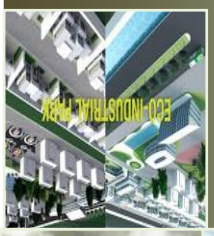
June, 2015

Detailed Project Report
Development of an Industrial Park at
Venkatagiri







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EXECUTIVE SUMMARY

The Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC) has identified Government land based on the findings given by the District Collector, Chittoor. The district officials had suggested a promising forest block i.e., Venkatagiri Reserve Forest (1726 hectares or 4263 acres) for the development of an Industrial Park.

This identified Venkatagiri Forest Reserve block is located amidst Ramanujapalle, Chinthapalem, Panguru, Krishnapalle and Merlapaka village of Yerpedu Mandal of Tirupati Revenue division. This block actually falls west to the above villages comprising 4263 acres of forest lands. This land is covered by small thorny bushes. It is about 32 km away from Tirupati town; about 26 km. away from Renigunta and 12 km away from Yerpedu.

The proposed Industrial Park will be developed in an integrated manner with all required onsite infrastructure as well as common infrastructure facilities. The proposed Industrial Park will enhance the opportunities to transform the region as a potential industrial hub with overall integration of common facilities / infrastructure for other industrial units in the vicinity.

One of the prime objectives of the proposed Industrial Park development is to generate employment opportunities by which the socio-economic status of the region will be improved.

In this regard, APIIC submits this Project Report to the Government of Andhra Pradesh seeking approval for de-forestation and alienation of the said land - Venkatagiri Reserve Forest for the development of an Industrial Park at an estimated project cost of **Rs. 1400 Cr** attracting an investment of **Rs. 7500 Cr**. and employment generation for **25,000** persons.

1. INTRODUCTION

1.1 BACKGROUND

Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC Ltd.), an undertaking of the Government. of Andhra Pradesh, is a premier organization in the state, vested with the objective of providing industrial infrastructure through development of Industrial Parks and Special Economic Zones. Over 320 Industrial Parks have been established throughout the state, covering an extent of over 1,30,000 acres. The Industrial Parks and Special Economic Zones are playing a pivotal role, in attracting investments to the state both domestic & foreign by providing multiple incentives. The Government's investor-friendly policies, state-of-the-art infrastructure, educated manpower, attractive incentive schemes etc., make Andhra Pradesh a choicest destination for Industrial Investment, particularly in the manufacturing sector.

HITEC City, Gangavaram Port, HITEX, HICC, Pharma City, Financial District, FAB City, Hardware Park, Genome Valley and Vishakhapatnam Industrial Water Supply are some of the prestigious projects that helped the state create large scale employment and improve the visibility of the State. These initiatives have put the state, specifically, Hyderabad on the Global Map.

APIIC proposes de-forestation of reserve forest lands at Venkatagiri, Yerpedu Mandal, Tirupati Revenue Division, Chittoor District, Andhra Pradesh for the development of a new Industrial Park. APIIC submits this Project Report to the Government of Andhra Pradesh seeking approval for de-forestation of the said reserve forest land.

1.2 THRUST ON INDUSTRIAL DEVELOPMENT

After the bifurcation of the state on 2nd June 2014, the government of the residuary state of Andhra Pradesh had identified industrial growth as a means to mitigate poverty and unemployment under its “Industry Mission”. The Industry Mission is aimed at attracting investments worth 12.5 lakh crores in the next 15 years. Industrial development promotes higher capital formation; raises wage incomes; and absorbs surplus workforce. With an objective to realize these benefits and hasten up the socio-economic change, industrial development is accorded top priority by the state government. The new Industrial Policy proposes to establish a state-of-the-art infrastructure, advance inclusivity, foster innovation, and develop skill sets of its workforce to create employment opportunities across the state.

The state envisages accelerated development by leveraging infrastructure creation and concerted promotion of industries. The plan seeks to build on region specific industry agglomeration and encourage industries specific to each region. In doing so it also seeks to leverage regional and locational synergies while encouraging industrial growth. The advantage of this strategy is that some of these regions will also emerge as key frontiers of industrial growth and also allow the government to focus on industrial development better.

Region-wise planning of thrust areas for an overall development of the state of Andhra Pradesh as envisaged by the state government is depicted below in **Fig. 1-1**:

