

AMARAVATI CAPITAL CITY DEVELOPMENT PROJECT

FINAL SOCIAL IMPACT ASSESSMENT REPORT NELAPADU VILLAGE

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TELANGANA

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1. EXECUTIVE SUMMARY

1.0. Project and Public Purpose

The Andhra Pradesh Reorganization Act 2014 (Central Act 6 of 2014), came into force on 2nd June, 2014, provided for the reorganization of the existing state of Andhra Pradesh. One of the most critical priorities for the new state is the formation of the New Capital city, which is very important from the perspective of economic development, cultural integrity and administrative functioning.

The Government of Andhra Pradesh has decided to establish a green field capital city as a liveable, environmentally sustainable and people's capital. For this purpose, the location of the capital was identified between Vijayawada and Guntur cities on the upstream of Prakasam Barrage on the river Krishna, with an area of 217.23 Sq. Km, which is covering a current population of 102401 in 24 revenue villages and part of Tadepalli Municipality which are covered under 26 LPS Units. The proposed Amaravati capital city is being planned to accommodate a population of 3.55 million by 2050.

The proposed capital city is being developed with 'state-of-the-art' infrastructure including world class roads, water supply facilities, administrative and institutional complexes, drainage, sanitation, Solid Waste Management (SWM) facilities, river front development etc, among others.

Vision: The New Capital of Andhra Pradesh is envisioned to be the pioneer Smart City of India. It aims to be World Class and at par with the standards set forth by countries such as Singapore. The new capital will be an economic powerhouse that will create a range of earning opportunities for existing resident villagers by upgrading their skills, as well as provide high-tech and knowledge based opportunities under industrial sector to be globally competitive and attempts to make them qualified for self-employment by providing interest free loans up to 25 lakhs. Housing will be at the core of its planning and will aim to provide affordable and quality homes to all its residents. It will demonstrate global quality of life standards to offer high levels of convenience to people of all ages.

Purpose: The procurement of lands required for the project is primarily under land pooling scheme as declared under A.P. Capital City LPS (F&I) Rules, 2015 and Land Pooling Development Scheme includes lands acquired for the project under LA, R&R Act, 2013. The Land Pooling Scheme is declared as per public purpose under AP CRDA Act, 2014. Amaravati Capital City Development Project is an infrastructure project which includes sub-sectors like transport, energy, water and sanitation, communication and social infrastructure. Hence the project is for public purpose within the meaning of section 2(1) of the LA, R&R Act, 2013.

1.1. Location

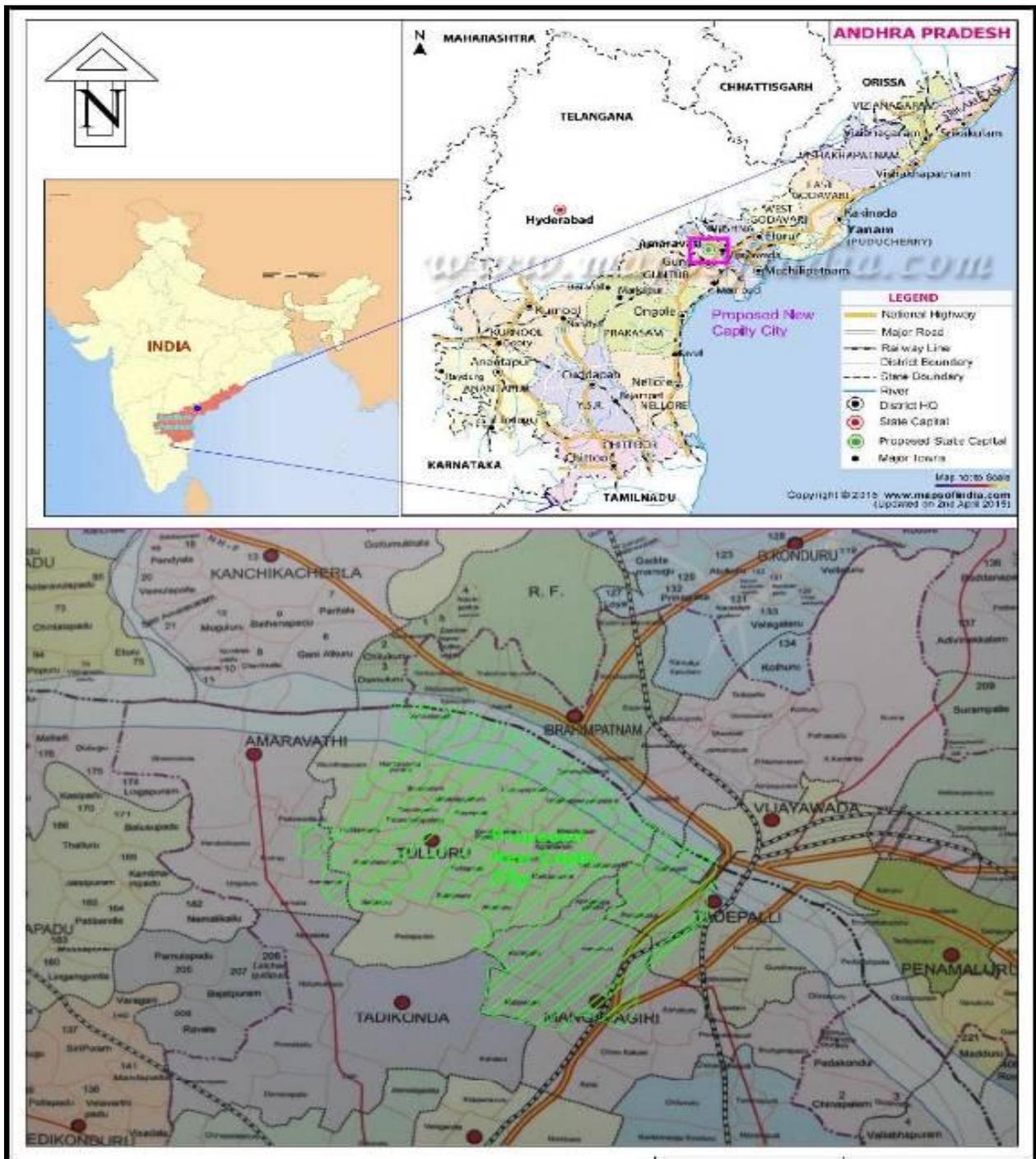


Figure: 1 - Key plan depicting the geographic location of the project

1.2. Size attributes of Land Acquisition

The geographical extent of Nelapadu village is **Ac. 1418.26** cents out of which extent **Ac. 1326.59** cents are to be procured and an extent of **Ac. 91.67** cents is Govt. land. Out of **Ac. 1326.59** cents and extent of **Ac. 1286.77** cents have been acquired under Land Pooling Scheme and extents of **Ac. 39.82** cents are to be acquired under LA R&R Act, 2013. Details of the land to be acquired along with the reputed owners have been presented in the Table E1

Table E1: Land to be acquired in Nelapadu Village

Sl. No	Survey No	Total Extent Ac. Cts.	Extent Covered by L.A. AC. Cts	Classification	Name of the reputed owner
1	67-D	3.6100	0.4525	Dry	Kalla Veera Bhadraiah
2	84-4	0.3800	0.3800	Dry	Inampudi Subbarao
3	85-1	0.6100	0.2800	Dry	Ponnam Venkateswararao, Ayinampudi Lakshmaiah
4	85-4	0.2900	0.2900	Dry	Ponnam Venkateswara Rao
5	84-2	0.2200	0.2200	Dry	Peddi Kamala Devi
6	85-1	0.6100	0.3300	Dry	Peddi Kamala Devi
7	34-A	1.7000	0.0500	Dry	Ananda Rao Chalamaraju
8	35-1	1.1600	0.0300	Dry	Ananda Rao Venkatappaiah
9	124-A	4.5200	0.0200	Dry	Ananda Rao, Dakshana Murti
10	121	12.1400	0.0100	Dry	Bogineni Kotaiah, Gourneni Chilakamma
11	151-B	3.0700	0.0100	Dry	Dhanekula Krishnaiah
12	75-B	4.7600	0.0100	Dry	Dhanekula krishtayya
13	42-C	1.6600	0.1000	Dry	Gangavarapu Seshaiah
14	63-3	2.2800	0.0050	Dry	Gudapati Gopaiah
15	44	4.0000	0.0100	Dry	Gujjarlapudi Adiseshamma
16	67-A	2.2900	0.0100	Dry	Gujjarlapudi China Devaiah
17	58-A	6.8000	0.0600	Dry	Gujjarlapudi Ramachandrudu
18	77-A	7.8300	0.0400	Dry	Gujjarlapudi Ramaswami
19	145-C	0.9200	0.7450	Dry	Gujjarlapudi Seethaiah and 17 others
20	53	8.0200	0.0100	Dry	Hanuparlapudi Yallamandaiah and Venkataswamigadu
21	153-A	6.0600	0.0100	Dry	Indurthi Narasayya, Pentayya
22	41-A	2.2200	0.1300	Dry	Jammula Ramaswamy
23	49-A	3.0300	0.0400	Dry	Jonnalagadda Bapaiah, Paddaiah and Subbaiah minor Gardian Achhamma
24	98	13.6200	0.0250	Dry	Kamineni Peda Seshaiah
25	101	9.0900	0.0650	Dry	Kamineni Ramanna
26	7	8.8200	0.0100	Dry	Kamineni Venkatappaiah and Aluri Venkatrayudu
27	95-B	1.4400	0.0200	Dry	Kata punnaiah and 10 others
28	10-B	3.5500	0.0025	Dry	Kommineni Sambrajyam
29	42-A	3.2200	0.0200	Dry	Kotapati Appaiah, Puvvada Seethaiah and Jammula Ramaswamy
30	38	5.2700	0.0050	Dry	Koyyagura Ammigadu
31	28-A	3.9500	0.0050	Dry	Koyyagura Ammigadu
32	48-B	0.9300	0.1000	Dry	Koyyagura Chiana Venkaiah
33	29-1B	3.5300	0.0250	Dry	Mulpuri Venkatarayudu and 3 others

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34	130	7.4400	0.0400	Dry	Nelapati Seethaiah, Ramaiah and 2 others
35	75-A	6.1900	0.0050	Dry	Nutakki Ramanna
36	120-B	12.2600	0.0100	Dry	Ponnam Seshaiah
37	40-A	5.1100	0.0050	Dry	Puvvada Nayudamma
38	45-C1	2.0900	0.0700	Dry	Puvvada Seethaiah
39	19-A2	1.9700	0.0050	Dry	Puvvada Venkatrayudu
40	5	10.3000	0.3400	Dry	Tirumala krishnamacharyulu, Srinivasacharyulu and 3 others
41	94-A	3.9400	0.0100	Dry	Vemparala Bavaji and Yedduri Ramanna
42	49-B	2.9300	1.4700	Dry	Nallapaneni Sambasiva Rao
43	38	5.2700	0.5000	Dry	Gudipudi Anandamma
44	76-D	4.5500	2.2700	Dry	Karnati Padmavati
45	112-C	6.1800	1.2400	Dry	Yamparala Padma
46	60-C	2.4200	0.6200	Dry	Addepalli Srinivasa Rao, Ponnam Chittemma, Gujjarlapudi Srinivasa Veera Mohanarao
47	68-B	7.4500	0.6000	Dry	Gorijala Aruna Kumari
48	129-A1	3.2300	0.8600	Dry	Gujjarlapudi Sambasiva Rao
49	151-E	2.6300	1.0900	Dry	Gujjarlapudi Sambasiva Rao
50	66-D	5.8200	0.7450	Dry	Gujjarlapudi Srinivasa Rao
51	68-B	7.4500	0.5100	Dry	Gujjarlapudi Srinivasa Rao
52	59	7.4000	2.0000	Dry	Kapa Nageswara Rao
53	61-B	3.8500	1.9250	Dry	Kapa Nageswara Rao
54	132	8.4000	1.0000	Dry	Kapa Nageswararao
55	108-C	5.0100	1.6700	Dry	Kapa Sambraajyam
56	132	8.4000	1.0000	Dry	Kapa Subbarao
57	104	5.9400	1.9800	Dry	Kapa Vasundara Devi
58	110	8.6600	4.3300	Dry	Gadde Butchaiah
59	110	8.6600	4.3300	Dry	Gadde Sambraajyam
60	114-A	3.2400	1.0800	Dry	Gadde Sambraajyam
61	114-B	2.9800	1.0000	Dry	Gadde Sambraajyam
62	119-A	5.2100	1.4250	Dry	Kommineni Nagendramma
63	119-A	5.2100	1.8925	Dry	Kommineni Poornachandra Rao
64	35-2	3.9600	0.2500	Dry	Kommineni Poornachandra Rao
65	75-A	6.1900	0.9450	Dry	Kommineni Poornachandra Rao
66	129-B	4.2000	0.2250	Dry	Cherukonda Nagabhushnam
67	129-B	4.2000	0.2250	Dry	Duddhukuri Bushababu
68	129-B	4.2000	0.2250	Dry	Peddi Appajirao
69	129-B	4.2000	0.2250	Dry	Peddi Sambasivarao
70	27-H	2.7200	0.1800	Dry	Kesanam Venkata Nagaraju
	Total		39.8175		

Source: APCRDA, LPS Unit-18, Nelapadu (V)

1.3. Social Impacts

The objective of Social Impact Assessment (SIA) is to prepare a complete inventory of structures, affected families and persons, to identify social impacts, and provide mitigation measures with compensatory mechanisms. In order to capture data for the present exercise, a questionnaire exercise was carried out. As a part of SIA, socio-economic survey has been conducted with the experts of the survey team to identify the affected structures, families/persons and list out the adverse impacts of the project.

The social impacts of the AP Capital City Development Project have been classified as

- i. Impact during beginning of the construction stage
- ii. Impact during Construction stage
- iii. Impact during Operation stage or post construction stage

The main aim of the Social Impact Management Plan is to ensure that the various adverse impacts are mitigated and the positive impacts are enhanced. The social impact management measures shall be implemented during the various stages of the project viz. Pre-construction Stage, Construction Stage and Operational Stage. A description of the various impacts identified during different stages of construction is presented in Table E2.

Table E2: Identification of Social Impacts at Various Projects

Beginning	Construction	Post Construction
Acquisition of agricultural land Acquisition of trees Loss of livelihood	Dust pollution Noise pollution Labour employment & small & medium scale markets with livelihood opportunities during construction	Social, Economic and Infrastructural Development which will improve the quality of life

1.4. Mitigation Measures

Potential impacts due to land related impacts are attributed to loss of land, change in land use and loss of access to present livelihood. The impacts of the project due to change in land-use are significant and irreversible; however the Concept Plan has addressed the issues and all necessary mitigation measures. The village site / habitation is excluded from the Capital City Development Project and included in the village development plan with least displacement of families. However, land will be acquired for construction of Roads / Railways as per requirements of master plan in the village site / habitation zone. The plan can be summarized into the following planning strategies and typologies:

1.4.1. Green & Blue lattice:

- ✓ Green grid – The green and blue network primary follows the road network creating passive recreational fingers across the city. These fingers are anchored with large parks and open spaces close to the 2 reservoirs. Each finger terminates at the scenic river Krishna waterfront.
- ✓ Active, beautiful and clean waterways weave through the Amaravati Capital city. These waterways follow the existing irrigation canals and reservoirs to form an interwoven water network.
- ✓ The plan creates a variety of interfaces between the green and blue creating different water themed public spaces such as lake parks, waterfront corridor, linear parks, etc.

1.4.2. Primary green spaces:

- ✓ Primary green spaces including large city parks, lakes, town parks, neighbourhood parks, water bodies and public plazas form the foundation of the city scale recreational network that provides recreation opportunities and improves a sense of community. These parks help in creating large public open spaces which can double up as event spaces for the larger community within the Capital city.
- ✓ Primary greens are planned along the existing canals and water bodies to serve as city's main ecological corridors. They play a dual role in flood management, and environmental conservation of the native species.

1.4.3. Secondary green links

- ✓ Secondary greens weave through the townships connecting the various town and neighbourhood parks. Planned as the secondary green fingers of the city, these greens act as passive recreational spaces, interactive jogging trails and non-motorized transports corridors across the city.

1.4.4. Recreational Landscapes

- ✓ Recreational landscapes include theme parks, golf courses, sports and recreational spaces.
- ✓ In line with the township model several sports and recreation parcels have been allocated in the town Centre, and in proximity to the neighborhood Centre.
- ✓ Large city level sports facilities such as cricket stadium, golf courses and theme parks have been strategically distributed across the city.

1.4.5. Water bodies

- ✓ Water bodies including rivers, canals, irrigation channels and reservoirs have been carefully protected and integrated with the green spaces as discussed in the previous section.

1.4.6. Benefits for the Project Affected Persons

The impacts due to procurement of land are expected to be minor with the implementation of the land pooling scheme for majority extent of lands covered by the project.

- ✓ Providing land pooling benefits to the landowners who entered into Development Agreement with CRDA.
- ✓ Demarcation of village site / Habitation and not including the area in capital city development except for the requirements of roads / railways or for village development,
- ✓ Payment of annuity prior to taking possession of land or any physical displacement for the damages sustained in terms of loss of net agricultural income.
- ✓ Payment of pension of Rs. 2,500/- per month to all landless families for 10 years towards transitional assistance to support economic loss;
- ✓ Dissemination of information about the acquisition and compensation calculation process and benefits under LPS
- ✓ Establishing a grievance redressal mechanism;
- ✓ Option for work during project construction period;
- ✓ Continuation of community engagement process;
- ✓ Provision of access to local villagers to continue with their pre project movement pattern.
- ✓ Agriculture loan waiver up to Rs. 1,50,000/- NREGA up to 365 days / Skill development training with stipend/free education/free medical facilities as prescribed by Govt. towards other benefits.
- ✓ Interest free loan up to 25 lakhs to all the poor families for self-employment.

