number	6	3000000	18000000
B-20	Shifting Allowance to Notified Slum Dweller	Number	6	12500	75000
B-21	Assistance to Vulnerable Households	Number	107	50000	5350000
Sub-Total (B)					160914860
C	Implementation Support Cost	Lumpsum 2 persons for 2 years			3000000
Total (A+B+C)					20997187021
Contingency (10% of total cost)					2099718702
GRAND TOTAL					23096905723