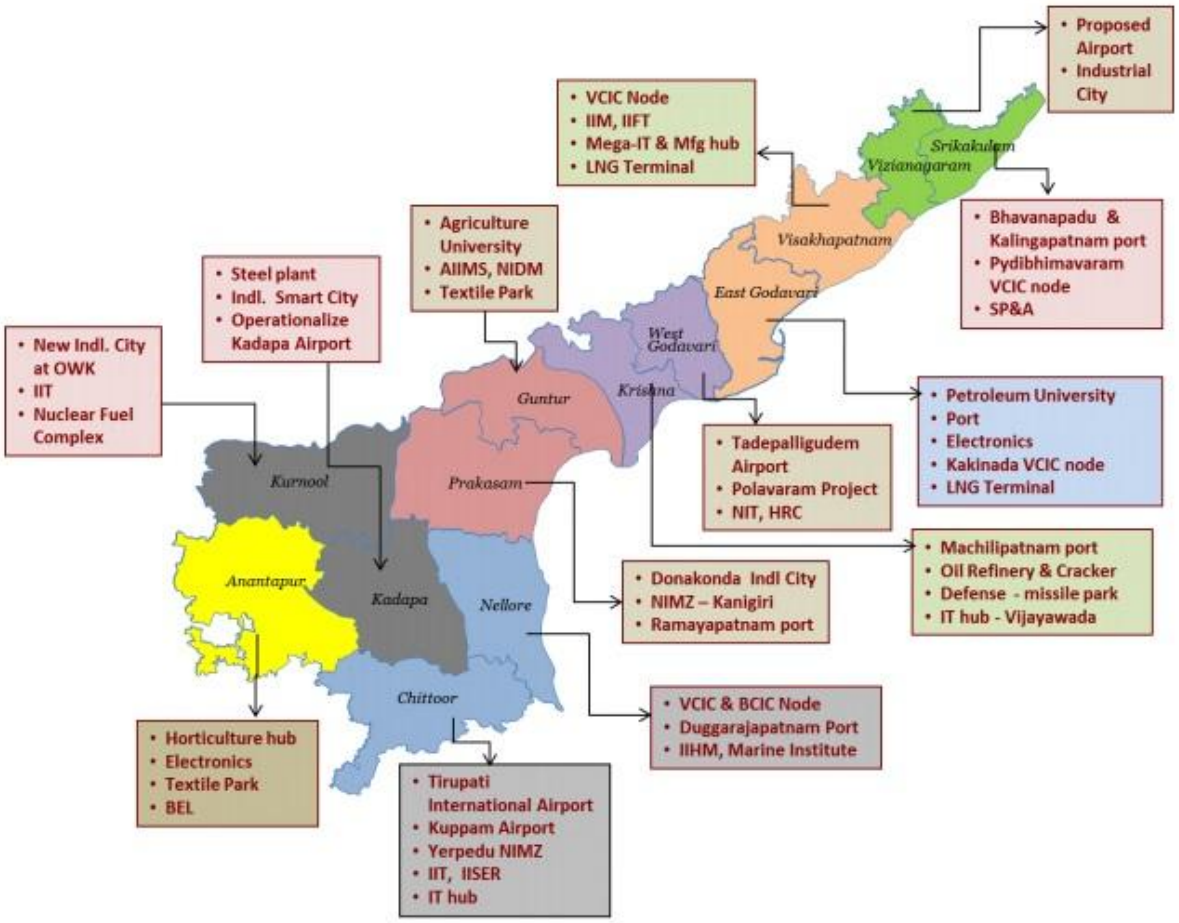

Fig. 1–1 Industrial Mission of Andhra Pradesh

In the district of Chittoor which hosts the temple town of Tirupati, the development plans include seeking conversion of the airport at Renigunta into an International Airport, an airport at Kuppam, a National Investment & Manufacturing Zone (NIMZ) at Yerpedu, an IIT and an IT hub.

1.3 ABOUT THE PROJECT

APIIC proposes the development of an Industrial Park at Venkatagiri RF, Yerpedu Mandal, Tirupati Revenue Division, Chittoor District in Andhra Pradesh. The park is proposed to be spread over **1726** hectares (**4263** acres) and cater to the socio-economic development of the region.

The Venkatagiri Block is on the left side of Yerpedu - Venkatagiri road with scrub jungle that includes Yerpedu Reserve Forest, Venkatagiri Reserve Forest and Gollapalli RF. The entire area of RF i.e., about 50,000 acres of land including hills is outside the sanctuary. The identified land is adjacent to Government *porombokes* and DKT lands of Yerpedu Mandal. There is a huge extent of

Government land available that connects Yerpedu - Venkatagiri road (NH-05). The land has good connectivity to rail and road as well as to an airport. This land is suitable for industrialization.

The proposed project attracts Environmental Clearance (EC) under **Schedule 7(c) category A** project, as per the guidelines of EIA notification of 2006, and the amendments thereafter as also the provisions relating to de-forestation of the Forest (Conservation) Act, 1980.

1.4 MARKET POTENTIAL

i) **Agro Resources** (2012-13)

Paddy (1,71,405 MT), Groundnut (1,26,657 MT) and Sugar Cane (24,92,000 MT)

ii) **Horticulture**

Chittoor district is one of the few major mango growing districts in the entire state. Cashew nut is also grown in mainly Satyavedu, Puttur and Srikalahasti Mandals Mango is grown on 56,800 hectares producing around 5 lakh tonnes per year.

Cashew nut is grown on 237 acres producing around 29 tonnes per year. Production of major crops – Mango (5,02,212 MT), Cashew nut (29 MT), Tomato (2,49,923 MT).

(iii) **Mineral Resources**

Low-grade steatite, soap stone, Grate and also road metal and building stones, Granite in different colors of Black, Pink and Grey.

(iv) **Dairy resources**

The District is having about 3,00,000 milch animals yielding about 18 Lakh Liters of Milk per day.

There are 53 Fruit Processing Industries in Small and Medium scale sector. There are 40 processing units in Chittoor region, 10 units in Tirupati region and 3 Units in Madanapalle region manufacturing fruit pulp with a total capacity of 10,000 M. Tonnes per Annum. There is a scope for more units with asceptic packing which is export oriented. The mango processing units produce large amount of mango peels and mango kernels, which largely remained unutilized.

There exists potential in setting up units for extraction of oil from mango kernel, which can be used in varnishes, soaps etc. Similarly, mango peels can be dried and converted into protein additive for cattle feed. This is an innovative process not in use in the district, hence, an appropriate technology for the same needs to be developed. The development of Fruit Processing Industry in the district has generally stimulated the production of horticultural products, particularly, mangos.