1.5. Impact on Livelihoods

Long term livelihoods have been, or will be, impacted for those families who have surrendered their lands for the project. Most of the people (landowner as well as landless) of the area are dependent on agriculture for their livelihood, and there is loss of current livelihood for almost the entire population.

1.5.1. Mitigation Measures

Since major land requirements have been procured under Land Pooling Scheme and after taking the following mitigation measures, the impact could be reduced considerably.

- ✓ Payment of compensation and R&R benefits as per LA R&R Act, 2013;
- ✓ Preference to the land losers as per eligibility to work during project construction period.
- ✓ Provide necessary skill improvement training to affected people to have more livelihood opportunities in project operation phase.

1.6. Impact on Utilities

All the village site / extended habitations are excluded from displacement without any disturbance to power lines, telephone lines, and water supply etc., Care shall be taken to

construct the project without disturbing general utilities. Provision of infrastructure facilities in the proposed plan will improve livelihood conditions.

1.6.1. Mitigation Measures

This impact is expected to be minor and with the implementation of the following mitigation measures the potential disruption to existing utilities will be further minimized.

- ✓ Coordination with respective concerned department for utility relocation;
- ✓ If any displacement is required and discontinuation of utilities if any arises necessary temporary arrangement shall have to be taken;
- ✓ Providing intimation to the people in advance about any disruption to services.

1.7. Impact during Construction Phase

The construction phase of the Project involves a number of sequential activities, collectively named as “spread”. The area affected by the construction, laying of road, clearing of site, construction of residential, commercial and industrial units, construction of social infrastructure, construction of treatment plant, laying of sewer line, and labour camps areas etc. Based on the assessment of above activities and in consultation with the different stakeholders, the following impacts are being envisaged for the construction phase of the project.

1.7.1. Mitigation Measures

Potential impacts during construction period include impact due to the influx of migrants and associated health related risk to the community. These impacts are expected to be moderate and with the implementation of the following mitigation measures the potential impact of loss of livelihood will be further minimized.

- ✓ Engage as many locally available unskilled, semiskilled and skilled human resource as practically possible to avoid large scale in migration of labour force; Rural agriculture labour to adopt urban agriculture / non-agricultural skills.
- ✓ Provision of infrastructure and amenities for migrant labour in construction camp to avoid dependence on limited local resources;
- ✓ Barriers will be provided to prevent ingress of persons into the construction site and also to protect public exposure to hazards associated with construction activities;
- ✓ Additional safety precaution while working in market and settlement areas and especially around the trenches;
- ✓ Screening, surveillance and treatment of workers, through the provision of medical facilities and, where required, immunization programmes;
- ✓ Undertaking health awareness and education initiatives among workers, especially about sexually transmitted disease ;
- ✓ Prevention of larval and adult propagation through sanitary improvements and

elimination of breeding habitats close to human settlements in the close vicinity of construction site;

- ✓ Implementation of a vector control programme;
- ✓ Avoiding collection of stagnant water;
- ✓ Educating project personnel and area residents on risks, prevention, and available treatment for vector-borne diseases;
- ✓ Promoting use of repellents, clothing, netting, and other barriers to prevent insect bites;
- ✓ Following safety guidelines for the storage, transport, and distribution of pesticides to minimize the potential for misuse, spills, and accidental human exposure; and Road safety measures.

1.8. Assessment of Social Cost & Benefits

This section provides social costs by comparing project benefits (positive impacts) and negative impact (social cost), from construction of Amaravati – AP Capital City Development Project. The cost of Land Acquisition of Nelapadu is estimated at **Rs. 4.48 crores**. Positive and negative impacts have been discussed in following Table E3.

Table E3: Positive and Negative aspects of the project

Sl. No	Positive Impact	Negative Impact	Remarks
1	Enhanced cost of land per acre	Loss of Agriculture Land	After careful examination of various parameters of cost and benefit (positive and negative impacts), it is found that the proposed construction would benefit local Community at large. The loss of livelihood in terms of agriculture to be mitigated by preparedness to undertake urban agricultural practices and non- agriculture based livelihood opportunities through skill development and self-employment.
2	Social Development	Loss of livelihood in terms of agriculture	
3	Infrastructure development	Not satisfied with compensation provided by the authority.	
4	Economic development	Providing commercial infrastructure on lottery base in the project area. The PAFs are not satisfied with this scheme.	
5	Improvement of quality of life		
6	Increase in livelihood opportunities and self employment		

The project involves predominantly acquisition of agricultural land. The land is made available through land pooling scheme. This project will help the local people through infrastructure development, social development and will increase livelihood opportunities and self-employment sources.

2. DETAILED PROJECT DESCRIPTION

2.0. Background

The Andhra Pradesh Reorganization Act 2014 which came into existence after the 2nd June, 2014, provided for the reorganization of the existing state of Andhra Pradesh. The formation of a new capital city - critical for its administration, economic development, and cultural integration – is an immediate priority for the Successor State of Andhra Pradesh.

In accordance with Section 6 of the Act, on 28.03.2014, the Government of India constituted “an expert committee to study various alternatives regarding location of the new capital for the successor State of Andhra Pradesh and make appropriate recommendations”. The five member expert committee, headed by Shri KC Sivaramakrishnan submitted their final report to the GoI on 27.08.2014. The Committee studied multiple options, and also highlighted the need to ensure balanced regional development. The Committee has not made specific recommendation selecting an area and the same report was forwarded to State Government by GoI.

In this context, the AP State Assembly passed resolution on 03-09-2014, “To locate the Capital City in a central place of the state, around Vijayawada, and to go for decentralized development of the State with 3 Mega Cities and 14 Smart Cities. It is proposed to go for Land Pooling System to be worked out by a Cabinet Sub Committee”.

As regards the new Capital, the Government is deeply committed to ensuring that the process of building the new capital involves the participation of people. It is in this context that the Cabinet has suggested the use of Land Pooling scheme to consolidate the land required for the capital. This will enable the local landholders to proactively participate and benefit from the development of the capital city, and will create a win-win situation for the landholders, citizens and the Government. As a result, the new capital city of the State of Andhra Pradesh can proudly call itself a “people’s capital”.

The creation of a world-class capital city at a central location is essential to create a level-playing field for the new State. As experience from across the world demonstrates, a vibrant capital city can act as a catalyst for economic development for the entire state and become an iconic city that is a source of pride for all its citizens.

The Government of AP has decided to establish the new capital city as a liveable, environmentally sustainable and people’s capital. For this purpose, the location of the capital was identified between Vijayawada and Guntur cities upstream of Prakasam Barrage and on the right bank side of river Krishna.

The Government of A.P vide GO-254, MA and UD (M2) Department dated 30th December 2014, read with GO MS No-141- MA & UD (M2) Department dated 9th June notified an area of 21.23 Sq.KMs as AP Capital City area.

The list of villages with the procurement of land area through LPS / LA (Source: APCRDA) is given in **Table 2.1** below.

Table 2.1: Village wise Extent of Area to be acquired through LPS /LA

Sl. No	Name of the Mandal	Name of the Village	Extent of Area (acre)
1	Mangalagiri	Krishnayapalem	1425.065
2		Nowlur-1	1439.7987
3		Nowlur-2	1751.78
4		Kuragallu-1	1618.08
5		Kuragallu-2 (Nerukonda)	1476.46
6		Nidamarru-1	1259.49
7		Nidamarru-2	1246.42
8		Undavalli	1262.23
9	Tadepalli	Penumaka	1646.52
10		Tadepalli	58.62
11	Thulluru	Borupalem	384.13
12		Abbarajupalem	731.7
13		Dondapadu	271.6968
14		Pitchukalapalem	822.5
15		Inavolu	1057.515
16		Rayapudi-1	1662.63
17		Rayapudi-2	638.73
18		Kondamaraju Palem	824.08
19		Lingayapalem	992.68
20		Uddandarayunipalem	612.72
21		Malkapuram	471.75
22		Nekkallu	1258.585
23		Nelapadu	1326.65
24		Sakhamuru	1526.07
25		Thulluru-1	1457.138
26		Thulluru-2	1786.41
27		Velagapudi	1867.04
28		Venkatapalem	1463.95
29		Mandadam-1	1676.92
30		Mandadam-2	1983.31
31		Ananthavaram	2048.81
		TOTAL	38049.4785

2.1 Nature, Size and Location of the Project

The proposed Amaravati City of Andhra Pradesh falls in Guntur district of Andhra Pradesh and located at a distance of approximately 30 km from the Vijayawada town. The proposed development site is predominantly of rural character with area of **217.23 sq.km** and the land to be procured under LPS / LA is **38049.48 acres**; covered in 24 revenue villages and part of Tadepalli municipality falling in three mandals namely Thulluru, Tadepalli and Mangalagiri.

The site is abutting the River Krishna on the west of Old National Highway from Prakasam Barrage to Y-junction at Mangalagiri. The nearest railway station is K C Canal Station near Tadepalli and the nearest airport is at Gannavaram.

The existing land use of the site is consisting of - agriculture, land for grazing, fruit and flower plantations, village settlements and village ponds etc.

2.1.1. Geographic Positioning of Amaravati

The proposed site is towards the west of Vijayawada at about 3 km. The exact coordinates of the site are shown in Figure 2 below. While attempt has been made to accurately depict the boundary, in view of the technical limitations minor variations in the boundary may be observed in representation. Official boundary is available with APCRDA and in public domain.

2.2. Transport Connectivity

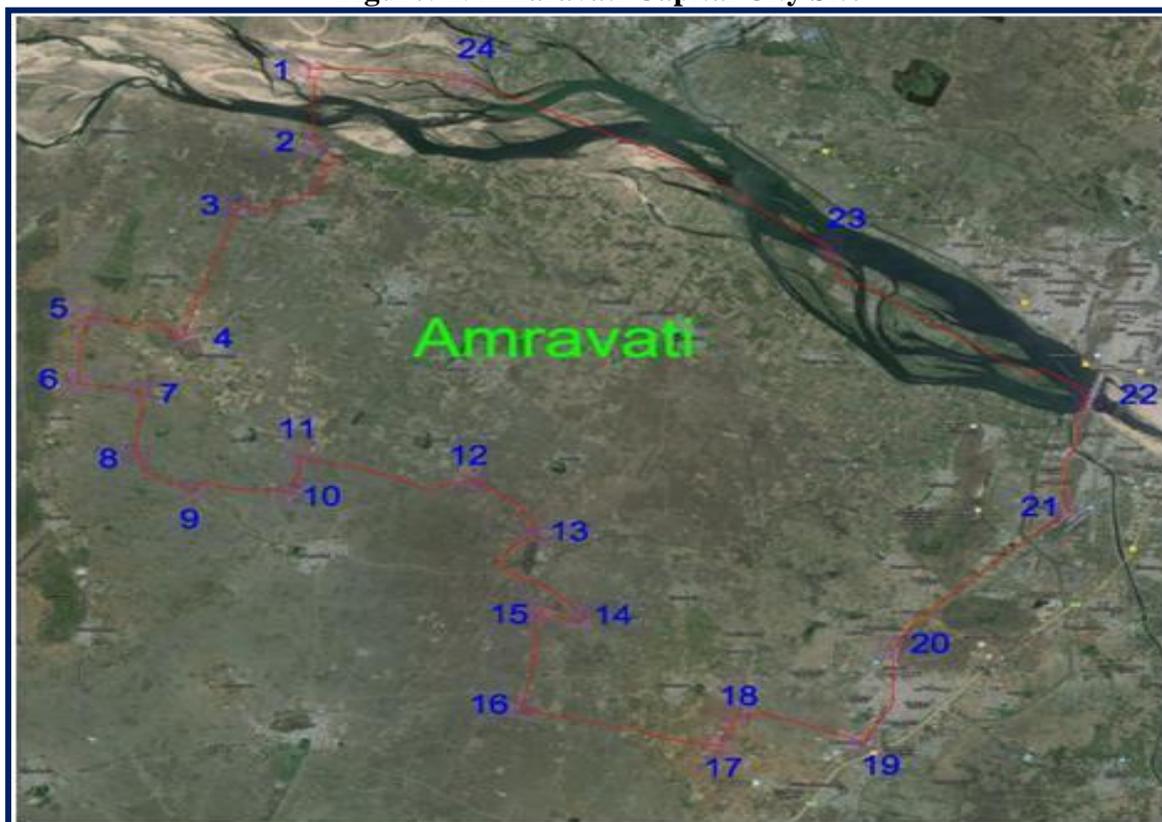
Air connectivity

- ✓ Existing Gannavaram airport is at 30 minutes drive from the city center
- ✓ Expansion of this airport is planned in near future and it will be upgraded to an international airport.

Road connectivity

- ✓ The existing national highway (NH16) will connect the Amaravati city to Vijayawada and Guntur, and further connect to Vishakhapatnam and Chennai.

Figure: 2. Amaravati Capital City Site



Site Coordinates

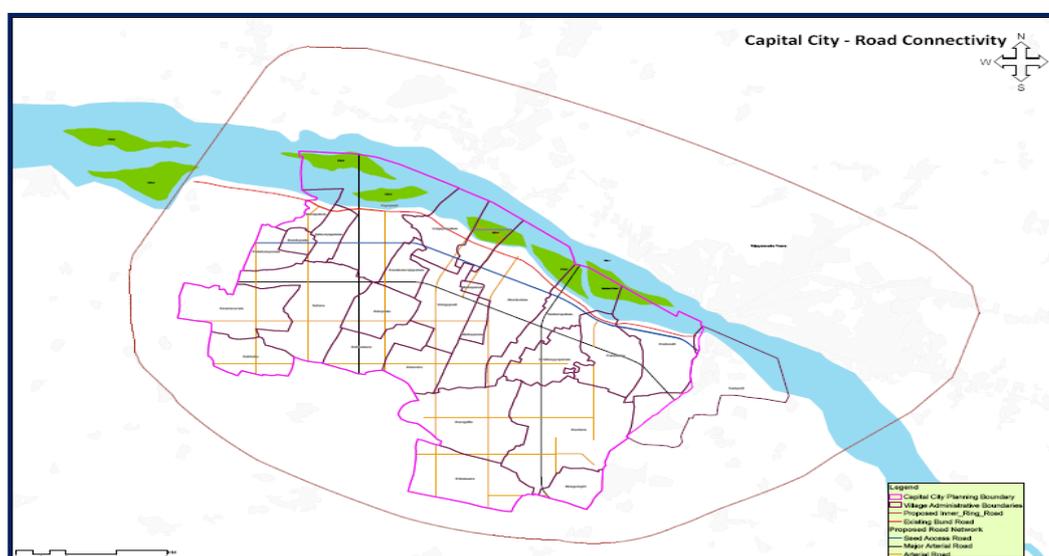
S No	Longitude	Latitude	S No	Longitude	Latitude
1	80.4525	16.5896	13	80.4967	16.4682
2	80.4540	16.5703	14	80.5061	16.4480
3	80.4390	16.5541	15	80.4973	16.4489
4	80.4281	16.5196	16	80.4937	16.4238
5	80.4097	16.5252	17	80.5324	16.4139
6	80.4073	16.5080	18	80.5361	16.4219
7	80.4199	16.5058	19	80.5604	16.4151
8	80.4190	16.4893	20	80.5661	16.4392
9	80.4300	16.4801	21	80.6000	16.4744
10	80.4489	16.4797	22	80.6040	16.5042
11	80.4509	16.4889	23	80.5537	16.5432
12	80.4840	16.4828	24	80.4832	16.5863

- ✓ A new national highway alignment has been approved in order to increase the Amaravati Capital city’s connectivity to the neighbouring Vijayawada city.
- ✓ The NH65 will connect the Amaravati Capital city to Hyderabad and Machilipatnam port.

Rail Connectivity

- ✓ The Amaravati Capital city has good connectivity to the Vijayawada rail station via NH16. The Vijayawada rail station is one of the busiest rail stations in the country.
- ✓ There is also an existing rail station in the Mangalagiri town.
- ✓ A new High Speed Rail alignment has also been proposed for connecting the Amaravati Capital city. As illustrated in **Figure 3**, this alignment runs along the approved national highway.
- ✓ There is a planned MRT network within Vijayawada. There is potential to tap on this public transportation network and extend it into the Amaravati Capital city.

Figure: 3. Amaravati Capital City Connectivity



2.2.1. Project Overview

The Andhra Pradesh Capital Region Development Authority Act, 2014 has come into force on 30th December, 2014. The Act mandates a) constitution of a Capital Region Development Authority for the purpose of Planning, coordination, execution, supervision, financing, funding and for promoting and securing the planned development of the Capital Region Development area and b) to construct new Capital City for the State of AP.

Vision, Goals and Strategies of the Amaravati Capital City

Vision: The New Capital of Andhra Pradesh is envisioned to be the pioneer Smart City of India. It aims to be World Class and at par with the standards set forth by countries such as Singapore. The new capital will be an economic powerhouse that will create a range of jobs for existing resident villagers by upgrading their skills, as well as provide high-tech and knowledge based industry jobs to be globally competitive. Housing will be at the core of its planning and will aim to provide affordable and quality homes to all its residents. It will demonstrate global quality of life standards to offer high levels of convenience to people of all ages. The proposal will capitalize on the rich heritage possessed by the region and utilize it to create a unique identity for the new capital. Sustainability and efficient management of resources will form another important pillar of this new capital. It will be supported by maintaining the clean and green character that the site currently demonstrates by strengthening these ideas in to the new capital master plan.



Figure 4: Capital Region with Mandal boundaries and Capital City Boundary

2.3. Goals and Strategies

(I) World Class Infrastructure

Goal: 135 Km of Public Transport corridors by 2050 > 600 km of Road Network by 2050

Strategies:

- ✓ Build state-of- art public transport both for Capital Region and Amaravati Capital city
- ✓ Develop a highly efficient road network at par with international standards
- ✓ Encourage high percentage of modal share using public transport
- ✓ Plan for a long term 2050 horizon and reserve transit corridors where necessary
- ✓ High speed Railway to have a station in the Amaravati Capital city
- ✓ Develop a world class International Airport to serve the Capital Region
- ✓ Capitalize on the opportunity to use National Waterway for trade
- ✓ Plan strategically to allow easy transfer between different modes of transport

(II) Jobs and Homes for all

Goal: 3.55 million Resident populations by 2050 and 1.5 Million Jobs by 2050

Strategies:

- ✓ Promote high-value added agriculture and agro-based industries
- ✓ Create opportunities for existing dwellers to upgrade skills
- ✓ Introduce a mix of knowledge based high-tech industries to attract investments
- ✓ Encourage home ownership to create a sense of identity for citizens
- ✓ Provide sufficient affordable housing to cater to the needful
- ✓ Strategize a slum free city through careful planning
- ✓ Phase out industries strategically for long term sustained growth
- ✓ Create a favourable policy framework to implement and support the Amaravati Capital city development

(III) Green and Clean

Goal: >20% area reserved for green and Blue and 25+ km Public River waterfront

Strategies:

- ✓ Create a network of parks and greens by integrating the village ponds
- ✓ Ensure access to park for every citizen within easy walking distance
- ✓ Make productive use of natural features on the site without damaging them
- ✓ Reserve most of the waterfront along Krishna River for public use
- ✓ Mandate retaining the green network reserved in the Amaravati Capital city Plan
- ✓ Reserve high value agriculture land as no development zone wherever possible
- ✓ Utilize the natural features such as forest and hills to create a regional green network.
- ✓ Create an image of city sitting within the water and greens

(IV) Quality of living

Goal: Parks and Public Facilities within 5-10 minute walking distance

Strategies:

- ✓ Ensure public transit is within easy walking distance for all
- ✓ Convenience of neighbourhood centre amenities within walking distance
- ✓ Safe environment with universal access for all ages
- ✓ Provide opportunities for learning and enhancing careers within the Amaravati Capital city and Region
- ✓ Provide excellent health care facilities at affordable costs within easy reach
- ✓ Ensure ample opportunities to live, work, learn and play
- ✓ Ensure ease of commute within 30 minutes from origin to destination with Amaravati Capital city

(V) Efficient Resource Management

Goal: Flood resistant City towards Net Zero Discharge

Strategies:

- ✓ Adopt efficient flood control techniques and protect most waterways in the city
- ✓ Promote “Reduce, Recycle and Reuse”
- ✓ Establish state of art waste management and disposal systems across the city
- ✓ Develop a smart grid in the city for efficient management of power and energy
- ✓ Encourage use of renewable energy to maximum extent possible
- ✓ Integrate the storm water drainage system with the existing canal and village tank network and utilize for flood management and recreation
- ✓ Encourage certification of projects using global standards such as IGBC and LEED

(VI) Identity and Heritage

Goal: > 220 km of Heritage and Tourism Network using Roads, Metro and waterways

Strategies

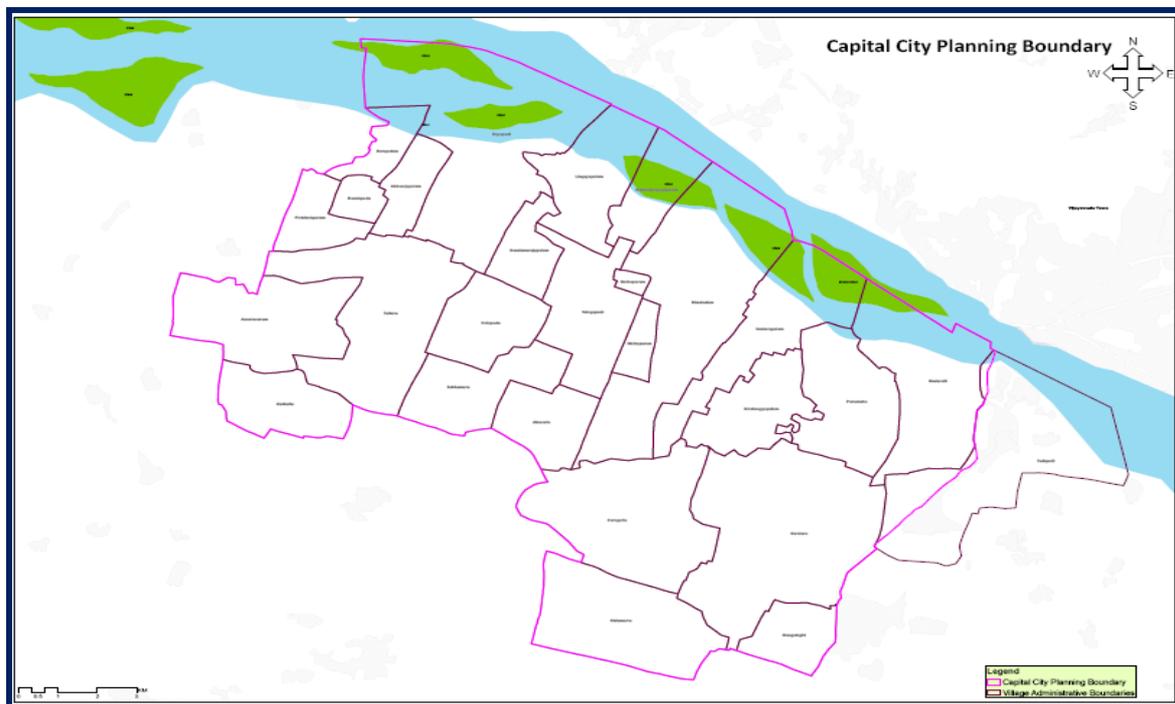
- ✓ Preserve all historic and culturally important sites
- ✓ Promote culture and heritage attractions for locals and tourists alike
- ✓ Compliment adjacent cities, at the same time establish a unique identity
- ✓ Integrate the existing villages as a vital component of city development
- ✓ Development nodes within the city that reflect the culture of the State and region.
- ✓ Dedicate strategic locations that will allow people to come together and organize cultural activities

- ✓ Create a tourism circuit that links all the existing heritage features and new nodes created in the city.

2.4. Developmental Phasing

The concept plan for Amaravati city is prepared in three phases and up to 2050. The phased development takes into account the growth potential, vision of the government and aspirational needs of the people. The phases are categorized as Catalyzing; Momentizing and sustaining the details of each phase are furnished below:

Figure 5: Capital City Boundary.



Phase 1-Catalyze

This phase will span for the first 10 years for catalyzing urban developments within the Amaravati Capital city. It will include a large number of infrastructure projects in order to create the critical base for development. This phase will catalyze developments within the capital by tapping on the existing and upcoming infrastructure, including the Vijayawada MRT and the new national highway.

The first phase will provide a variety of housing options for 850,000 population comprising about 39% of the total Amaravati Capital city Area, this phase will create 350,000 jobs in the civic, commercial and industrial sectors.

Key Projects

- ✓ Development of the government administrative core along the north-south axis housing the secretariat, high-court, legislative assembly, Chief Minister's Office and other government offices.

- ✓ Development of the proposed Business Park within the SEED Development Area.
- ✓ Development of the north-eastern Regional Centre housing a transportation hub.
- ✓ Development of the light Industrial cluster proposed in proximity to the SEED Development Area (towards west). This cluster will primarily house high-tech light industries.

Phase 2-Momentize

This phase will focus on the medium term development (2025-2035) in order to momentize urban development within the Amaravati city. Building on the infrastructure developed in the previous phase, Phase 2 will momentize development by creating new employment centres and expanding residential areas.

This phase will span over 10 years (2025 - 2035). Phase 2 will accommodate over 900,000 more people and create 380,000 more employment opportunities for its residents.

Key Projects

- ✓ Development of the proposed residential developments in proximity to the western edge of the north-south ceremonial axis aka administrative core.
- ✓ Development of the southern industrial cluster along the national highway.
- ✓ Development of the Amaravati Capital city central park and water reservoir.
- ✓ Development of the proposed MRT network within the city.
- ✓ Development of the gateway commercial node on the northern bank of river in close proximity to the existing Vijayawada city

Phase 3- Sustain

This phase will focus on the long term development (2035-2050) of the city in order to achieve successful implementation of the overall Concept Plan. This phase will sustain growth and capitalize on the infrastructure developed in the previous phases.

Spanning over 15 years (2035 - 2050), this phase will largely support medium and high density population accommodating 2.4 million people within the Amaravati Capital city.

As the employment centres within the Amaravati Capital city will now be reasonably established, this phase will create over 1 million more jobs for its residents. The land area distribution plan for the Phase 3 of Amaravati capital City development is shown in.

Key Projects

- ✓ Development of eco-resorts on the clusters of islands in river Krishna.
- ✓ Development of the Sports City
- ✓ Proposed within the north-eastern recreation node.
- ✓ Development of the national high speed rail ink.
- ✓ Development of numerous high density residential clusters in the western and southern parts of the city.

- ✓ Development of the downtown (SEED capital) water front cluster.

2.5. Applicable Legislation and Policies

Table 2.2 presents various regulations and legislations relevant to Amaravati – AP Capital City Development Project.

Table 2.2 Applicable Legislation and policies

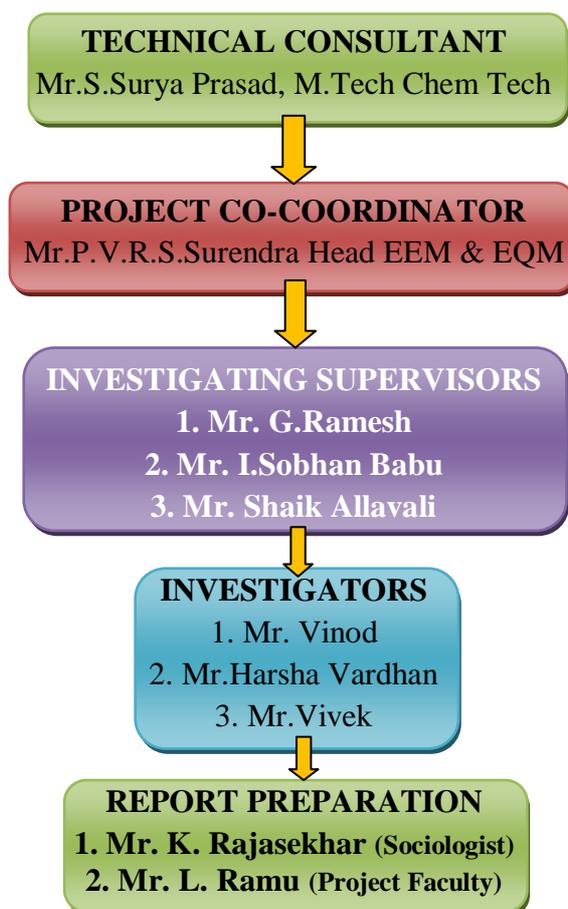
SL. No	Act/Rules	Purpose	Applicable Yes/No	Reasons for applicability	Authority
1	AP CRDA Act, 2014 and AP Capital City LPS (F&I) Rules, 2015	Set out rules for procurement of lands by Authority	Yes	This Act and Rules are applicable for procurement of lands and implement development plans with the voluntary participation of landowners.	MA & UD Dept., / Commissioner, CRDA / District Collector, Guntur / Addl. Commissioner's / Competent Authorities
2	The Right to Fair compensation and Transparency in Land Acquisition and Rehabilitation And Resettlement, 2013	Set out rule for acquisition of land by government	Yes	This act will be applicable to as there will be acquisition of land for Amaravati – AP Capital City project.	Revenue Department & Land acquisition, Collector & Commissioner R & R
3	Environment Protection Act-1986	To protect and improve overall environment	Yes	As all environmental notifications, rules and schedules are issued under this act.	MoEF. Gol; State Gov. CPCB; SPCB
4	The forest (conservation) Act 1980	To check deforestation by restricting conversion of forested areas into non – forested areas	No	This act is not applicable to as there are no forest areas	Forest Department GoAP

5	National Environment Appellate Authority Act (NEAA) 1997	Address Grievances regarding the process of environmental clearance.	No	Grievances if any will be dealt with, within this act.	NEAA
6	Air (Prevention and Control of Pollution) Act, 1981	To control air pollution by & Transport controlling emission of air Department. Pollutants as per the prescribed standards.	Yes	This act will be applicable during construction; for obtaining NOC for establishment of hot mix plant, workers camp, construction camp, etc.	SPCB
7	Water Prevention and Control of Pollution) Act 1974	To control water pollution by controlling discharge of pollutants as per the prescribed standards	Yes	This act will be applicable during construction for (establishments of construction camp, workers camp, etc.	SPCB
8	Noise Pollution(Regulation and Control Act) 1990	The standards for noise for day and night have been promulgated by the MoEF for various land uses.	Yes	This act will be applicable as vehicular noise on project routes required to assess for future years and necessary protection measure need to be considered in design	SPCB

3. TEAM AND COMPOSITION, APPROACH AND SCHEDULE FOR SIA

3.0. Team Composition

Commissioner, R&R, (FAC) & secretary to Government, (Irrigation) water resources Department, Government of Andhra Pradesh *vide Notification No. Proc.Rc.No.53/CRR/A/2016 dated 25.02.2016* has notified Environment Protection Training and Research Institute (EPTRI) as State Social Impact Assessment Unit. In response to the SIA request and details provided by the Commissioner, R&R, and District Collector, Guntur a team to carry out SIA has been constituted. The SIA notification for AP Capital City Development Project pertaining to Nelapadu Village was issued on 03-03-2016. The Collector, Land Acquisition, has provided details of land to be acquired to SIA unit.



3.1. Objectives and Scope of the study

The main objective of the study is to ensure that the project addresses the adverse impacts on the livelihood of the people and those affected have access to project benefits, both during project construction as well as operation.

Social Impact Assessment has been carried out in accordance with the provision of section 4 of the RFCTLARR Act 2013 for economic and social considerations. The SIA has assessed socio-economic impacts of the proposed acquisition based on information collected from secondary and primary sources. The SIA team has focused upon the following aspects while conducting the study.

- ✓ Public and peoples development centric.
- ✓ Possibility of minimizing land acquisition and alternatives
- ✓ To carry out a socio-economic, cultural and political/institutional analysis to identify the project stakeholders and social issues associated with the project;
- ✓ To assess the extent of agriculture land loss and undertake the census of potential project affected people;
- ✓ To identify likely migration of agriculture labourers and others and to develop a strategy to reduce such incidence; and
- ✓ To develop a consultation framework for participatory planning and implementation of proposed mitigation plan
- ✓ To examine potential positive and negative impacts on the socio-economic condition of people in the project area,
- ✓ To develop appropriate measures to minimize the negative socio-economic impacts,
- ✓ Viability of the project in terms of potential benefits vis-a-vis social costs and adverse impacts.

The scope of socio-economic study is to include the impacts due to the proposed Amaravati Capital City Development Project. Based on the site survey, socio-economic data about project affected families along with an inventory of property will be generated. Based on the data, the project proponent shall develop measures to safeguard the PAFs from the loss occurred due to the proposed project. The primary objective is to identify the impacts and to plan measures to mitigate losses of the project while the specific objectives are as follows:

- ✓ To prepare an action plan for the project affected people to improve or at least to retain their living standards in the post settlement period.
- ✓ To outline the entitlements for the affected persons for the payment of compensation and assistance for establishment of livelihoods.
- ✓ To develop communication mechanism to establish harmonious relationship between APCRDA and project Affected persons (PAP's)
- ✓ To ensure adequate mechanism expeditious implementation of R&R.

3.2. Approach and Methodology for Socio-Economic Studies

Approach and methodology mainly consists of quantitative and qualitative tools and techniques. The study was conducted in two phases.

3.2.1. Phase – I: Pre Survey Activities

Collection and review of project literature

This phase intends to familiarize with the concerned and important stakeholders to identify and collect the available literature and to scope the activities. This involved two pronged

approach (a) discussions with Project Implementing authorities and other concerned. b) Collection of available relevant project literature. Consultations were held with concerned revenue officials to establish the ownership of land. Literature review and consultations formed the basis for identification of key stakeholders.

Rapid reconnaissance survey to familiarize field activities

Following to the review and consultations, rapid preliminary field visits were conducted as part of reconnaissance exercise. This provided the basis for field research preparation and helped in testing the questionnaires and checklists.

Scoping and other Pre survey activities

Both the review and rapid reconnaissance survey have helped in finalizing the study instruments and preparation of Questionnaires and work plan.

3.2.2. Phase II: Survey Activities

Census and socio-economic household survey for all affected persons

The census survey of all the project-affected persons was conducted in the second phase. The survey, inter alia, has assessed the impacts of the project, the socio-economic conditions, and living standards of affected persons due to the project implementation. The following were collected during the survey:

- ✓ Socio economic conditions of the affected persons
- ✓ Family structure and number of family members
- ✓ Bringing high level of Literacy
- ✓ Occupation type and income levels
- ✓ Inventory of household assets
- ✓ Loss of immovable assets due to the project by type and degree of loss
- ✓ Accessibility to the community resources
- ✓ Perceptions on the resettlement and rehabilitation measures
- ✓ Perceived income restoration measures
- ✓ Grievances of affected persons and its re-addressed
- ✓ Willingness to participate in the project

Qualitative survey

Surveys were conducted for evaluation of both affected population and implementation capacities. The qualitative survey included focus group discussions and in depth interviews with various sections of people such as women, knowledgeable persons and community leaders to elicit their expectations and suggestions, which will support and provide additional information collected through quantitative survey.