1.5 METHODOLOGY

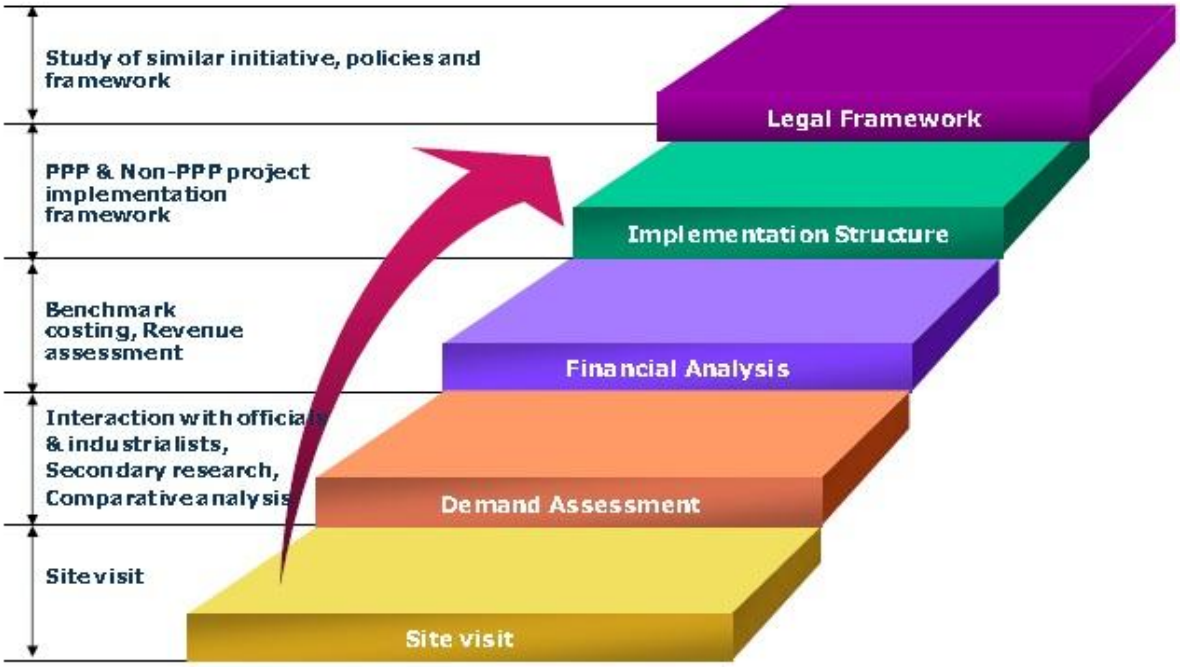

Fig. 1 -2 Methodology / Approach to Industrial Park

1.5.1 Site Inspection

The site visit in the Tirupati area was carried out to ascertain the existing land use pattern and the distribution of habitation in the area. Land use pattern signifies the percentage of residential, industrial and agricultural areas in the region. The existing infrastructure facilities were also studied during the site visit, like connectivity infrastructure – roads, railways etc.

1.5.2 Demand Assessment

Demand assessment plays a major role in the industrial establishments and development of the area. The first level of interaction was carried out with the government officials in order to understand the government's perspective plan for the development of this region. Secondary research was carried out to assess the availability of resources in the region. Accordingly, the development plan of the industrial park was made, based on the potential as witnessed by the success of previous ventures by APIIC.

1.5.3 Financial analysis

The primary stage is the cost estimation for the development of industrial park including governmental and private investments. The major portion of government investments would be made for the provision of core infrastructure and other related activities. The core infrastructure

would comprise roads, power, communication network, water & sewerage system, solid waste management, power etc.

1.5.4 Implementation structure

The eligible projects for Private-Public Partnership were identified in the process and the projects are tentatively categorized under PPP and Non-PPP headings. The required investments to be made by the private partner and the government are arrived at in the ratio of 10 ; 90 approximately.

Social Cost benefit Analysis (SCBA) has been done to confirm the feasibility of the project.

1.5.5 Legal Framework

Review of the implementation framework was done. Similar project initiatives, policies and the framework have been studied. The applicable acts as per the state government and the central government along with their implications were also studied. Accordingly, the legal framework for the suggested implementation structure is elaborated further in this report.

2. ANDHRA PRADESH INDUSTRIAL INFRASTRUCTURE CORPORATION (APIIC)

2.1 ABOUT APIIC

Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC Ltd.) was incorporated on 26th September, 1973 with an Authorised Capital of Rs.20.00 crores and paid up capital of Rs.16.33 crores. APIIC is a wholly owned Undertaking of Government of Andhra Pradesh.

Vested with the objective of providing industrial infrastructure through development of industrial areas, the Corporation has so far developed more than 300 industrial parks spreading over an extent of about 1,21,655 acres (including allotted area). Besides, the Corporation is also developing sector focused parks like apparel park / food processing parks/leather parks, Special Economic Zones in the state. The Corporation has also constructed 3500 industrial sheds, 4800 dormitory units, 466 commercial shops.

With the advent of economic liberalization the Corporation has reoriented itself to the changing needs of economy and assumed the role of facilitator. To its credit the Corporation has developed Hi-Tech city with a private promoter. The corporation is the principle facilitator in Mega Projects like Special Economic Zone, Visakha Industrial Water Supply, Gangavaram Port, Convention Centre, Mega Industrial Parks at Parawada, Pashamylaram Financial District Hardware Park at Hyderabad.

The Corporation has to its credit the execution of civil works for various Government Departments. It has executed works covering Referral Hospitals, Navodaya Schools Polytechnic Buildings Court Complex, Building and Hostel for Indian Institute of Information Technology. Government entrusted the responsibility of constructing Games Stadia and Games Village for the National Games on Project Management Basis. The Corporation is the Nodal Agency for Government Sponsored scheme like Growth Centers, Export Promotion Industrial Parks, Integrated Infrastructure Development Centers.

In keeping with the trend worldwide, and growing environmental/ecological concerns, APIIC is keen to attain sustainable development of industries giving due consideration to environment protection. The Government of Andhra Pradesh has decided upon its vision and objectives to transform the existing Industrial Parks (IPs) into Eco-Industrial Parks and to ensure sustainable model(s) for industrial growth in the state.

APIIC has made a pioneering move to develop Eco-Industrial Parks in the state of Andhra Pradesh. The IP Nacharam and IP Mallapur are included in the pilot phase for transforming these industrial parks into Eco-Industrial parks

2.2 OBJECTIVES OFAPIIC

The main objectives of the corporation are as below :

- To develop and maintain Industrial Parks, SEZs, Industrial Clusters
- To provide industrial infrastructure
- To act as Nodal Agency for schemes of Government of India/ Government of AP, like NIMZ, SEZ, MSME, Food Processing Parks, Textile Parks, Women's Park and IT & C department schemes like ITIR, EHMC, Incubation centers etc.
- To act as Local Authority in all the Notified Industrial Parks

2.3 STRENGTHS OFAPIIC

- APIIC has developed over 320 Industrial Parks which includes IT, Bio-Tech, Automotive, Apparel, Pharma, Leather, SEZs with its expertise in providing Industrial infrastructure.
- APIIC is spread over in all districts of Andhra Pradesh having 15 Zonal Offices.
- APIIC has manpower of all sectors including Administration, Engineering and Quality Assurance, Legal, Marketing, Finance and Internal Audit etc.,
- APIIC will undertake infrastructure development in its Industrial Parks and takes up regular maintenance.
- APIIC is also delegated with Local Authority Powers under Panchayat Raj & Municipal Act by GoAP.

2.4 CORE FUNCTIONS OF APIIC

- Identification of potential sites for Industrial Areas
- Procurement of Land under Acquisition / Alienation for Industrial parks
- Providing Infrastructure facilities in Industrial parks
- Allotment of Land / Plots / Structure for various Industries
- Identification and development of Infrastructure Projects under PPP mode
- Executing Construction works as deposit work for various State & Central Govt Departments.