Assessment of livelihood losses

The study focused on identifying people losing their livelihood directly or indirectly. Also through consultations the rehabilitation strategies for those losses by way of training for income generation and other remedial and restoration measures were identified. For this the consultations were conducted among:

- ✓ People losing properties/resources
- ✓ Knowledgeable persons
- ✓ Opinion leaders in the community

Review of legal policy provisions and implementation capacity of R&R services

Relevant national and state legislations and regulations were reviewed. To study implementation arrangements and their capacity in delivering the R&R services, verification of these arrangements and in-depth interviews with authorities were conducted.

3.3. SIA Methodology

The indicative methodology adapted to study above mentioned aspects of SIA is briefly presented in Table-3.1

Table –3.1 Indicative methodology of Conducting SIA study

Sl. No	Aspects of SIA	Description Methodology	Source
1	Assess whether the proposed acquisition serves public purpose	List has been presented section 2(I); a to f	Andhra Pradesh State RFCTLARR Act2013
2	Estimate number of affected families and number of families among them likely to be displaced	Census and baseline Survey of families Affected (Low Population size) Through questionnaire method	Field Study
3	Understand extent of acquired land- public and private, houses, settlement and other common properties likely to be affected by the proposed acquisition	<i>Transact Walk</i> ’ Through the project area based on ownership details of the land and type of land to be acquired, enumeration of affected properties, trees etc.	Field study
4	Understand extent of land acquired is bare minimum needed for the project	In-depth study of proposed utilization of land to be acquired including examining relevance of land acquisition	Desk study and Field verification
5	Study of the Social impacts, nature and cost of addressing	Study on their impacts	Desk work and field study, consultation

them and impact of these costs on the overall cost of the project via-à-vis the benefits of the project		with stakeholders
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The social assessment of the project has been carried out as per requirement of RFCT LA R&R Act, 2013. The details of methodologies include:

Socio-Economic Survey: The Survey was carried out for all the Project affected persons along with the court cases and demarcation of village site / habitation issues in the month of May 2015. The socio-economic survey has delineated impacts as minor impacts and major impacts.

Stakeholder’s Consultation: Consultations were carried out at individual and village level. Important issues were discussed at village level include (but not limited to) impact of land acquisition on the livelihood of the people, compensation as per LA R&R Act, 2013. Findings, suggestions and opinion of people have been taken into account while preparing social impact management plan. (Details of the consultations have been presented in the following sections).

Information Dissemination: The dissemination process and the type of information shared with the stakeholders during consultation are described below:-

- ✓ While undertaking inventory of Amaravati – AP Capital City Development Project, the procedure under Land Acquisition, court cases and demarcation of village site / habitation, sample survey of PAFs, information dissemination focused on the proposed project characteristics, acquired agriculture land area required for the construction of AP Capital City Development Project.
- ✓ PAFs were consulted to inform them about, resultant impacts and possible social-cultural conflict (if any) including loss of agriculture land during capital city construction.
- ✓ During these consultations, Google maps, maps given by Deputy Collector Guntur were used to explain about the location of proposed developments. This activity helped people to understand the impact on their assets and properties.
- ✓ A pamphlet on the project is prepared and shared with the Stakeholders and Villagers explaining proposed project and social impact assessment studies during public hearing.
- ✓ **Consultation during Sample Survey Stage:** SIA at this stage included consultations at individual PAP level, groups of local people and focused group discussions at strategic location at village Nelapadu, Thullur mandal to understand acceptability of the project and issues related to land acquisition. The overall objective of these consultations was to ensure that the local people participate in the project specific studies and to express their concerns and opinions. Suggestions/preferences which were shared by the stakeholders, local people are considered in preparation of SIA report.



Grama Sabha Conducted on 22.03.2016 at Nelapadu Village

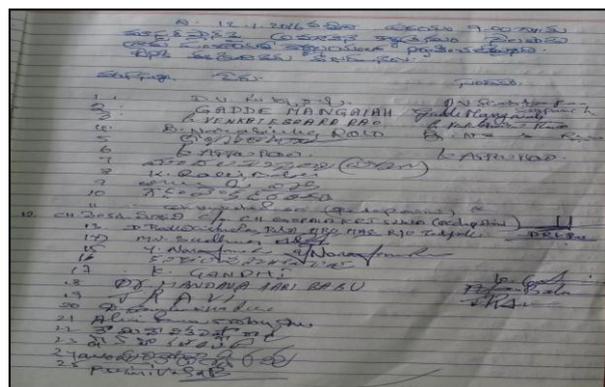
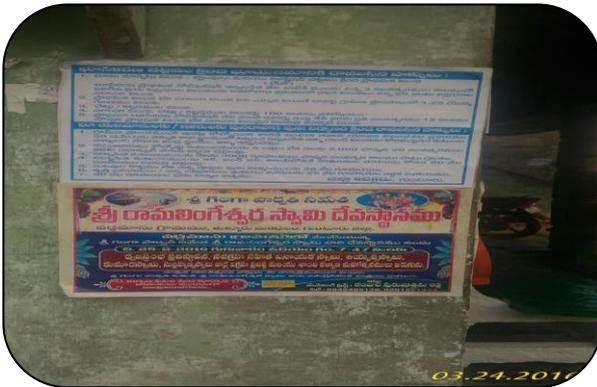


Figure 6 Enumerators collecting data from project affected families

3.4. Findings of Consultation

Consultations were carried out at individual as well as Village level. Village level consultations were held during sample socio-economic survey. Important issues were discussed during consultation with the stakeholders individually and also at village level. These issues were related to loss of livelihood, compensation for acquired land and properties, provision of livelihood opportunities. Issues raised during these consultations are presented below (Table 3.2).

Table 3.2: Important Issues of Consultation

Issues Identified	Solutions
Provision of Job in lieu of compensation and Loss of source of livelihood because of loss of agricultural land as per sl.no.4 of the Second Schedule of New LA R&R Act, 2013	Since it is an infrastructure project jobs as such cannot be created. For livelihood losers lump sum onetime payment / annuity at their choice could be provided as per LA R&R Act provisions.
Compensation for trees as per Section 29 of LA R&R Act, 2013.	Determination of value as per JD Agriculture / AD Horticulture / DFO
Demarcation of village sites / habitations.	Responsibility of the Government is to Demarcate village sites / habitations as per Rule 5(4) read with Schedule –III (1) (ii).
Free education and medical facilities	Govt. promises to provide free education and medical facilities to all those residing as on 08-12-2014.
Provision of infrastructural amenities	As per the provisions mentioned under the third Schedule of LA R&R Act, 2013.

3.4.1. Framework for continued consultation

As per provision of section 4(6) and section 7(6) of the LA R&R Act, 2013, the SIA required to be disclosed to people at conspicuous locations, Deputy Collector, Village Panchayat, Tehsil, District offices. To fulfil the goal the SIA team ensured that

- ✓ Key stakeholders, Commissioner, CRDA (requiring body), Government of Andhra Pradesh, District Collector, Guntur (representing appropriate Government) and EPTRI, Hyderabad will be involved actively in approval of recommendations of social impact assessment studies by expert appraisal group as per provision of section 7 of LA R&R Act, 2013 and submission of report by Collector to the appropriate Government for taking decision.
- ✓ Identified critical issues will be given due attention in developing good communication strategies with the land owners during acquisition process under LA R&R Act, 2013.
- ✓ Key features of the compensations and R&R entitlements (as per provision of section 30 of the LA R&R Act, 2013) have been displayed on billboards, in the village for understanding and acceptability.

3.4.2. Data Sources

The following section highlights data sources and activities being carried out for the preparation of SIA report.

3.4.3. Data from Secondary Sources

Following information is collected from the published documents to appreciate the project background, land ownership status, and statistical information required for baseline

information.

- ✓ The Right to Fair Compensation and Transparency in Land Acquisition 2013,
- ✓ Primary Census Abstract, District Census Handbook 2011,
- ✓ District wise Socio-Economic Indicators (Directorate of Economics & Statistics, Government of Andhra Pradesh),
- ✓ Acts and Policies of Government of India and Government of Andhra Pradesh related to R&R and Land acquisition.

3.4.4. Data and information from Primary Sources

- ✓ Structured Survey - Baseline and Census survey in a prescribed format
- ✓ Public Consultation
- ✓ Focused Group Discussions
- ✓ Consultation with key informants
- ✓ Interviews with important secondary stakeholders

3.4.5. Schedule of SIA

Details showing the date wise work undertaken for Social Impact Assessment (SIA) of land acquisition for Amaravati Capital City project in Nelapadu, Thullur Mandal, Guntur District of Andhra Pradesh is presented below.

Date	Particulars
20.01.2016	Collectorate, Guntur district has approached EPTRI for carrying out the SIA study under section 4 of RFCTLARR Act, 2013.
20.02.2016	Constitution of SIA Team for carrying out a SIA study for Amaravati capital city project.
01.03.2016	Received approval from APCRDA and sanctioned advance fees
03.03.2016	Notification for commencement of conduct of SIA
22.03.2016	Grama Sabha at 5.00 PM
24.03.2016	Training of SIA Team at CRDA Unit-18 office, Nelapadu
24.03.2016 to 26.03.2016	Field Survey in village Nelapadu, at Thullur Mandal, Guntur.
09.05.2016	Date of Draft Report Submission
15.05.2016	Date of Public Hearings
04-07.2016	Submission of Final SIA/SIMP report for public hearing

4. LAND ASSESSMENT

4.1. Proposed Land and Area

Land acquisition of the proposed Amaravati Capital city is being carried out as per provisions of the Right to Fair Compensation and Transparency in Land Acquisition and Rehabilitation and Resettlement Act, 2013. The AP CRDA has given requisition for acquisition of lands in the villages Lingayapalem, Uddandarayunipalem, Malkapuram, Velagapudi, Nelapadu, Shakamuru, Inavolu, Mandadam, Venkatapalem, Ananthavaram, Nekkallu, Thullur, Dondapadu, Pichukalapalem, Abbarajupalem, Borupalem, Rayapudi, Kondamarajupalem of Thullur Mandal, Undavalli, Penumaka, Part of Tadepalli municipality (Nulakapet, Dolas Nagar etc.) of Tadepalli Mandal and Krishanayapalem, Nidamaruru, Kuragallu including Hamlet Villages of Nerukonda and Nowluru including Hamlet Villages of Yerrabalem & Bethapudi of Mangalagiri Mandal for purpose of Amaravati Capital City Development Project.

4.2. Total Land Requirement

The Government of Andhra Pradesh has decided to establish a green field capital city as a liveable, environmentally sustainable and people’s capital. For this purpose, the location of the capital was identified between Vijayawada and Guntur cities on the upstream of Prakasam Barrage on the river Krishna. Total required land for this project is Ac. 53748.00 cents out of which Ac. 15698.52 cents are Govt. lands like Krishna River, Hills, Tanks / Roads etc, including village sites/ habitations. The total land coming under land acquisition for Nelapadu village is Ac. 39.82 cents of land required from 61 PAF’s only 15 members have responded to SIA survey. And now for which the land acquisition proceedings were initiated under LA R&R Act, 2013.

4.3. Quantity of Land Proposed to be acquired

Total 39.82 acres of land is proposed to be acquired in Nelapadu village of Thullur Mandal, Guntur District. The reputed ownership of this land is given in the table 4.1.

Table 4.1 Land Requirement from Nelapadu Village for Amaravati - Capital City

Sl. No	Survey No	Total Extent Ac. Cts.	Extent Covered by L.A. AC. Cts	Classification	Name of the person
1	67-D	3.6100	0.4525	Dry	Kalla Veera Bhadraiah
2	84-4	0.3800	0.3800	Dry	Inampudi Subbarao
3	85-1	0.6100	0.2800	Dry	Ponnam Venkateswararao, Ayinampudi Lakshmaiah
4	85-4	0.2900	0.2900	Dry	Ponnam Venkateswara Rao
5	84-2	0.2200	0.2200	Dry	Peddi Kamala Devi
6	85-1	0.6100	0.3300	Dry	Peddi Kamala Devi
7	34-A	1.7000	0.0500	Dry	Ananda Rao Chalaraju
8	35-1	1.1600	0.0300	Dry	Ananda Rao Venkatappaiah
9	124-A	4.5200	0.0200	Dry	Ananda Rao, Dakshana Murti
10	121	12.1400	0.0100	Dry	Bogineni Kotaiah, Gourneni

					Chilakamma
11	151-B	3.0700	0.0100	Dry	Dhanekula Krishnaiah
12	75-B	4.7600	0.0100	Dry	Dhanekula krishtayya
13	42-C	1.6600	0.1000	Dry	Gangavarapu Seshaiah
14	63-3	2.2800	0.0050	Dry	Gudapati Gopaiah
15	44	4.0000	0.0100	Dry	Gujjarlapudi Adisesamma
16	67-A	2.2900	0.0100	Dry	Gujjarlapudi China Devaiah
17	58-A	6.8000	0.0600	Dry	Gujjarlapudi Ramachandrudu
18	77-A	7.8300	0.0400	Dry	Gujjarlapudi Ramaswami
19	145-C	0.9200	0.7450	Dry	Gujjarlapudi Seethaiah and 17 others
20	53	8.0200	0.0100	Dry	Hanuparlapudi Yallamandaiah and Venkataswamigadu
21	153-A	6.0600	0.0100	Dry	Indurthi Narasayya, Pentayya
22	41-A	2.2200	0.1300	Dry	Jammula Ramaswamy
23	49-A	3.0300	0.0400	Dry	Jonnalagadda Bapaiah, Paddaiah and Subbaiah minor Gardian Achamma
24	98	13.6200	0.0250	Dry	Kamineni Peda Seshaiah
25	101	9.0900	0.0650	Dry	Kamineni Ramanna
26	7	8.8200	0.0100	Dry	Kamineni Venkatappaiah and Aluri Venkatrayudu
27	95-B	1.4400	0.0200	Dry	Kata punnaiah and 10 others
28	10-B	3.5500	0.0025	Dry	Kommineni Sambrajyam
29	42-A	3.2200	0.0200	Dry	Kotapati Appaiah, Puvvada Seethaiah and Jammula Ramaswamy
30	38	5.2700	0.0050	Dry	Koyyagura Ammigadu
31	28-A	3.9500	0.0050	Dry	Koyyagura Ammigadu
32	48-B	0.9300	0.1000	Dry	Koyyagura Chiana Venkaiah
33	29-1B	3.5300	0.0250	Dry	Mulpuri Venkatarayudu and 3 others
34	130	7.4400	0.0400	Dry	Nelapati Seethaiah, Ramaiah and 2 others
35	75-A	6.1900	0.0050	Dry	Nutakki Ramanna
36	120-B	12.2600	0.0100	Dry	Ponnam Seshaiah
37	40-A	5.1100	0.0050	Dry	Puvvada Nayudamma
38	45-C1	2.0900	0.0700	Dry	Puvvada Seethaiah
39	19-A2	1.9700	0.0050	Dry	Puvvada Venkatrayudu
40	5	10.3000	0.3400	Dry	Tirumala krishnamacharyulu, Srinivasacharyulu and 3 others
41	94-A	3.9400	0.0100	Dry	Vemparala Bavaji and Yedduri Ramanna
42	49-B	2.9300	1.4700	Dry	Nallapaneni Sambasiva Rao
43	38	5.2700	0.5000	Dry	Gudipudi Anandamma
44	76-D	4.5500	2.2700	Dry	Karnati Padmavati
45	112-C	6.1800	1.2400	Dry	Yamparala Padma
46	60-C	2.4200	0.6200	Dry	Addepalli Srinivasa Rao, Ponnam Chittemma, Gujjarlapudi

					Srinivasa Veera Mohanarao
47	68-B	7.4500	0.6000	Dry	Gorijala Aruna Kumari
48	129-A1	3.2300	0.8600	Dry	Gujjarlapudi Sambasiva Rao
49	151-E	2.6300	1.0900	Dry	Gujjarlapudi Sambasiva Rao
50	66-D	5.8200	0.7450	Dry	Gujjarlapudi Srinivasa Rao
51	68-B	7.4500	0.5100	Dry	Gujjarlapudi Srinivasa Rao
52	59	7.4000	2.0000	Dry	Kapa Nageswara Rao
53	61-B	3.8500	1.9250	Dry	Kapa Nageswara Rao
54	132	8.4000	1.0000	Dry	Kapa Nageswararao
55	108-C	5.0100	1.6700	Dry	Kapa Sambraajyam
56	132	8.4000	1.0000	Dry	Kapa Subbarao
57	104	5.9400	1.9800	Dry	Kapa Vasundara Devi
58	110	8.6600	4.3300	Dry	Gadde Butchaiah
59	110	8.6600	4.3300	Dry	Gadde Sambraajyam
60	114-A	3.2400	1.0800	Dry	Gadde Sambraajyam
61	114-B	2.9800	1.0000	Dry	Gadde Sambraajyam
62	119-A	5.2100	1.4250	Dry	Kommineni Nagendramma
63	119-A	5.2100	1.8925	Dry	Kommineni Poornachandra Rao
64	35-2	3.9600	0.2500	Dry	Kommineni Poornachandra Rao
65	75-A	6.1900	0.9450	Dry	Kommineni Poornachandra Rao
66	129-B	4.2000	0.2250	Dry	Cherukonda Nagabhushnam
67	129-B	4.2000	0.2250	Dry	Duddhukuri Bushababu
68	129-B	4.2000	0.2250	Dry	Peddi Appajirao
69	129-B	4.2000	0.2250	Dry	Peddi Sambasivarao
70	27-H	2.7200	0.1800	Dry	Kesanam Venkata Nagaraju
	Total		39.8175		

4.4. Type of Land

Following section presents type of land required for proposed Amaravati - A P Capital City project in Nelapadu village of Thullur Mandal, Guntur District. The proposed project stretch will involve acquisition of about 39.82 acres of land in which majority of the land is being owned by private Owners. (Table 4.2)

Table 4.2 Project Area: Loss of Land

Sl. No	Village	Mandal	Number of PAFS	Remarks
1	Nelapadu	Thullur	70	Agriculture land & Dry Land

5. SOCIO ECONOMIC AND CULTURAL PROFILE

5.0. General

This chapter describes about the socio-economic profile of the project area and the project affected persons. This chapter specifically analyzes the impacts on land and other immovable assets based on detailed Survey done. Based on the impact on land and structures, a sample Survey was carried out; and the results of the Survey established socio-economic status of PAFs. The survey has indicated the nature and characteristics of R&R interventions required to mitigate negative impacts of the proposed project.

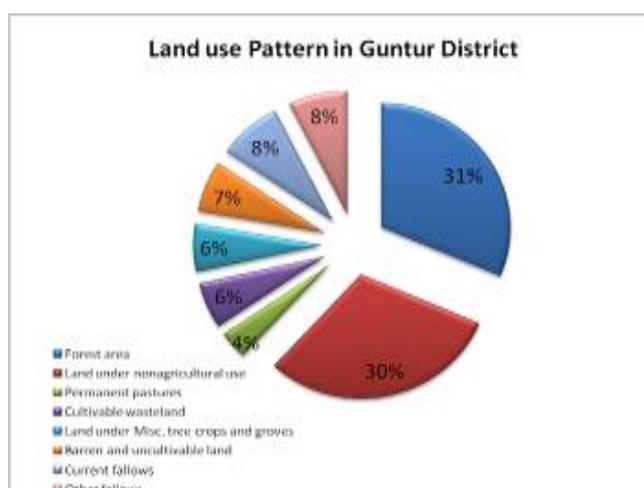
5.1. The Project area

Guntur District is located in Andhra Pradesh along the east coast of Bay of Bengal. The district has a coastline of around 100 kilometres. Guntur City is the largest city in the district and administrative centre of Guntur District. The district is a major centre for learning. Telugu and Urdu are the main languages spoken in this district. The project area is lies between 15°18'0" -16°50'0" of North Latitude and 15°18'0" -16°50'0" of East Longitudes.

5.1.1. Land use Pattern:

The existing land use of the site is consisting of - agriculture, land for grazing, fruit and flower plantations, village settlements and village ponds etc.

General Land Use Pattern of the State indicated that the project area has current fallows (8%) followed by land put to non-agricultural use (30%), forest (31%) and other fallow (8%). The principal crops of the district are paddy, cotton, Maize, black gram and red gram.



Socio economic characteristics of project area:

In 2011, Guntur had population of 48,87,813 of which male and female were 24,40,521 and 24,47,292 respectively. With regard to the sex ratio it is 1003 per 1000 males, literacy rate is 67.40. The table 5.1 shows the secondary data of the affected villages.

Table 5.1 Demographic condition of the project area

	Social and demographical				
	Literacy (%)			No. of house holds	SC (%)
	Total	Male	Female		
Andhra Pradesh State	73.0	80.9	64.6	-	17.1
Guntur district	67.40	74.79	60.09	1296609	19.6
Thullur	63.19	35.08	28.11	2280	30.29
Nelapadu	59.63	33.27	26.36	300	33.6

Source: Census 2011

5.2. Project Impacts

Following sections illustrate analysis of the results of socio-economic and sample surveys. The analysis describes about the social, demographic and economic profile of PAPs to understand the type of R&R intervention measures required to enhance living condition of PAPs. The socio-economic study has been done based on education, occupation, demographic profile and other social characteristics of the PAPs.

(i) Impact on Agriculture Land: Table 5.2 presents impact on affected agriculture land. Out of 39.82 acres of agriculture land, only 57 are having less than 1 acre, 5 are having 1 to 1.5 acres and 8 are having above 1.5 acres of their agricultural land respectively.

Table 5.2: Project area Agricultural Land acquired

Village	Acres			Total
	0 to 1 acres	1 to 1.5 acres	1.5 acres above	
Nelapadu	57	5	8	70

(ii) Impact on People: The estimated numbers of families being affected are about 15. The impact on livelihood could be mitigated with the intervention of Rehabilitation measures as per the LA R&R Act, 2013. Further explorative technique has been used to assess social impacts on families, understand social and demographic profile of the project affected families. As it can be seen from Table 5.3 that there are 78 PAPs from 15 estimated PAFs who responded the survey with average family size of 5 respectively.

Table 5.3: Project affected families (PAFs) and Project affected persons (PAPs)

Village	Land (PAFs)	PAPs	Average family size
Nelapadu	15	78	5

5.3 Social Profile of the PAPs

5.3.1. Age wise Distribution:

Age of stakeholders gives the SIA study good idea about area and its people because if the number of older people is high in specific area then there can be different problems and attitudes of that respective area. If the number of younger people is high then social problems, attitudes can be different like unemployment. So the understanding of the age

pattern is very important and age data of all the project affected persons (PAPs) is given below in table 5.4.

Table 5.4 Age limit of PAPs

Age	Male	%	Female	%
0-10	7	9.0	5	6.4
11-20	6	7.7	3	3.8
21-30	4	5.1	8	10.3
31-40	8	10.3	5	6.4
41-50	6	7.7	5	6.4
Above 51	11	14.1	10	12.8
Total	42	53.8	36	46.2

Source: Household Survey

Above mentioned table it is shown that majority of the stakeholders in this study is from the age limit of 51 and above. They contribute 26.9% of the total. 16.7% stakeholders are from the age limit of 31 - 40. 15.4% stakeholders are 21-30 & 0-10, 14.1% stakeholders are 41-50 and 11.5% stakeholders are 11-20 age limits respectively. This table represents that the stakeholders whom land is proposed to be acquired for the project are mature people and majorly above 51 years.

5.3.2 Family Structure

The adjacent figure 8 shows that Joint families are predominant in the project area with an incidence of 67% while the remaining 33% are observed to be living in Nuclear families.

Figure 8 Family Structure

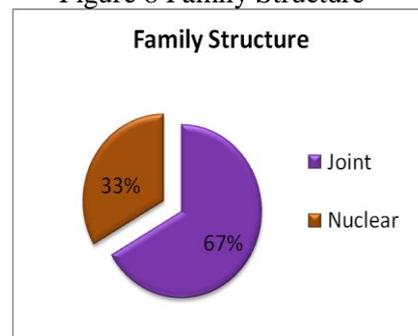
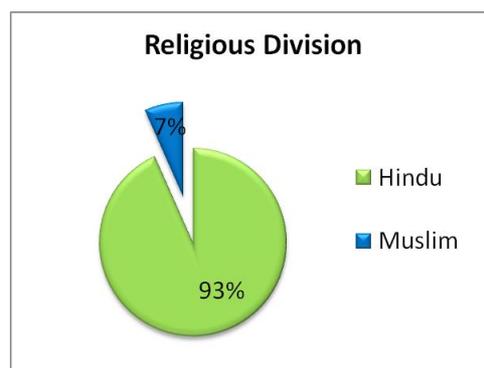


Figure 9 Religious Division



5.3.3 Religious Category of the PAFs

It was observed that the 14 PAFs are divided into two major religious communities, with a numerical preponderance of the Hindu religion. Out of the total 15 PAFs, 14 (93 %) belong to Hindu religion and the remaining 7 % are the Muslims. The religious division of the PAFs is presented in the table 5.5 & Figure 9 below.

Table 5.5 Religious Division

Religion	Frequency	%
Hindu	14	93.3
Muslim	1	6.7
Total	15	100.0

Source: Primary Sources

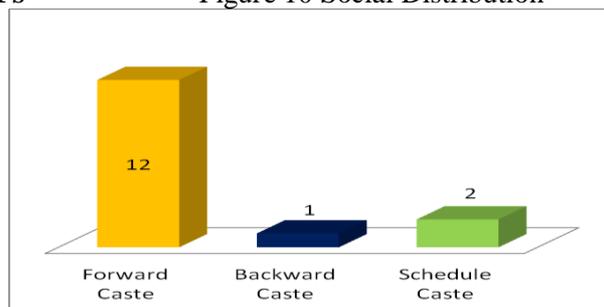
5.3.4 Social Category of Project Affected Families (PAF)

The social division of the households in the project, it was observed from the socio economic survey PAFs from forward caste communities, which constitute 80 per cent of the total households; and PAFs from backward caste communities, constituting 7 per cent of the total households. There were 13 percent of the households belonging to the Schedule caste communities in Nelapadu villages. The social division of the PAFs is presented in the following Table 5.6 & figure-10.

Table – 5.6 Social Distributions of the PAFs

Caste	Number	%
Forward Caste	12	80.0
Backward Caste	1	6.7
Schedule Caste	2	13.3
Schedule Tribe	--	--
Total	15	100

Figure 10 Social Distribution



Source: Primary Sources

5.3.5 Marital Status of PAPs

The analysis on marital status of the PAPs indicates that more than half of the PAPs (60%) were married, while 36 per cent were unmarried. The proportions of widowed persons were very minimal in the project area with only 4 per cent of the total population. There were no divorced persons reported in the project area. The marital status of PAPs is depicted in the following Table 5.7.

Table – 5.7 Marital Statuses of PAPs

Marital Status	Male	%	Female	%
Married	24	30.8	23	29.5
Un married	17	21.8	11	14.1
Widowed	1	1.3	2	2.6
Divorced	-	-	-	-
Total	42	53.8	36	46.2

Source: Primary Sources

5.3.6 Educational Status of PAPs

Among the PAPs, excluding the non-school going children below the age of 5 years, 9 per cent were illiterate and 91 per cent are literate. From among the total PAPs, 31 per cent of the population had attained education up to 5th standard whereas 28 per cent of the population claimed of having education up to high school level. Only 5 per cent had completed Intermediate level whereas 18 per cent of the PAPs are graduates. When it comes to higher educational degrees like Post Graduation, the percentage is only 5. The educational status of the PAPs is enumerated in the following Table 5.8.

Table –5.8: Educational Status of the PAPs

Education	Male	Female	Total	Percentage
Illiterate	4	3	7	9.0
Up to 5 th Standard	11	13	24	30.8
Up to 10 th standard	13	9	22	28.2
Intermediate	3	1	4	5.1
Graduate	8	6	14	17.9
Post graduate	1	3	4	5.1
Vocational Course	1	-	1	1.3
Others	-	-	0	0.0
Non school going children (below 5 years of age)	1	1	2	2.6
Total	42	36	78	100

Source: Primary Sources

5.3.7 Living Conditions and Infrastructure Facilities

Housing Status

✓ Residential dwellings in study area were generally classified into Kutcha (Huts), Semi – Pucca and Pucca (Concrete house) house.

✓ Kutcha (huts) – thatched structures, walls constructed from un-burnt bricks or mud, floor material is primarily mud and dung.

✓ Pucca house (Concrete house) – cemented walls built with cement bricks/ burnt bricks, with RCC roof, classified into two categories as independent house or apartment in the study area.

Independent house - a house registered in the name of the person who owns the house. The owner is the only one with the property rights unless it is assigned to another party in writing.

Apartment - means a part of any property, intended for residential use, including one or more rooms or enclosed spaces located on one or more floors or any part or parts thereof, in a multi-storied building registered in the name of individual flat owner.

✓ Semi Pucca house - cemented walls built with cement bricks/ burnt bricks, without RCC roof

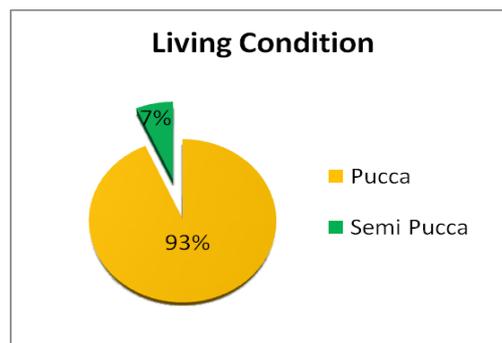
It is important for the policy makers, development practitioners, government, non-government as well as donor agencies to understand the living conditions of people, whose uplift ment they work for through various programmes and policies. In the present context of Amaravati -AP Capital city project it is also apt to understand the living conditions of the PAFs. When inquired about the quality of the housing in the Project area, it was revealed that almost all families (93 %) live in *pucca* house, followed by 7 per cent in semi *pucca* house. The quality of housing is shown in the table 5.9 & figure-11.

Table – 5.9: Living conditions of PAFs

Living Condition	Frequency	%
Pucca	14	93.3
Semi Pucca	1	6.7
Katcha	-	-
Total	15	100

Source: Primary Sources

Figure 11 Living Condition



5.3.8 Number of dwelling rooms

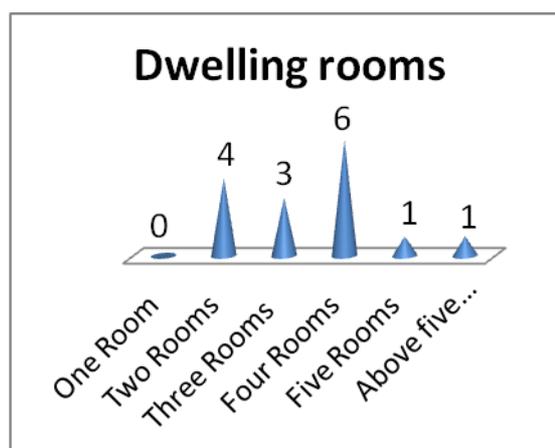
According to the survey findings which were enumerated in the Table-10.11 most of the households have separate dwelling rooms. It was observed that majority of the households 40% have four rooms and 27% households are having two rooms, 20% of families are having three room and the least 7% have 5 rooms and more than 5 rooms in the study area as shown in Table-5.10& Figure-12.

Table-5.10 Dwelling rooms

Dwelling rooms	Number	Percentage
One Room	0	0
Two Rooms	4	26.7
Three Rooms	3	20.0
Four Rooms	6	40.0
Five Rooms	1	6.7
Above five Rooms	1	6.7
Total	15	100

Source: Primary Sources

Figure 12 Dwelling rooms



5.3.9 Source of Water Facilities

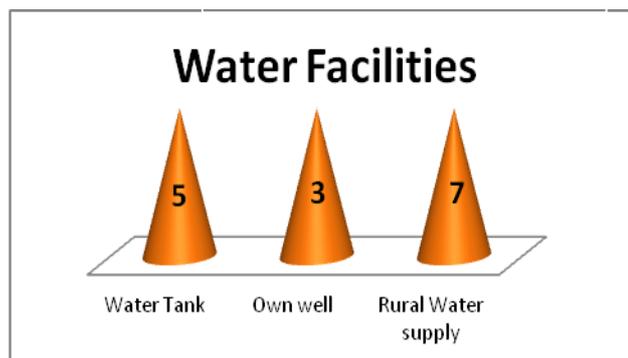
Besides understanding the living conditions of the respondents in terms of an investigation of their housing conditions, an attempt was also made to assess the civic amenities in their houses. The survey results on water sources used by communities in the study area are shown in the Table-5.11. 47% of the respondents attained their water from rural water supply and other significant sources of water are water tank 33% and 20% of bore well respectively (figure-13).

73% families are having clean drinking water like mineral water, purifiers etc.

Table-5.11 Source of water facilities

Source of drinking water	Number	%
Water Tank	5	33
Own well	3	20
Rural Water supply	7	47
Total	15	100

Figure 13 Source of water



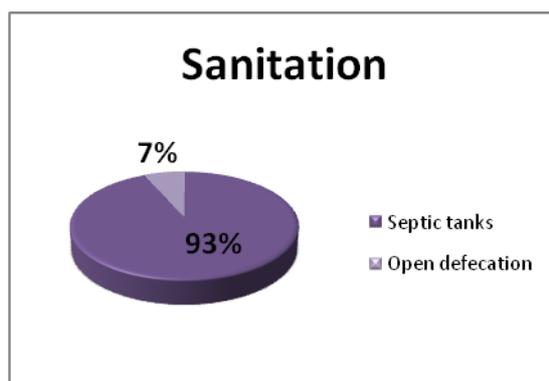
5.3.10 Sanitation

Sanitary conditions of the villages are relatively better, most of the respondents 14 (93%) having toilets at their premises. However, on the whole 1(7%) of the respondents don't have access to toilet at their premises as shown in Table-5.12 & Figure-14.

Table-5.12 Sanitation Outlets

Sanitation Outlets	Number	Percentage
Septic tanks	14	93
Open defecation	1	7
Community toilet	0	0
Total	15	100

Figure 14 Sanitation



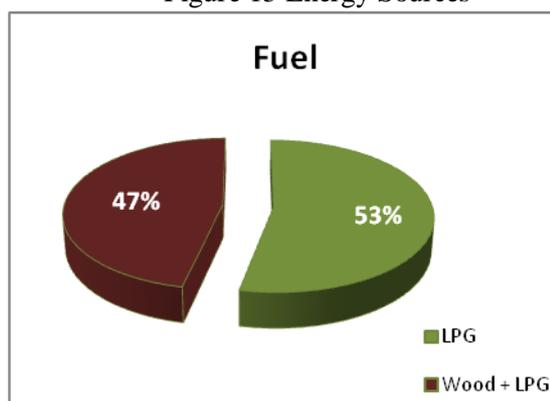
5.3.11 Household Energy Sources

About 53.3% of the sample households have been using LPG connection, and the remaining 46.7% are using both Wood as well as LPG for cooking purpose as shown in Table-5.13 & Figure-15.