2.5 ORGANIZATIONAL STRUCTURE

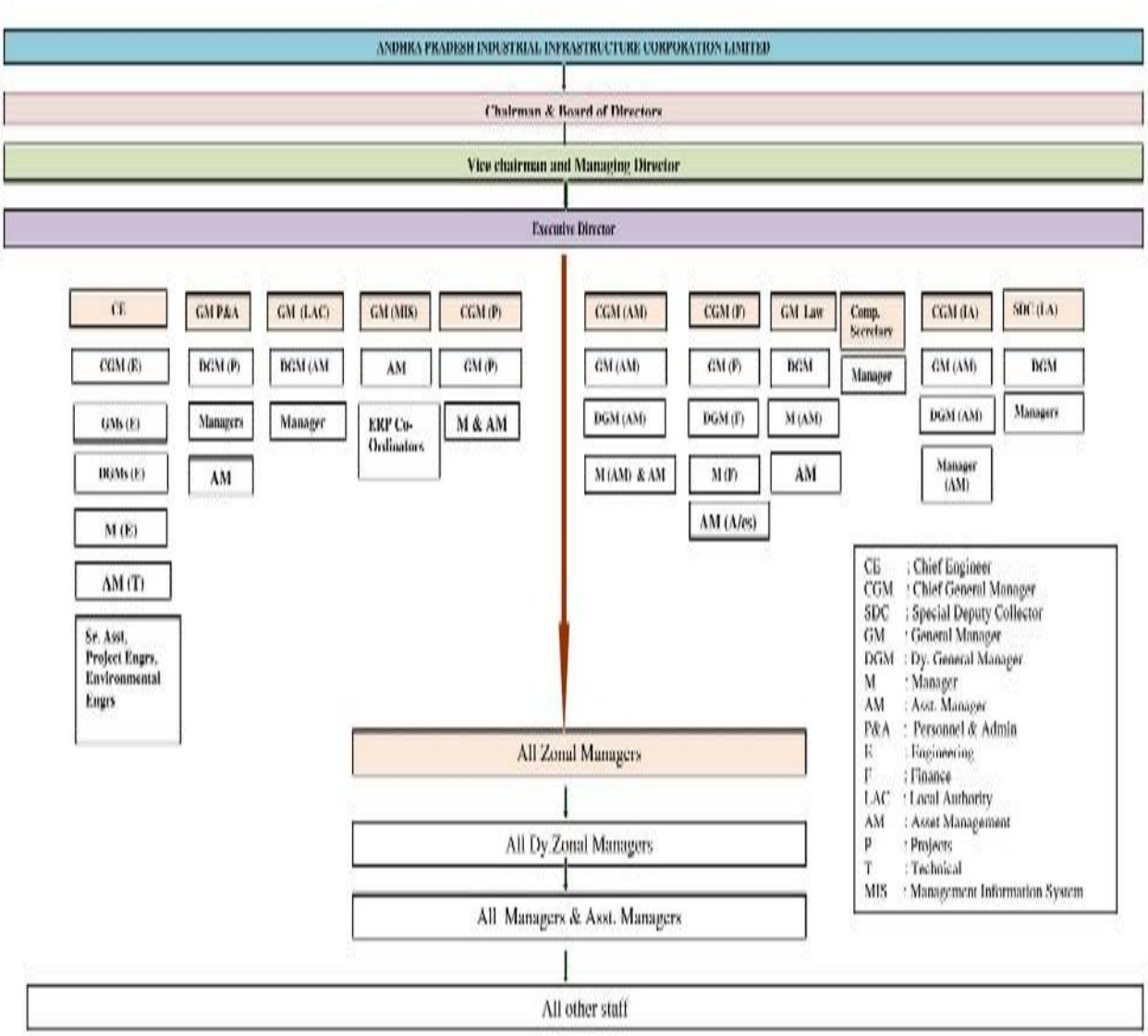

Fig. 2-1 Organization Structure of APIIC

3 EXISTING ENVIRONMENTAL SETTINGS

3.1 GEOGRAPHICAL MAP OF CHITTOOR DISTRICT

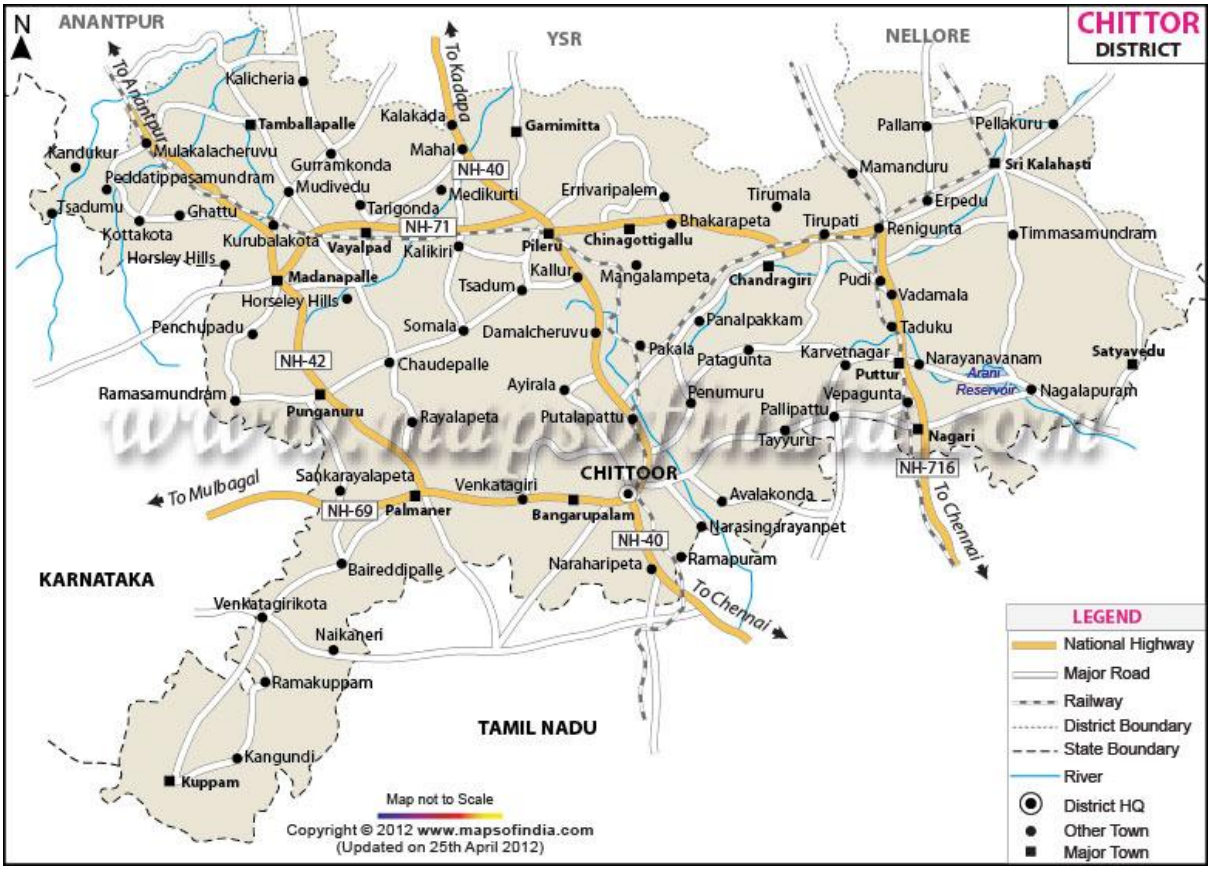

Fig. 3-1 Chittoor District Map

Chittoor district is one of the Rayalasema districts of Andhra Pradesh. It covers a geographical area of 15,152 sq. km and situated between 12° 37' and 14°00' North latitudes and 78°30' and 79°55' Eastern longitudes. The district is divided into 3 revenue divisions viz., Chittoor, Tirupati and Madanapalle. The district has 66 mandals under these 3 revenue divisions, with 2 Municipal Corporations of Chittoor and Tirupati and 6 municipalities of Madanapalle, Punganur, Palamaner, Nagari, Srikalahasti and Puttur.

3.2 LIVESTOCK & POULTRY (*2007*)

Table 3-1: Livestock & Poultry Details

S. No.	Particulars	No.
A.	Livestock	
1	Cows	1103656
2	Buffaloes	139759
B.	Other Livestock	

S. No.	Particulars	No.
1	Sheep	1124890
2	Goats	490931
3	Pigs	7208
4	Dogs & Bitches	96705
5	Poultry	143983793

3.3 CLIMATE

Chittoor district has a dry and healthy climate. The upland mandals are comparatively cooler than the eastern mandals except Chittoor where the climate is moderate.

3.4 TEMPERATURE

The temperature in the western parts of the district like Punganur, Madanapalle, Horsley Hills are relatively lower than the eastern parts of the Chittoor District. This is because of the higher altitude of the western parts compared to the eastern parts. The summer temperatures touches 46 °C in the eastern parts whereas in the western parts it ranges around 36º to 38 °C. Similarly the winter temperatures of the western parts are relatively low ranging around 12 °C to 14 °C and in eastern parts it is 16 °C to 18 °C.