Table-5.13 Energy Sources

Type of Fuel	Number	Percentage
Fire Wood	0	0
LPG	8	53.3
Wood + LPG	7	46.7
Kerosene	0	0
Total	15	100

Figure 15 Energy Sources



5.4 Economic Activity and Livelihood Pattern

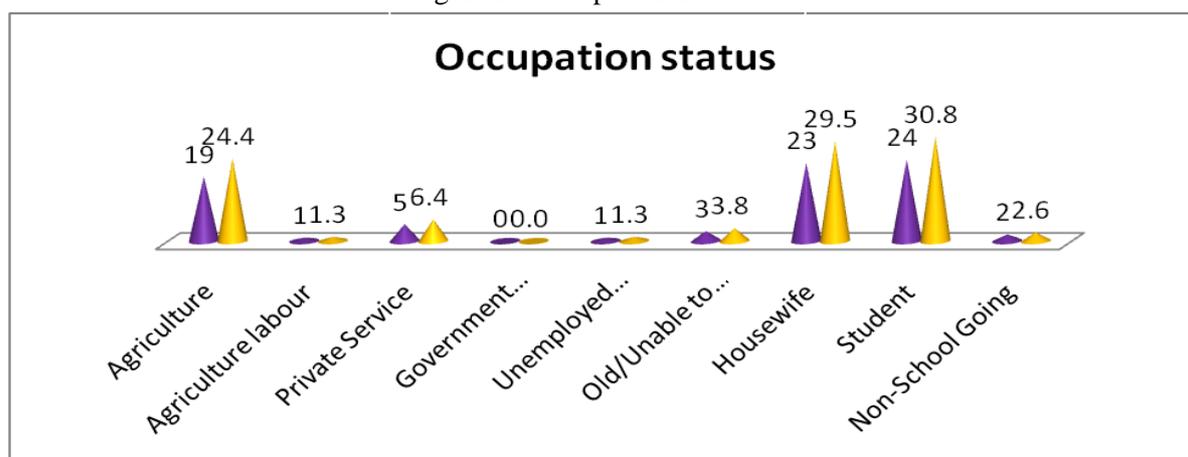
The working population in the study area includes cultivators, agricultural labourers, and household industry workers, petty vendor, service sector and unorganized industrial sector. All the workers those who have been engaged in some economic activity during the last year, who are not cultivators or agricultural labourers or in household industry are other workers. Other workers include factory workers, plantation workers, those in trade, commerce, business, transport, mining, construction, political or social works, all Government & private sector employs, priests, entertainment artists etc.

Subsistence agriculture is an important contributor to the livelihoods. Amongst the surveyed population, 24.4% persons are farmers, 6% persons are private employees and 1.3% persons are agriculture labours and unemployed. 29.5% persons are home makers, 30.8% persons are pursuing their education, and 2.6% persons are below 5 years old respectively (table 5.14 & figure16).

Table-5.14 Occupational Status

Occupation	Frequency	Percentage
Agriculture	19	24.4
Agriculture labour	1	1.3
Private Service	5	6.4
Government Service	0	0.0
Unemployed Youth	1	1.3
Old/Unable to Work	3	3.8
Housewife	23	29.5
Student	24	30.8
Non-School Going	2	2.6
Total	78	100

Figure 16 Occupational Status



5.4.1. Agricultural Scenario

All the respondents are depending on only agriculture. Most of the respondents have rythwari patta lands and total agricultural average holding size is Ac. 0.57 cts. A range of crops cultivated are mirchi, banana, lemon, paddy and maize etc., Among the total land holders, which 46% are marginal farmers, 27% small farmers and 7% are medium farmers (table 5.15)

Table-5.15 Ownership of agricultural Fields

Category of farmer	Farmers	Land (in acres) %
Less than 2.5	7	46
2.5 to 5	4	27
5.01 to 12.5	1	7
No land	3	20
Total	15	100

Besides land, both in absolute acreage and quality, the possession of livestock and other items like plough, tractor, etc significantly affects the agricultural outcome. 33 % of them did possess costly agricultural related items like tractors, sprayers and plough etc and remaining respondents have accesses to these services through payment/rental basis.

5.4.2. Live stock Farming

Livestock husbandry is an important component of economic activities in the study area, particularly in the rural settlements. Livestock owned by households includes cattle and goats are in less proportion. Still cattle are an integral part of cropping activities in the study area. Livestock provides meat, milk and as a cash income.

Even though animal husbandry is the major source of sustenance especially in rural villages a number of constraints reduce the dependency on the livestock husbandry in the study area in recent times. These include:

- Rapid urbanization and consequent engulfing of agricultural and grazing lands into urban sprawl
- Decreased dependency on agriculture and allied activities as primary livelihood
- Animal husbandry is derelict due to the ageing of the population caused by the drift of young people and those in their prime of life to the cities.

Livestock ownership details obtained in the study area during the socio economic survey for 15 households are shown in Table-5.16. A total of 6 households have cattle. Interestingly, majority of households owned no livestock. Furthermore, herd sizes were small, with few households owning more than four heads of any of the two livestock types.

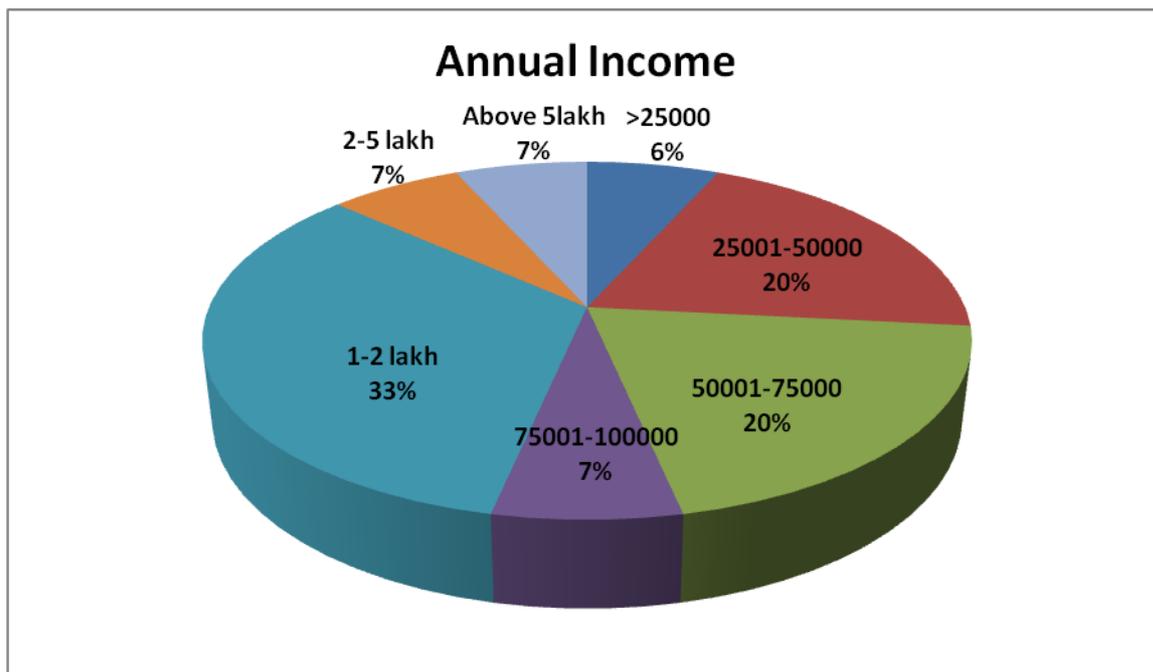
Table-5.16 Live stock Ownership in the study area

Herd Size	HH	%
NO	9	60
1--3	2	13
4--7	3	20
8 & above	1	7
Total	15	100

5.4.3. Income of the PAF's

An assessment was made to understand the economic status of the respondents by understanding their income and expenditure pattern for the past one year. The assessment of income and expenditure of the respondents in the study area have been categorized into five groups taking into account 2013-2014 as the base year. The income groups are (i) less than Rs 25,000,(ii) Rs 25,001-50,000,(iii) Rs 50,001- 75,000,(iv) Rs 75,001-1 lakh (v)1 lakh - 2 lakh (vi) 2 lakh - 5 lakh (vii) Above 5 lakhs. Respondents were asked to indicate their households' income sources. Sources of income and amounts show huge disparity. They were also asked to give a broad indication of their household's average monthly income. The socio-economic condition of the respondents in the project area is in Figure-17.

Figure 17 Occupational Status



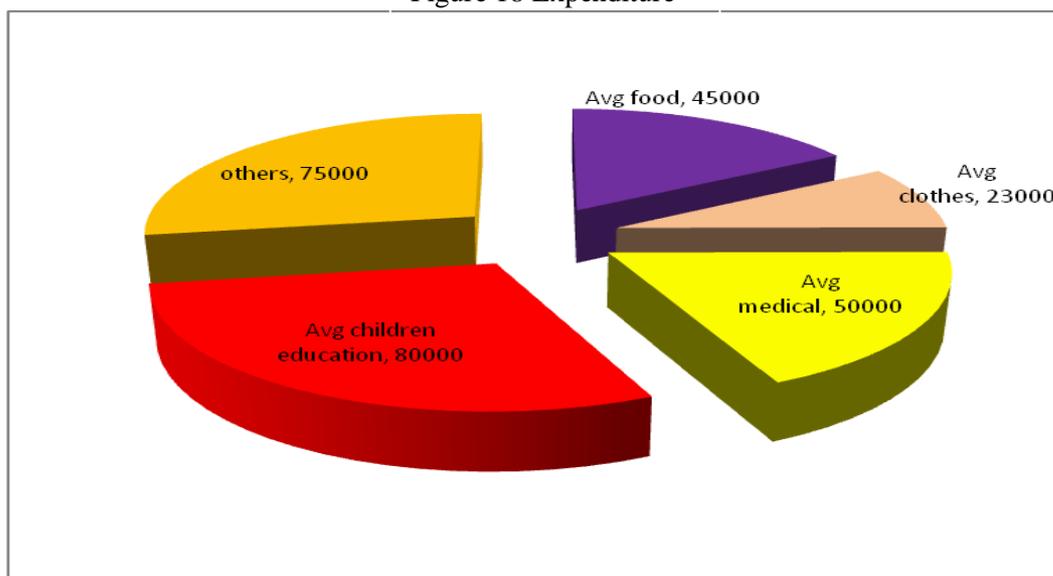
It was observed that out of the total 15 respondents, 33 % had an income between 1-2 lakh per annum and another 20% of the of the respondents are within the range of Rs.250001 to 50000 & Rs.50001 to 75000 and 7% of the respondents are within the range of 75001-1 lakh, 2-5 lakh & above 5 lakh and 6% of the respondent are within the range of less than 25000.

5.4.4. Expenditure of the PAF's

The data on annual income of rural households, whose primary occupation is mostly agriculture, labour work; self employment (auto drivers, Tailoring, Mechanic etc.) in terms of a fixed figure may not always reveal the actual situation. Since these households do not have a fixed source of income like salary every month, it often becomes difficult on the part of the respondents to exactly estimate their annual household income. In such a situation, the researcher has to depend upon the memory of the respondents. To overcome such shortcomings, an attempt to assess their pattern of spending on essential items like food, cloth, health and education was made.

It was observed that the average household records a monthly expenditure of approximately Rs. 22750. Food and medical expenses are the most common, representing two of the most frequent expenditure items alongside food and personal items, children education and clothing (figure-18).

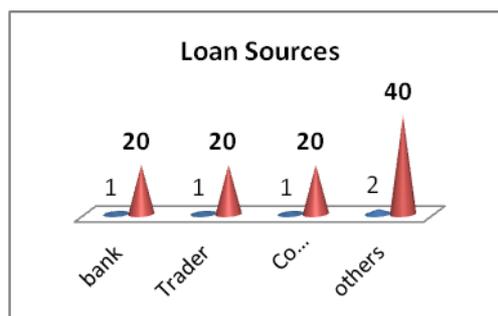
Figure 18 Expenditure



5.4.5. Loan Sources

From adjacent figure 19, about 33 % of the sample households have loans. 20% (1) of households have bank, trader and co operative society loans and 40% (2) of households are having loan from other sources. The main reason behind taking loans is to invest in agriculture sector. All loans are taken keeping land as mortgage.

Figure 19 Loan details



5.4.6. Consumption standard

For inferring the consumption standard of the sample households, their possession of various consumer durables was recorded in the survey. Considering the movable assets, it was observed that 33% of the households possess two wheeler vehicles & cycles, 27% of the households possess only two wheelers, 20% of the households having cycles, two wheeler & four wheelers, 13% of the households having two wheeler & four wheelers and least 7% of the respondents have only cycles as shown in Table-5.17.

Figure 20 Movable Assets

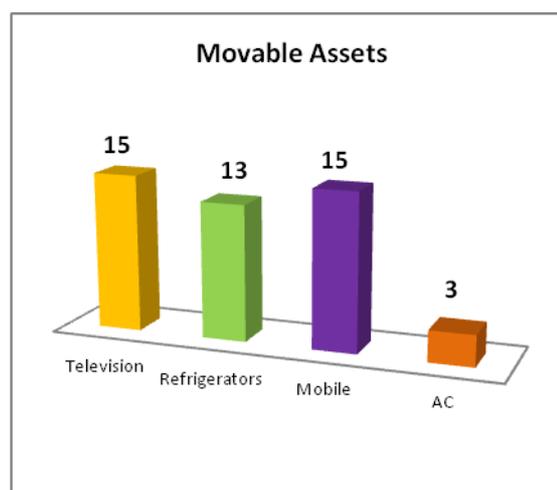


Table-5.17 Possession of Movable Assets

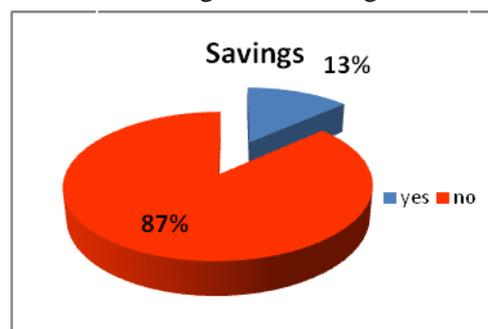
Vehicle	Number	Percentage
Cycle	1	7
Two Wheeler	4	27
4 Wheeler	0	0
2 wheeler+ Cycle	5	33
4 wheeler+2 wheeler	2	13
Cycle+ 2 Wheeler + 4 Wheeler	3	20
Total	15	100

In the other group of consumer durables consisting of television, refrigerator, fan, mobile phone, it was observed that almost all the household possess fan, television and mobiles as their minimum requirement, 87% of sample households having refrigerators and 20% of the households having air conditioners (Figure-20). This indicates chances of having access to information and connectivity with the outside village for the all of the respondents. It was observed that some of respondents having tractors for self employment purposes.

5.4.7. Savings

As shown in Figure-21 the sample households enumerated in the present socio economic survey, only 2 (13%) of households possess savings and the remaining 13(87%) households doesn't have savings. 11 (73%) of the households having saving accounts at Thullur village.

Figure 21 Savings



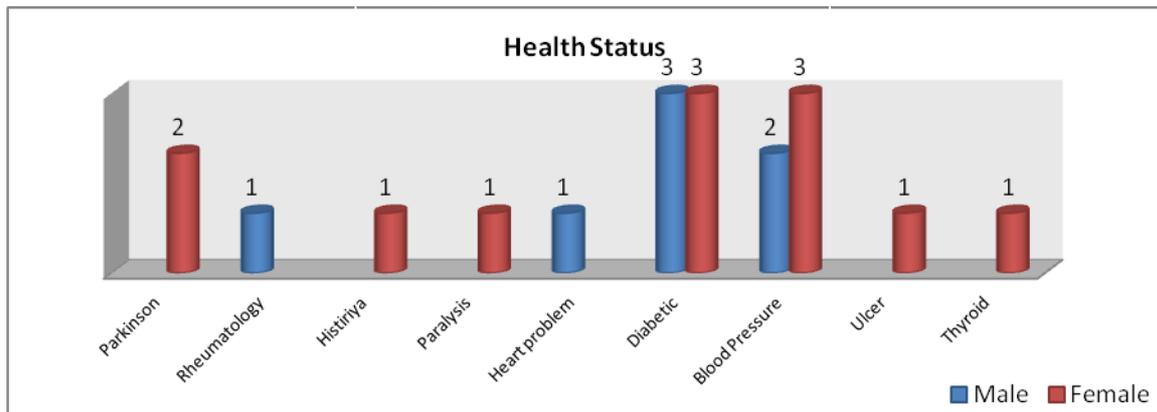
5.4.8. Transport Facilities

Transport system comprises several modes including Road, Rail, and Waterways etc. When it was enquired about the transport facilities in the villages it was observed that all the surveyed villages have motorable road along with the RTC bus facilities and the villagers are also using autos and other sources for their conveyance purpose.

5.4.9. Health Status

Health status of the respondents are studied in the project area, it was revealed that large numbers of respondents are affected by seasonal diseases like cold, cough, fever, weakness, joint pains etc. 14% of the people are suffering from major diseases like heart problem, Parkinson, Rheumatology, Hysteria, Ulcer, Diabetic, Thyroid, and Paralysis is shown in Figure-22.

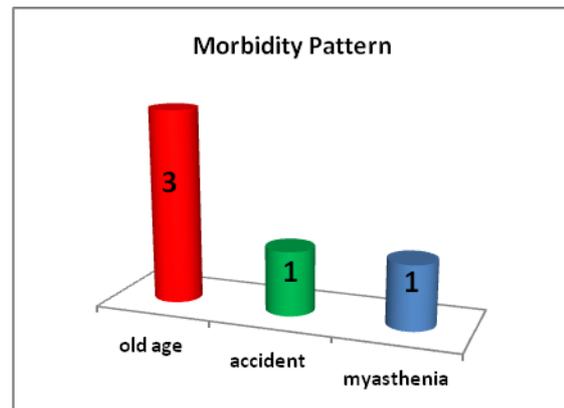
Figure 22 Health status



5.4.10. Morbidity pattern

Morbidity pattern mainly focuses on the nature of death and has been classified into two different categories i.e., natural and unnatural death. Unnatural death includes deaths by induced, homicide, accidents etc and natural death includes death by disease or old age. Unnatural deaths owed to accidents in the study area. Majority of the respondents in the study area had natural deaths in last ten years due to old age and myasthenia etc. morbidity pattern was presented in the figure-23

Figure 23 Morbidity Pattern



5.5. Project Awareness:

The main aim of this study is to find out the level of awareness among the respondents about the proposed Amaravati - AP Capital City project in the study area.

It was observed that all of the respondents were aware of the project in 2014 and all of the respondents have knowledge of the project through media, project authorities and meetings etc.

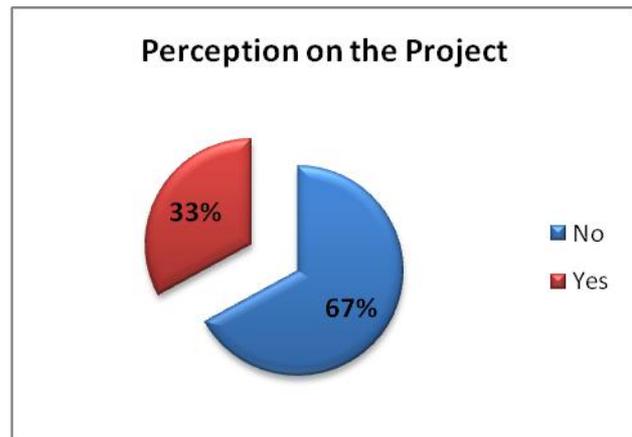
5.6. Project Perception of the PAFs:

The project perception embraces opinions of the respondents about the proposed project. This comprised the perceived advantages & disadvantages and views of the respondents in the project area. 10 (67%) of the respondents were concerned about its impact on livelihoods and environment. Indirect negative impacts of the project on health were also identified by the all three settlement population. These impacts will ultimately disrupt

sustainable livelihoods of the local people. 5 (33%) of the respondents in favour of the project opined that more job opportunities will be created for the local population which would result in sustainable livelihoods and also helps in improving economic condition during construction and operation period which would ultimately result in skill up gradation, ancillary and auxiliary business opportunities, better infrastructure and transportation facilities and overall well being of the area (figure-24).

However, PAFs had other concerns also in the project area which relate to increase in prices, noise and dust, individual and family safety and disruption in village harmony.

Figure 24 Perception of the Project



6. LEGAL POLICIES AND FRAME WORK

6.0. Regulatory Framework

The Article 48-A of the Constitution of India states that the State shall endeavour to protect and improve the environment to safeguard the forest and wildlife of the country. At the same time, it shall be the fundamental duty of every citizen of India under Article 51-A (g) of the Constitution of India, to protect and improve the natural environment including forests, lakes, rivers and wild life.

Over the years, the Government of India has framed several policies and promulgated number of Acts, Rules and Notifications aimed at management and protection of the environment. As a result, our country now has a fairly complex body of environmental legislation aimed at ensuring that the development process meets the overall objective of promoting sustainability in the long run.

The present chapter focuses on the rules and regulations pertaining to and applicable for the proposed project. The regulatory framework has been studied covering the applicability and where possible, the project specific implications of relevant legislation.

6.1. Environmental policies

Several environmental policy statements have been formulated in the last few decades as a part of the Government's approach to integrate environmental and developmental aspects of planning. The policies reflect a gradual shift in emphasis from pollution abatement and control to proactive and voluntary approaches for pollution prevention in keeping with global paradigm shifts and trends in environment management.

Following are some of the key policies that have been laid down by the Central Government:

- National Forest Policy, 1988;
- National Conservation Strategy and Policy Statement on Environment and Development, 1992;
- Policy Statement on Abatement of Pollution, 1992.

Despite these policy documents a need for a comprehensive policy statement it had been evident for some time in order to infuse a common approach to the various sector and cross-sectoral approaches to environmental management. As a result, a National Environment Policy (NEP, 2006) has been drawn up as a response to our national commitment to a clean environment, mandated in the Constitution in Articles 48 A and 51 A (g), strengthened by judicial interpretation of Article 21. The National Environment Policy is intended to be a guide to action: in regulatory reform, programmes and projects for environmental conservation; and review and enactment of legislation, by agencies of the Central, State, and Local Governments.

6.2. Legal Provisions for Environment for Proposed Development

The proposed project would be governed by various Acts, Rules and regulations enforced by Ministry of Environment and Forests and Climate Change (MoEF&CC) at the Central level and other regulatory agencies at the State and local levels. Various environmental standards, specifications and guidelines of Central Pollution Control Board (CPCB) and state level agencies will also be applicable.

The various environmental regulations as applicable to the project are briefly described in the following sections below:

Clearance Required

Environmental Impact Assessment Notification, 2006

Projects or activities listed in the Schedule to this notification shall require prior environmental clearance from the Expert Appraisal Committee (EAC) of Ministry of Environment and Forests & Climate Change for developmental activities falling under Category 'A' of the Schedule and from the State Environmental Impact assessment Authority (SEIAA) at the State level for development activities falling under Category 'B' of the said schedule, before any construction work, or preparation of land by the project proponent (PP).

Implication: The Amaravati City development project requires Environmental Clearance from the State Expert Appraisal Committee (SEAC) and State Environmental Impact Assessment Authority (SEIAA) of the state of Andhra Pradesh under the Category 8(b) Township and Area Development Projects as per the EIA Notification 2006. The General Condition (GC) clause as per the EIA Notification is not applicable for this project vide Amendment 22nd December (SO No-3252E) of EIA Notification 2006.

Forest (Conservation) Rules, 2003

Every user agency, that wants to use any forest land for non-forest purposes, shall make its proposal in the appropriate form to the concerned nodal officer authorized on this behalf by the State Government, along with requisite information and documents complete in all respects, well in advance of taking up any non-forest activity on the forest land.

Environmental Acts

The Environment (Protection) Act, 1986

The Government of India (GOI) has framed an 'Umbrella Act' called the Environment (Protection) Act, 1986 which is designed to provide a framework for the coordination of central and state authorities established under Water and Air Act. The Environment (Protection) Act, 1986 is established by the GOI to fulfil its commitment to protect and improve the human environment. It is applicable to the entire country. From time to time the central government has issued notifications under the EPA, Act 1986 for the protection of ecologically-sensitive areas or issues guidelines for matters under the EPA.

It empowers the Central Government to take necessary measures for the purpose of protecting and improving environmental quality and preventing, controlling and abating environmental pollution. Important powers of the Central Government include laying down

standards for environmental quality and emission/ discharge of environmental pollution from various sources. These powers define procedures and establish safeguards for handling of hazardous substances, and establish rules to regulate environmental pollution.

Separate Noise regulations for DG sets of various capacities were introduced in 2002 vide notification of MoEF&CC of 17th May 2002 under the Environmental (Protection) Second Amendment Rules 2002. This requires that all DG sets should be provided with exhaust muffler with insertion loss of minimum 25 dB (A). All DG sets manufactured on or after 1 July 2003 shall comply with these regulations.

Implication: All the applicable rules and regulations shall be followed by AP-CRDA&CA provided in the Act towards planning of activities in the project area. For all the activities to be undertaken in Amaravati City development project; the maximum allowable limits of concentration of various environmental pollutants shall be followed as per the standards of quality of air, water, or soil for various areas and purposes.

The Water (Prevention & Control of Pollution) Act, 1974

(Water Act)

The purpose of this Act is to prevent and control water pollution and to maintain or restore the quality of water. In order to achieve its goals and this Act empowers the CPCB and SPCB and defines their functions.

This Act requires any new development, industries, local bodies and agencies engaged in any trade to obtain consent from the SPCB for discharge of effluent into water bodies. The SPCBs have the authority to enforce this Act, if any projects discharge effluent in water bodies, land or sea.

The Environment (Protection) Rules under the EPA also lay down specific standards for quality of water effluents to be discharged into different type of water bodies (sewers, surface water bodies like lakes and rivers, marine discharge).

Implication: For any activities falling in categories as per Andhra Pradesh Pollution Control Board (APPCB), Consent to Establish (CTE) will be obtained before starting the construction and Consent to Operate (CTO) before commissioning the activity.

The Air (Prevention and Control of Pollution) Act, 1981

The purpose of this act is to prevent, and control air pollution including noise pollution and preserve air quality. In order to achieve its goals, this act empowers the CPCB and SPCB and defines their functions. An important function of the CPCB is to establish Environmental standards.

This Act requires industries, local bodies and agencies engaged in any trade to obtain consent from the SPCB prior to releasing emissions into air. The SPCBs have the authority to enforce this Act.

Implication: For any activities falling under categories as per Andhra Pradesh Pollution Control Board (APPCB), Consent to Establish (CTE) will be obtained before starting the construction and Consent to Operate (CTO) before commissioning the activity.

The Municipal Solid Wastes (Management and Handling) Rules, 2000 and Draft Rules 2015

As per this rule, every municipal authority shall, within the limits of the municipality, be responsible for the implementation of the provisions of these rules, and for any infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid wastes.

The Solid waste management for the proposed project will be as per the; Municipal Solid Wastes (Management and Handling) Rules, 2000 and draft Rules 2015, Ministry of Environment and Forests, The Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules, 2008, E waste (Management and Handling) Rule, 2011, Bio-Medical Waste (Management and Handling) Rules, 1998 and its amendments thereof and Andhra Pradesh Pollution Control Board (APPCB), Andhra Pradesh Guidelines. Recent technologies for Waste to Energy (WtE) conversion will also be used in the proposed development.

The Hazardous Wastes (Handling and Management) Rules, 1989 and subsequent amendments

These rules were notified on 28th July 1989, under the Environment Protection Act, 1986. They aim at controlling the generation, collection, treatment, transportation, and disposal of hazardous wastes. These rules have been amended subsequently in, 2000, 2003 and 2009. Hazardous waste generated during construction & operation phase are covered under the ambit of this act. The industries are required to obtain prior authorization from the SPCB for handling, treatment, storage and disposal of Hazardous Wastes.

E-waste (Management and Handling) Rule, 2011

This rule covers producer, consumer or bulk handling involved in the manufacture, sale purchase and processing of electrical and electronic equipment or components as specified in this rule. Environmentally sound management of e-waste means taking all steps required to ensure e-waste is managed in a manner which shall protect health and environment against any adverse effects, which may result from hazardous substance contained in such waste.

Bio-Medical Waste (Management and Handling) Rules, 1998, amendment 2003

As per this rule it shall be the duty of every occupier of an institution generating bio-medical waste which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment. Every occupier, where required, shall set up in accordance with the time-schedule in Schedule VI, requisite bio-medical waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste or ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility. This rule specifies guidelines for segregation, packaging, transportation, storage, treatment and disposal of biomedical waste.

Implication: Facilities for treatment and disposal of biomedical waste already exist at Guntur

and Vijayawada. These facilities will be utilized for the proposed project. Augmentation of the facilities will be done as and when required with respect of the prevailing norms. These two facilities or any new facility that is proposed shall have to comply with the provisions of these Rules.

Fly Ash Notification, 1999, amendment 2009

The MoEF&CC, GoI has issued a Notification regarding the utilization of fly ash/ bottom ash generated from coal/ lignite based thermal power plant, with an intention to protect the environment, conserve top soil and prevent the dumping and disposal of fly ash discharged from coal or lignite based thermal power plants. As per this notification, every construction agency engaged in the construction of buildings within a radius of hundred kilometres from a coal or lignite based thermal power plant shall use only fly ash based products for construction, such as: cement or concrete, fly ash bricks or blocks or tiles or clay fly ash bricks, blocks or tiles or cement fly ash bricks or bricks or blocks or similar products or a combination or aggregate of them, in every construction project.

Implication: In view of the existing thermal power plants in vicinity of the proposed development, Proponent and other stakeholders will follow this notification and will use fly ash based construction material as indicated in this notification.

Ancient Monuments and Archaeological Sites and Remains Act 1958 and Ancient Monuments and Archaeological Sites and Remains Rules, 1959

This Act provides for the preservation of ancient and historical monuments and archaeological sites and remains of national importance and for the regulation of archaeological excavations and for the protection of sculptures, carvings and other like objects. According to this Act, areas within the radiuos of 100m and 300m from the

“Protected property” are designated as “protected areas” and “controlled areas” respectively. No development activity (including building, mining, excavating, blasting) is permitted in the “protected areas”. Development activities likely to damage the protected property are not permitted in the “controlled areas” without prior permission from the Archaeological Survey of India (ASI) if the site/remains/ monuments are protected by ASI or the State Directorate of Archaeology.

Implication: Famous Undavalli caves an archeologically important site falls within the project boundary. The proponent will follow respective regulations in this regard.

National and International Institutional Framework

India’s environmental regulatory framework is based on a system of shared central government/ state pollution control administration. Since the passage of the Environment Act of 1986, the enforcement and oversight role of the central government, and particularly of Ministry of Environment & Forests & Climate Change, has been strengthened considerably. At the national level, the Central Pollution Control Board administers air and water regulatory efforts. This board is responsible for coordination of activities and guidance in formulation of standard for its state counterparts. The State Pollution Control Boards are responsible for enforcing the regulations. The states may adopt standards that are more

restrictive than those of the CPCB, but they may not relax them.

Ministry of Environment & Forests and Climate Change

Ministry of Environment and Forests and Climate Change (MoEF & CC) plays a pivotal role in environmental management for sustained development and for all environmental matters in the country. The major responsibilities of MoEF&CC include:

- Environmental resource conservation and protection, including environmental impact assessment of developmental projects.
- Co-ordination with the other ministries and agencies, voluntary organizations and professional bodies on environmental action plans.
- Policy-planning.
- Promotion of research and development, manpower planning and training and creation of environmental awareness.
- Liaison and coordination with international agencies involved in environmental matters.

Project proponents who are planning to undertake developmental activities have been mandated by MoEF&CC to submit Environmental Impact Statements to establish that they have planned to install adequate pollution monitoring equipment in order to comply with the relevant statutes and regulations as applicable to their scope of activities

Central & State Pollution Control Boards

The Central Pollution Control Board is directly responsible for pollution control throughout the boundaries of the country. In addition to the control of air, noise and water pollution it is also responsible for ensuring effective control on disposal of hazardous wastes and storage and handling of hazardous chemicals and substances.

Additionally, with the enactment of air and water pollution laws, states have set-up their own Pollution Control Boards (SPCBs) to monitor industrial emissions and effluents and to approve the operation of new industries after careful scrutiny. The functions of the SPCBs include:

- The planning of comprehensive state programs for the prevention and control of air and water pollution and to ensure the implementation thereof;
- Inspection of control equipment, industrial plants, etc.;
- Establishing norms in consultation with the CPCB with respect to National Ambient Air Quality Standards, gaseous emission standards from industrial plants, automobiles, etc. Different emission standards may be laid down for different industrial plants, with respect to the quantity and composition of emissions into the atmosphere from such plants and the general pollution levels in the area;
- Advising the State Government on siting of new polluting industry.

Kyoto Protocol

The emission of significant amounts of carbon dioxide and other greenhouse gases, primarily by industrialized and developed nations, has come into sharp focus in the last few decades as it may result in rising global temperatures and resultantly cause change in climatic patterns across the globe. To address this issue, the Kyoto Protocol further supplements and strengthens the United Nations Framework Convention on Climate Change - an international treaty on climate change under which developed countries have committed to reduce their emissions of carbon dioxide and five other greenhouse gases. The treaty was negotiated in Kyoto, Japan in December 1997, opened for signature on March 16, 1998, and closed on March 15, 1999. As of September 2005, a total of 156 countries have ratified the agreement (representing over 61% of global emissions).

India has formally accepted the treaty by ratifying on the 26th of August, 2002 and thus, the aim of APCRDA & CA will be to abide by the objectives of the protocol. APCRDA & CA will focus on the minimum emission of green-house gases like CO₂ and the optimal use of fuel resources in Amaravati and environs.

Montreal Protocol & the Vienna Convention

Scientific concerns about damage to the ozone layer prompted governments to adopt the Vienna Convention on the Protection of the Ozone Layer in the year 1985. Then, two years later, in 1987, the Montreal Protocol was legally adopted and required industrialized countries to reduce their consumption of chemicals harming the ozone layer. As of September 2002, 183 countries have ratified the Montreal Protocol which sets out the time schedule to "freeze" and reduce consumption of ozone depleting substances (ODS). India acceded to the Montreal Protocol on 17th September 1992. India commonly produces and uses seven of the 20 substances controlled under the Montreal Protocol. These are CFC-11, CFC-12, CFC-113, Halon-1211, Halon-1301, Carbon tetrachloride and Methyl chloroform. India is presently considered to be the second largest CFC producer in the world, after China. The Government of India has entrusted the work relating to ozone layer protection and implementation of the Montreal Protocol to the Ministry of Environment and Forests (MoEF) and Climate Change which is the coordinating Ministry in India for all matters relating to the Montreal Protocol.

Stockholm Convention

The Stockholm Convention is a global treaty in response to the urgent need to protect human health and the environment from persistent organic pollutants (POPs). The Convention was adopted with the formal voted approval of delegates from 127 countries on 22 May 2001, at Stockholm in Sweden. POPs are toxic, and have the potential to injure human and other organisms even at concentrations as low as parts per billion (ppb). The 12 initial POPs referred to as "Dirty Dozen" are aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex, toxaphene, polychlorinated biphenols (PCBs), hexachlorobenzene, dioxins and furans.