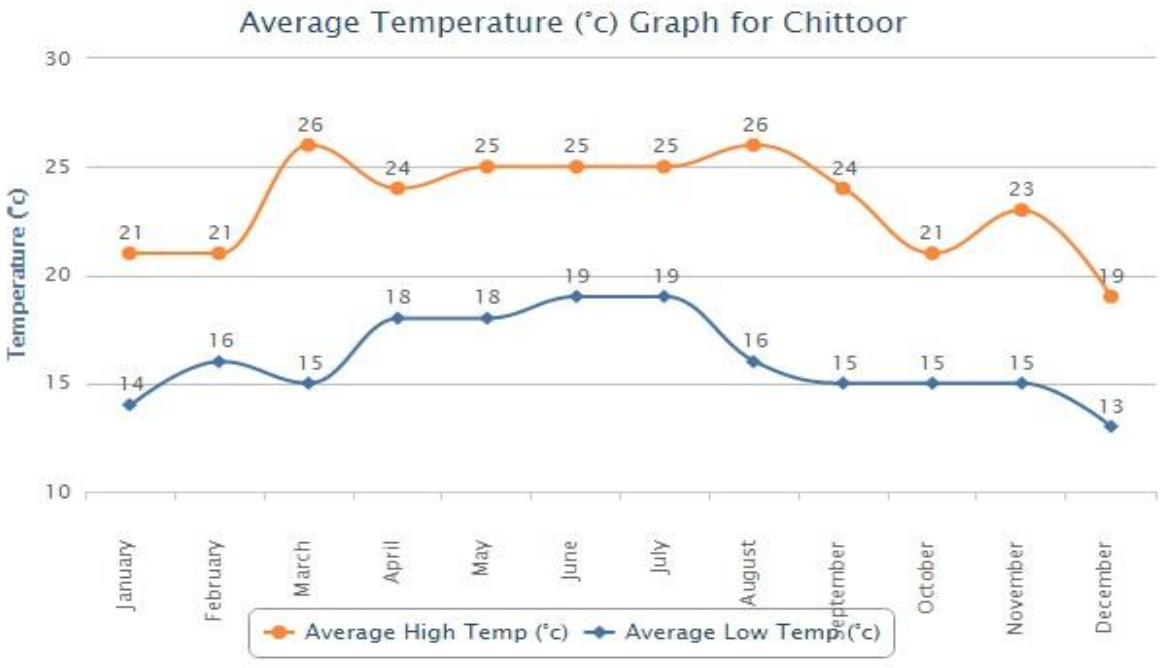

Fig. 3-2 Average Temperature Profile

3.5 RAINFALL

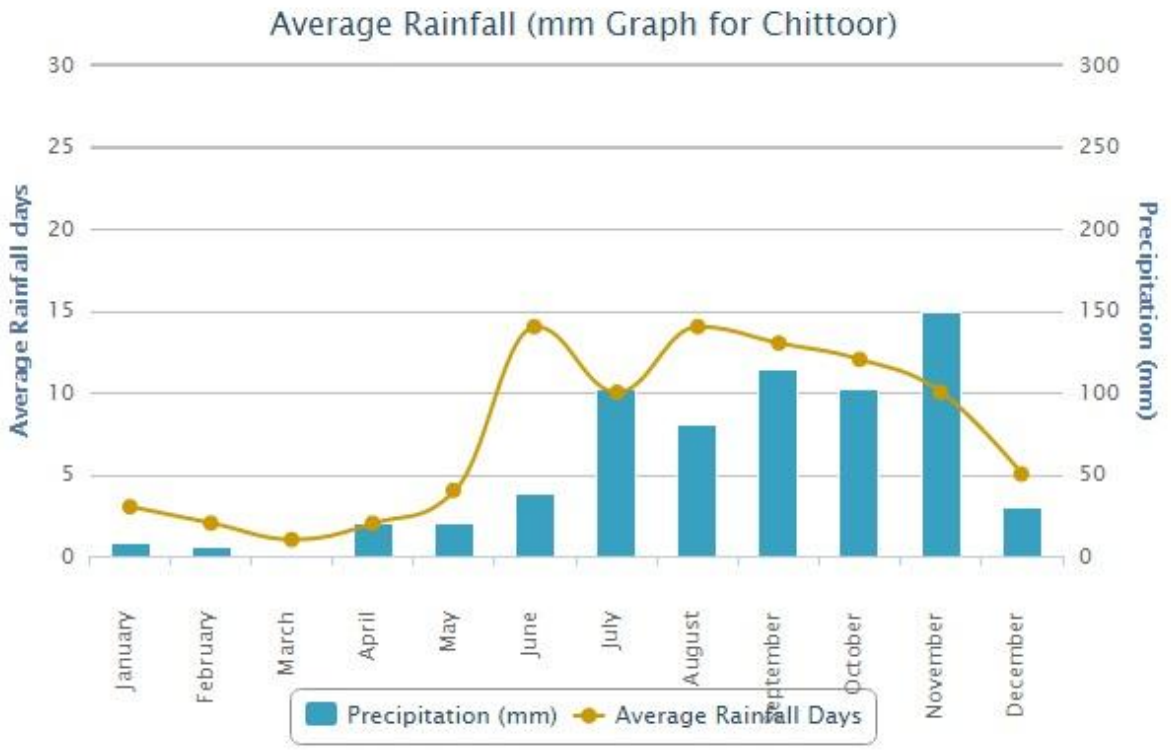

Fig. 3-3 Average Rainfall Profile

The annual rainfall of the district is 934 mms. The district has the benefit of receiving rainfall during both the south-west and north-east monsoon periods and the normal rainfall received during these periods is 438.0 mms and 396.0 mms respectively. The rainfall received from the south-west monsoons is more copious compared to north-east monsoons in the western mandals and in the central part of the district, whereas the rainfall received from north-east monsoons is comparatively copious in the eastern mandals of the district.

3.6 HUMIDITY

The relative humidity generally varies from 86% to 33%.

3.7 GEO MORPHOLOGY AND SOIL TYPES

The district is underlain by formations of Achaean, Proterozoic, Jurassic Cretaceous Tertiary and Quaternary ages. The oldest rocks in the area belong to Magnetite Complex, represented by magnetized quartzo-felspathic gneiss and are exposed in the northeastern part of the district. Older metamorphic comprise amphibolites, hornblende-talc-mica-schist, fuchsite quartzite, calc-silicate rock, marble and banded ferruginous quartzite. The district has hills and plateau and elevation ranges up to 1,318 meters.

3.8 DRAINAGE AND WATER BODIES

There are no major rivers in the district. Most of the rivers are ephemeral in nature carrying large quantities of water immediately after precipitation. The drainage is generally sub articulate to sub-parallel following straight courses. The important drainage basins are Bahuda, Pincha, Swarnamukhi, Palar, Ponnaiand Araniyar. The Bahuda and Pincha are north flowing rivers, Swarnamukhi is east flowing, Palar is southeast flowing, Ponnai towards south and Araniyar is southeast flowing. According to the assessment made on the basis of village records, 57% of the area is covered by Red loamy soils, 34% by red sandy soils. The remaining 9% is covered by black clay (3%), black loamy (2%), black sandy (1%) and red clayey (3%).

3.9 SOIL

The major portion of the district is covered by red soils with portions of alluvial soil in Chittoor and Bangarupalem. The constitution of the soils in the district is: redloamy-57%; red sandy 34% and the remaining 9% is covered by black clay black loamy, black sandy and red clay.

3.10 TOPOGRAPHY

The district forms a part of the Mysore plateau. The western and southwestern parts comprising Kuppam, Palamaner, Punganur, Thamballapalle and Madanapalle areas have an altitude between 600 m and 900 m MSL. The altitude of central region comprising Bangarupalem, Chittoor, Piler, Vayalpad, Chandragiri areas has 300 m to 600 m MSL. The eastern / southern parts covering parts of Puttur, Karvetinagar, Satyavedu, Tottambedu and Srikalahasti areas have an altitude of less than 300 m MSL. This indicates that the elevation in the district is highly variable and having steep slopes.

3.11 LAND USE

Out of the total geographical area of 15,15,100 ha, the forests cover is 4,52,018 ha i.e., 30% of the total area. The barren and uncultivable land covers1,63,650 ha (11%) whereas the land put to non-agricultural use is 1,48,529 ha (9%). The current fallows and other fallow lands cover 1,34,536 ha. (8%) and 1,14,920 ha (8%) respectively. The net area sown is 3,90,487 ha i.e., 27% of the total area. The area sown more than once is 40,899 ha (3%) making the total cropped area is 4,31,386 ha i.e., 30% of total. The details of land utilization are given **Table-3-2**.

Table 3.2: Land Utilization (*Year 2010-11)*

S. No.	Particulars	Area, (in hectares)
1	Total Area	1515100
2	Forest cover	452018
3	Non Agriculture Land	155845
4	Barren land	154389
5	Cultivable waste	46095
6	Pmt. Pastures	33371
7	Misc tree crops	29496
8	Other fallow	120963
9	Current fallow	143651
10	Net area sown	379222

3.12 CROPPING PATTERN

The district is categorized under Southern Agro climatic zone of Andhra Pradesh based on soil type, rainfall and altitude. Groundnut cropping system occupies maximum area of the zone followed by Rice. In dry farming tract of the zone, mono cropping of the Groundnut is the main stay whereas under canals, tanks, wells and bore wells, double cropping is practiced. Sugarcane is the main cash crop grown extensively under the tank. In the dry lands around tank a variety of rainfed crops are grown, including groundnut, pulses, chillies, coriander and so on. Mango is an important garden crop. Many of the dry and wetlands are being converted into mango gardens. Due to lack of labour two crops of paddy are grown. The first crop is largely rainfed and the other is tank fed. If water is still available a third crop is also grown.