The proponent will strive to ensure that the usage of such chemicals falling under the POPs category is avoided to the extent possible in any of the planned developmental activities.

6.3. Social Impacts

The social impact of the construction of proposed AP Capital City project has been classified

- i. Impact during Pre- construction stage.
- ii. Impact during Construction Stage.
- iii. Impact During Operation stage

The main aim of the Social Impact Management Plan is to ensure that the various adverse impacts are mitigated and the positive impacts are enhanced. The social impact management measures shall be implemented during the various stages of the project viz. Pre-construction stage, Construction Stage and Operational Stage. A description of the various impacts is identified during different stages of construction which is presented in Table 6.1.

Table6.1: Identification of Social Impacts at different stages

Pre- Construction	Construction	Operation
Acquisition of agricultural land Acquisition of trees Loss of livelihood	Dust pollution Noise pollution Livelihood opportunities during construction	Social Development Economic Development, Infrastructure development Improvement of quality of life Livelihood opportunities and Self-employment.

6.4. Project Impacts

The major findings and magnitude of impacts of the proposed Amaravati - AP Capital City are discussed in the following sections. The project impacts have been classified into different categories such as impacts on land, impacts on the affected families and their livelihood resources.

The proposed Amaravati - AP Capital City will have a number of positive and negative impacts. In general the proposed project shall bring following positive impacts:

- Social Development
- Economic Development,
- Infrastructure development
- Improvement of quality of life
- Livelihood opportunities and self-employment.

The anticipated negative impacts on PAFs include:

- Loss of landholdings

- Loss of livelihood
- Loss of labour activity

6.5. Land Requirement and Acquisition

The New Capital of Andhra Pradesh is envisioned to be the pioneer Smart City of India. It aims to be World Class and at par with the standards set forth by countries such as Singapore. The new capital will be an economic powerhouse that will create a range of jobs for existing resident villagers by upgrading their skills, as well as provide high-tech and knowledge based industry jobs to be globally competitive. Housing will be at the core of its planning and will aim to provide affordable and quality homes to all its residents. It will demonstrate global quality of life standards to offer high levels of convenience to people of all ages.

The concept will capitalize on the rich heritage possessed by the region and utilize it to create a unique identity for the new capital. Sustainability and efficient management of resources will form another important pillar of this new capital. It will be supported by maintaining the clean and green character that the site currently demonstrates by mimicking these ideas in to the new capital Concept Plan.

The project shall require the acquisition/ transfer of 39.82 Acres of land, details of land requirement are summarized below in Table 6.2.

Table 6.2 Land Requirement for the Project in the village

Sl. No	Land Requirement	Nelapadu
1	Acquisition of Land (in Acres)	1326.59
1.1	Land acquired under LP	1286.77
1.2	Land to be acquired (acres)	39.82
2	Impact on PAFs/PAPs (No.)	
2.1	Total PAFs	70
2.2	Total No. of PAFs responded during the survey	15
2.3	Total PAPs	78

Based on the socio- economic survey

6.6. Impact on Families

About 78 Project Affected Persons (PAPs) from 15 Project Affected families those who responded to the survey (PAFs) (But actual PAP's are 70) are affected in this particular village for proposed project Amaravati –AP Capital City project by losing their agriculture lands.

6.7. Loss of livelihood

Total number of land owners in the project area referred to as Project Affected Families are 70. Most of the people (landowner as well as landless) of the area are dependent on

agriculture for their livelihood, and there is permanent loss of current livelihood for almost the entire population. However, due to the provision of giving land in the development to the people losing land- will act as source of livelihood to the landowners on long term basis. The impact on livelihood could be mitigated with the intervention of Rehabilitation measures as per the RFCTLARR Act 2013. Further explorative technique has been used to assess social impacts on families, understand social and demographic profile the project affected families.

In view of social impacts, rehabilitation of the PAFs has been proposed. During site social survey, choice and desire of affected people have also been collected through survey questionnaires. Mitigation measure of the adverse impacts shall be following:

- Payment of compensation for lost asset at replacement cost;
- Preference to the land losers in work during project construction period.
- Provide necessary skill improvement training to affected people to make them employable in project operation phase.

7. COST AND BENEFIT ANALYSIS

7.0. Introduction

The Andhra Pradesh Reorganization Act 2014 (Central Act 6 of 2014), came into force on 2nd June, 2014, provided for the reorganization of the existing state of Andhra Pradesh. One of the most critical priorities for the new state is the formation of the New Capital city, which is very important from the perspective of economic development, cultural integrity and administrative functioning.

The Government of Andhra Pradesh has decided to establish a green field capital city as a liveable, environmentally sustainable and people's capital. For this purpose, the location of the capital was identified between Vijayawada and Guntur cities on the upstream of Prakasam Barrage on the river Krishna.

The land required for the new Amaravati-AP Capital City Development Project with an area of 38049.48 acres, which is covering a current population of 102401 in 24 revenue villages and part of Tadepalli Municipality covered by 26 LPS Units (As per Primary Census Abstract Tables Census 2011).

The proposed capital city is being developed with 'state-of-the-art' infrastructure including world class roads, water supply facilities, administrative and institutional complexes, drainage, sanitation, Solid Waste Management (SWM) facilities, river front development etc, among others.

7.1. Assessment of Public Purpose

One of the objectives of the Social Impact Assessment study is to examine whether the proposed project is a public purpose project? The proposed land acquisition for construction of Amaravati-AP Capital City Development Project is required for the following reasons.

The New capital comes under the villages Ananthavaram, Nekkallu, Thullur, Pitchikalapalem, Dondapadu, Borupalem, Abbarajupalem, Rayapudi, Nelapadu, Sakhamur, Inavolu, Velagapudi, Lingayapalem, Uddandarayunipalem, Malkapuram, Mandadam, Venkatapalem, Penumaka, Kuragallu, Krishnayapalem, Nidamaruru and Navuluru. It falls under the list of projects classified in section 2 (I). (a to f) i.e. government acquires land for its own use, hold and control, including for public sector undertakings and for public purpose according to the LARR ACT 2013. It clearly shows that this project surely has a public purpose.

7.2. Benefits from the Project

Though, it is very difficult to quantify actual cost of social impact based on severity of land acquisition. However efforts were made to minimize negative impacts through intervention of R&R measures. However, the project will entail a multitude of benefits to the entire area. The project will have following benefits for the people:

Social costs are calculated by comparing project benefits and negative impacts, from construction of Amaravati-AP Capital City in Nelapadu village. The cost is approx. Rs.4.48 Crores or agriculture land in Nelapadu village.

Positive and negative aspects of the project have been discussed in detail in the following Table no: 7.1

Table -7.1 Comparative Analysis of Positive and Negative Impacts

Sl. No	Positive Impact	Negative Impact	Remarks
1	Enhanced cost of land per acre	Loss of Agriculture Land	After careful examination of various parameters of cost and benefit (positive and negative impacts), it is found that the proposed project would benefit local Community at large.
2	Social Development	Loss of livelihood	
3	Infrastructure development	Loss of employment	
4	Economic development	Loss of labour activity	
5	Improvement of quality of life		
6	Increase employment & self-employment		

This project will help the local people in infrastructure development, social development and will increase livelihood opportunities & self-employment sources.

7.3. Determination of Compensation

As per section 26 and 27 of LARR 2013 the collector shall adopt following criteria to assess and determine the market value of land and amount of compensation

- Market value specified in the Indian Stamp Act, 1899, for the registration of sale deeds or agreement to sell where land is situated,
- The average sale price of similar type of land situated in the nearest village or nearest vicinity,
- Factoring with 1.25
- Estimated cost of trees and structures
- 100% solarium and 12% additional market value
- R& R package as per LARR Act, 2013

7.4. Land Acquisition Cost

As mentioned in earlier section, about 39.82 acres of land is being acquired from the village Nelapadu. The cost of acquisition of land is presented in Table 7.2

Table 7.2 Detailed Cost of Acquisition of Land

Sl. No.	Village Name	Description of Item	Land Acquired (Acres)	Amount in Lakhs (Rs.)
1.	Nelapadu	1 Agriculture Land value @ Rs.5,00,000 /- per acre as per SRO Tadikonda	39.82	1,99,10,000
		2 Multiplication factor value as per rule 28 Chapter IV of Act 30/2013 is 1.25 time of the land value (rural area)		49,77,500
		3 Tree value + Structure value		1,99,10,000
		4 100% Solatium (1+3)		-----
		5 12% addl. market value on Col.1 from date of 11(1) to passing of award		-----
		Total (1 to 5)		4,47,97,500

Table 7.3 Entitlement Matrix

Prescribed Item/Issue	LARR Act 2013
P.A.Fs in lieu of loss of livelihood	a) Onetime payment of five lakhs rupees per affected family who lost livelihood or b) Annuity policy of not less than Rs 2000 * 240 months
cattle shed/petty Shops cost	Rs.25,000
One time grant to Artisan / Small traders and certain others (PAF)	Rs.25000
Losing of Houses	Making or building New houses for the PAF

8. SOCIAL IMPACT MANAGEMENT PLAN

8.1. Approach to Mitigation

This Social Impact Management Plan (SIMP) has been prepared to mitigate negative social impacts of Amaravati – AP Capital city project according to LA R&R 2013. The social Impact Management Plan (SIMP) consists a set of mitigation, monitoring and institutional measures to be taken during the design, construction and operational phases of the project to eliminate adverse social impacts or to reduce them to acceptable levels. The main aim of the SIMP is to ensure that the various adverse impacts are mitigated and the positive impacts are enhanced. The SIMP shall be implemented during the various stages of the project viz. pre-construction stage, construction stage and operational stage. A description of the various management measures suggested during different stages of the project is provided in following section.

Table 8.1 Classification of social impacts at different stages of project cycle

Pre- Construction	Construction	Operation
Acquisition of agricultural land	Dust pollution	Social Development Economic Development, Infrastructure development
Acquisition of trees	Noise pollution	Improvement of quality of life
Loss of livelihood	Livelihood opportunities during construction	Livelihood opportunities & self-employment

8.2. Major Findings of SIA study

Survey has estimated about **15** project affected families and about **78** project affected persons.

This Social Impact Management Plan (SIMP) of the proposed Amaravati –AP Capital City is prepared to mitigate negative social impacts of the acquisition of 39.82 acres of land in Nelapadu village. The SIMP has followed The Right to Fair Compensation and Transparency in Land Acquisition and Rehabilitation and Resettlement Act, 2013 (RFCTLARR 2013). It appears from the analyses and overview of the Act that provisions of compensation for LA under LA R&R Act, 2013 will be sufficient to manage social issues. Moreover to provide clarity in the provisions of the Act following broad principles shall be adopted under the project:

- Continued consultations with representatives of Panchayat will be the main feature of the R&R planning and implementation of the project,
- Administrator and Commissioner for Resettlement and Rehabilitation shall be appointed as per provisions of LARR 2013 by the appropriate Government,
- The Administrator of the project shall ensure preparation of R&R plan and disclosure as per provisions of LA R&R Act, 2013
- The SIA report shall be disclosed as per Section 7 (5) of the LA R&R Act, 2013
- R&R benefits will be as per provisions of second schedule of LA R&R Act, 2013.

Table 8.2 Analysis of Social Impact of Land Acquisition for Amaravati-AP Capital City Project

Sl. No	Type of Impact	Mitigation measures
1	Loss of fertile agricultural land	Compensation as per provision of LA R&R Act, 2013
2	Loss of CPR	Compensation as per provision of LA R&R Act, 2013
3	Acquisition of trees	Lump- Sum compensation

Table 8.3 Analysis of Social Impact of Land Acquisition for Amaravati – AP Capital city

Sl. No	Type of Impact	Mitigation measures
1.	Loss of Agricultural land Loss of livelihood About 39.82 acres of agricultural land is to be acquired About 39.82 acres of 70 families will be losing their livelihood	Compensation as per the provision of LA R&R Act, 2013. Rehabilitation assistance as per schedule II The stamp duty and other fee payable for registration shall be borne by the authority.

8.3. Measures to avoid, mitigate and compensate impact

8.3.1. Mitigation Measures

Potential impacts due to land related impacts are attributed to loss of land, change in land use and loss of access. The impacts of the project in change in land-use are significant and irreversible; however the Master Plan has addressed the issues and all necessary mitigate measures are planned. The proposed Green and Blue plan in the Amaravati City translates into an implementable land use plan. The plan can be summarized into the following planning strategies and typologies:

Green & Blue lattice:

- Green grid – The green and blue network primary follows the road network creating passive recreational fingers across the city. These fingers are anchored with large parks and open spaces close to the 2 reservoirs. Each finger terminates at the scenic river Krishna waterfront.
- Active, beautiful and clean waterways weave through the Amaravati Capital city. These waterways follow the existing irrigation canals and reservoirs to form an interwoven water network.
- The plan creates a variety of interfaces between the green and blue creating different water themed public spaces such as lake parks, waterfront corridor, linear parks, etc.

Primary green spaces:

- Primary green spaces including large city parks, lakes, town parks, neighbourhood parks, water bodies and public plazas form the foundation of the city scale recreational network that provides recreation opportunities and improves a sense of community. These parks help in creating large public open spaces which can double up as event spaces for the larger community within the Capital city.
- Primary greens are planned along the existing canals and water bodies to serve as city's main ecological corridors. They play a dual role in flood management, and environmental conservation of the native species.

Secondary green links

- Secondary greens weave through the townships connecting the various town and neighbourhood parks. Planned as the secondary green fingers of the city, these greens act as passive recreational spaces, interactive jogging trails and non-motorized transports corridors across the city.

Recreational Landscapes

- Recreational landscapes include theme parks, golf courses, sports and recreational spaces.
- In line with the township model several sports and recreation parcels have been allocated in the town centre, and in proximity to the neighbourhood centre.
- Large city level sports facilities such as cricket stadium, golf courses and theme parks have been strategically distributed across the city.

Water bodies

- Water bodies including rivers, canals, irrigation channels and reservoirs have been carefully protected and integrated with the green spaces as discussed in the previous section

The impacts due to loss of land and loss of access are expected to be minor with the implementation of the land pooling scheme and taking the following mitigation measures.

- Providing land pooling benefits / LA benefits to the effected
- Payment of cost for lost asset and providing rehabilitation if any displaced;
- Payment of compensation prior to taking possession of land or any physical displacement;
- Payment of transitional assistance to support economic loss;
- Dissemination of information about the acquisition and compensation calculation process;
- Establishing a grievance radical mechanism;
- Option for work during project construction period;
- Prior information to harvest the crops or compensation for loss of crop;

- Continuation of community engagement process;
- Provision of access to local villagers to continue with their pre project movement pattern.

Impact on Livelihoods

Long term livelihoods have been, or will be, impacted for those families who have surrendered their lands for the project. Most of the people (landowner as well as landless) of the area are dependent on agriculture for their livelihood, and there is permanent loss of current livelihood for almost the entire population. However, due to the provision of giving land in the development to the people losing land- will act as source of livelihood to the landowners on long term basis.

Mitigation Measures

This impact is expected to be insignificant with the implementation of the following mitigation measures

- Payment of compensation for lost asset at replacement cost;
- Preference to the land losers in work during project construction period.
- Provide necessary skill improvement training to affected people to make them employable in project operation phase.

Impact on utilities

Impacts have been assessed assuming general utilities such as power line, telephone line, water supply etc. may be affected during the construction. Therefore, the likelihood of significance of impact would be negligible.

Mitigation Measures

This impact is expected to be minor and with the implementation of the following mitigation measures the potential disruption to existing utilities will be further minimized.

- Coordination with respective concerned department for utility relocation;
- Establishing replaced utilities prior to disconnecting or discontinuing the existing one;
- Providing intimation to the people in advance about any disruption to services.

Impact during Construction Phase

The construction phase of the Project involves a number of sequential activities, collectively named as “spread”. The area affected by the construction, laying of road, clearing of site, construction of residential, commercial and industrial units, construction of social infrastructure, construction of treatment plant, laying of sewer line, and labor camps areas etc. Based on the assessment of above activities and in consultation with the different stakeholders, the following impacts are being envisaged for the construction phase of the project.

MINUTES OF THE PUBLIC HEARING HELD ON 12-05-2016 AT NELAPADU (V)

In order to determine the Social impact and Public purpose, the District Collector, Guntur has issued notification u/s 4(1) of the RFCT in LA, R&R, Act 2013 for commencement of consultations and conduct of the Social Impact Assessment Study. The notification was published as per the provisions of section 4(2). The Grama Sabha was conducted on 22.03.2016 in Nelapadu(v) informing about commencement of SIA Study by EPTRI which was appointed by the Commissioner, R&R Hyderabad for the purpose. The EPTRI submitted draft SIA report. The date were conducting public hearing has been fixed in consultation with the Panchayat Nelapadu to be conducted on 12-05-2016 at Gramapanchayat office, Nelapadu.

Intimation / Notices were extended / issued to panchayat sarpanch / members / elders of the village / landowners of the village. Sufficient no of copies of draft SIA report in English and executive summary of draft SIA Report in Telugu circulated.

The EPTRI has explained the contents of draft SIA study report and the Competent Authority has explained the provisions of LA R&R Act, particularly the provisions of compensation and R&R. One member from panchayat and 18 landowners attended the public hearing. All the landowners who participated in Land Pooling Scheme also attended the public hearing and no landowners belonging to proposed lands under SIA study attended the public hearing.


12/5/16
Special Deputy Collector & Competent Authority / LAO
LPS Unit No – 18, Nelapadu Village.