3.13 IRRIGATION SOURCES

The area has to basically depend upon tanks for irrigation as it is a rain-fed area. Somasila Swarnamukhi (near Yerpedu) Link canal from Somasila to Yerpedu in Chittoor District, is proposed to provide irrigation facility for drought prone areas situated on the right side of existing K.P. Canal.

Mandals which will stand to benefit are Rapur, Dakkili and Venkatagiri Mandals in Nellore District and Srikalahasti, Yerpedu and Thondamanudu Mandals in Chittoor Districts. Completion of Handri-Neeva Sujala Sravanthi project will ensure sufficient water for the region.

3.14 FORESTS

Thirty (30%) percent of the total land area is covered by forests in the district. The flora of Chittoor comprises dry South Indian deciduous mixed forests, southern cutch thorn forests and tropical evergreen dry forests. The fauna of the district is also widely varied. It includes tigers, panthers, wild pigs, porcupines, hyenas, wolves, jackals and a lot more. A large variety of birds are also found in

the district of Chittoor like the large grey shrikes, mynas, vultures, eagles, kites, owls, partridges, green pigeons, peacocks and many more add to the variety of the avian culture of Chittoor.

3.15 INDUSTRIES

The economy of Chittoor is mainly agro based. It has a huge market for mango, sugarcane, grain and peanuts. The important industries of the district include oilseeds, rice milling, Nutrine Confectionaries, a well known chocolate industry, mango pulp manufacturers.

The granite industry is also of prime importance in the district of Chittoor. The Tirupati Temple in Chittoor is also a major source of earning for the district. This is because a large number of devotees throng the temple throughout the year.

3.16 SOCIO ECONOMIC ENVIRONMENT

According to the census of 2001 the population of the Chittoor district is 3,745,875. The density of population in the district is 246 persons per square kilometer. Out of this population around 21.65 percent of the population is urban. The most commonly used language in the district is Telugu and other languages used are Tamil, English and Hindi language. The literacy rate in Chittoor is 66.77 percent. Among the literate population 77.62 percent of the male population is literate while 55.78 percent women are literate. The work force of the district comprises 46.85 percent of the entire population.

4. CHITTOOR DISTRICT INDUSTRIAL PROFILE

4.1 INDUSTRIAL SCENARIO

4.1.1 Industry at a Glance

Table 4-1: Industry At a Glance

S. No.	Head	Unit	Particulars
1	REGISTERED INDUSTRIAL UNITS	No.	16,562
2	REGISTERED MEDIUM & LARGE UNITS	No.	82
3	ESTIMATED AVG. NO. OF DAILY WORKER EMPLOYED IN SMALL SCALE INDUSTRIES	No.	75,151
4	EMPLOYMENT IN LARGE AND MEDIUM INDUSTRIES	No.	21,424
5	NO. OF INDUSTRIAL AREAS	No.	27

4.1.2 Year Wise Trend of Units Registered

Table 4-2: Industrial Trend of Chittoor District

Year.	NUMBER OF REGISTERED UNITS	EMPLOYMENT	INVESTMENT (lakh Rs.)Head
2004-05	4675	40102	11980
2005-06	4696	40281	12255
2006-07	4113	39540	16574
2007-08	4214	41510	20601
2008-09	4466	47411	31370

Source: DIC, Chittoor & Commissioner of Industries

4.1.3 Details of Existing Micro & Small Enterprises

Table 4-3: Details of Existing Micro & Small Enterprises

S. No.	Category	% of units	% of total Investment	% of total Employment
1	Agriculture based	29.79	18.93	34.17
2	Forest based	8.14	3.38	4.65
3	Textile based	18.45	23.45	16.26
4	Mineral	4.45	19.23	4.65

S. No.	Category	% of units	% of total Investment	% of total Employment
5	Engineering	12.53	15.14	12.47
6	Chemical	4.00	4.06	7.25
7	Leather	7.00	7.11	7.25
8	Others	15.62	8.68	16.34

4.1.4 Large Scale Industries / Public Sector undertakings

It is estimated that there are 40 Large scale enterprises, involving an investment of Rs. 1175 Crores and employing around 10,000 persons. The units are mainly engaged in fruit processing, Granite slabs and monuments, news paper printing, processed fruit and vegetables, etc

4.1.5 Medium Scale Enterprises

It is estimated that there are 42 Medium scale enterprises, involving an investment of Rs. 216 Crores and employing around 11,500 persons. The units are mainly engaged in fruit processing, Granite slabs and monuments, news paper printing, processed fruit and vegetables, etc

4.1.6 Major exportable items

Mango, Mango pulp, teak, red sandalwood, dairy products like ghee, butter, etc.

Growth trend: There were 84 Large and Medium industries in the year 2001, involving an investment of Rs 1059 crores and providing employment to 23812 persons. A decade later, there has not been much change in the scenario. In fact, the number of L&M industries has slightly reduced to 82. One reason for the decline may be that, due to raise in investment ceiling for MSMEs, the units classified as Large and Medium earlier, may now be included as small scale units. The employment and investments in L&M units have also declined to 21424 and Rs. 1675 crores respectively.

4.1.7 Vendorisation and Ancillarization

Vendorisation and Ancillarization: In Chittoor district there is very wide scope for ancillary development as it has a good number of large/medium scale industries. At present there are 84 large/medium scale industries workers in the district which require a good lot of ancillary items of different varieties. Presently they are getting either from Hyderabad or from Madras and Bangalore. It is reported that all the fruit processing industries required a number of items as ancillaries which could be very well manufactured in small scale industries. Carriage workshop is an important large scale unit which requires a good number of ancillary units, which is located at Tirupati, Renigunta Road. This is one of the major workshop of the Indian Railways undertaking periodical repairs to passenger coaches. The main items which are required by the Workshop are: Pins and Bushes (different types)

Washers, sealing for axle box guide, Filtering, Destruction tube, Flushing valve assembly Holding device for vestibule foot plate, Push cock complete, Coat hook, Oil filling arrangement, Glass shutter, Commode seat cover, Commode, Door lock assay, Alarm disc cover, Ash tray, Sliding door lock, Top Spring Seat, Footstep support. Springs of different types, Rubber Washers, Metal Fabrication items, Foundry items. The list is only indicative and Entrepreneurs are advised to contact the Carriage Workshop for selection of project.

4.1.8 Medium Scale Enterprises

There are 42 (of the 82) Medium scale enterprises, involving an investment of Rs. 216.17 Crores and employing around 10,000 persons. The units are mainly engaged in fruit processing, Granite slabs and monuments, news paper printing, processed fruit and vegetables, etc

4.2 POTENTIAL FOR NEW MSMEs

4.2.1 Agro, Food and Allied Industries

Jams and Jellies	Chikki	Turmeric polishing and Grinding
Seed Processing	Potato wafers	Particle ;Boards from Rice Husk
Vermicelli	. Bread	Ice Blocks
Confectionery	Mushrooms	Mango Kernel Oil
Dall Mill	. Honey Bee keeping	Rice Flakes
Pappad	Hatchery	

4.2.2 Mechanical and Metallurgical

G.I. Pipes and fittings	General Engineering Workshop	Non-Ferrous castings	Agricultural Implements
Air-coolers	Insecticide Sprayers	Steel furniture	G.I. buckets
Carpentry furniture	. Lancing tubes used in blast furnaces	Tool Room, Flush Doors	Solar Cooker
Copper wire	Forged Items	Saw mills	Photo lamination
PVC Engineering Trays	Milk Cooling and ghee setting equipment	Road Construction	Electric Motor and pump sets
Wire Drawing	Hand pumps	Gates and grills	Pop Rivets

4.2.3 Chemical, plastic and Rubber based

Detergent cakes and Powders	. Burnt Lime, Ferric Alum	Camphor Tablets	Electroplating / Nickel plating
Phenyl	. Agarbathis	Hawaii Chappals	PVC Pipes
Grease	Cleaning Powder	. Red oxide	Disposable Syringes
. Ayurvedic Medicine Formulations	Plastic cups and plates	Leaf cups and plates (Laminated)	Fibre Glass reinforced plastics
Screen Printing	Computer stationery	Bobbins	Polypropylene Sutli
Reprocessing of plastic waste	Sodium Sulphate	. Pharmaceuticals, Mineral Water	Corrugated Paper Boards and Boxes

4.2.4 Glass and Ceramics

Stone polishing	Fly ash bricks	Quartz Crushing	Plaster of Paris
Fire clay bricks and blocks	RCC Spun Pipes	Sodium Silicate	Ceramic Artware manufacture
Lens Grinding	Road Metal Crushing		

4.2.5 Paper Products

Paper Cups and Plates	Exercise Note Books	File covers, file Boards and Letter Pads

4.2.6 Textile Based

Silk Reeling and twisting	Hosiery	Sewing thread
Sizing	Dyeing	Ready Made Garments

4.2.7 Wooden Products

Flush Doors	TV Stands	Wooden Toys

4.2.8 Electrical and Electronics

TV Antenna	Emergency Lamps	Voltage Stabilizers	Transformers
Tube light chokes and tube light fittings	Auto bulbs	GLS Lamps	

4.2.9 Leather and Foot Wear

Vanity bags and purses made of leather and Rexine	. Leather belts	Leather Footwear
Rexine Travelling Goods	Leather Gloves	Shoe Uppers

4.3 MAJOR CLUSTERS

Following are the industrial clusters found in Chittoor district. The district is known for its rich horticulture produce, especially mango, and has a major concentration of horticulture produce.

The major manufacturing clusters are the fruit processing, power loom, bus body building and granite clusters.

Table 4-4: Details of Major Clusters

Cluster	No. of functional units	Turnover of the Clusters, Rs. Cr.	Employment in Cluster
Chittoor fruit processing	67	Domestic: 125.00 Exports: 330.00	20,000
Nagari power loom Association	530	200.00	24,000
Chittoor Rice Mill	153	400.00	6,000
Madanapalle Bus body building	242	11.3	3,000
Chittoor granite processing Cluster	200	180.00	2,000

Source: www.clusterobservatoyr.in

5. SITE LOCATION & JUSTIFICATION

5.1 LOCATION OF THE SITE

An Industrial Park is being proposed at Venkatagiri in Yerpedu Mandal of Chittoor district of Andhra Pradesh. This is on the left side of Yerpedu - Venkatagiri road with scrub jungle that includes Yerpedu Reserve Forest, Venkatagiri Reserve Forest and Gollapalli RF. The entire area of RF i.e., about 50,000 acres of land including hills is outside the sanctuary. The identified land is adjacent to Government *porombokes* and DKT lands of Yerpedu Mandal. There is a huge extent of Government land available that connects Yerpedu - Venkatagiri road with NH-05 (about 70 km away). The land has good connectivity to rail and road as well as to an airport. This land is suitable for industrialization.

The Venkatagiri Reserve Forest is located amidst Ramanujapalle, Chinthalapalem, Panguru, Krishnampalle and Merlapaka villages of Yerpedu Mandal. This block actually falls west to the above villages comprising 4263 acres of forest lands. The land is covered by small thorny bushes. This land is located in Yerpedu Mandal of Tirupati Revenue Division. It is about 32 km away from Tirupati town, about 26 km away from Renigunta airport and 12 km away from Yerpedu.

The District Collector, Chittoor vide Order No, RocE6/5188/2014 dated 25.03.2015 identified an extent of about 1726.0 Hectares (4263 acres) of land in Venkatagiri Forest Block and proposed for de-notification. An extent of 1726 Ha. has already been allocated to APIIC to file requisite proposals.

The Location Map is given in Fig.5-1 and views of the site are given in Fig.5-2. The salient features of the site are given in **Table 5-1**.

5.2 SURROUNDING FEATURES

Surrounding features of the project are summarized in below **Table 5-1**.

Table 5-1: Surrounding features of proposed Industrial Park

Site Location	Near Mannavaram Village, Srikalahasthi Mandal, Chittoor District Latitude:13 51’ 19.1” N ; Longitude: 79 30’ 19,4” E
Nearest villages & their distances	Mannavaram – 0.3 Km; Kurjalaguda – abutting; Kalampalli – 10 km; Gundlapalli – 11 km; Kalvakuntla -12 km
Protected areas, National Parks etc.	Reserve Forest Notified u/s 15 of AP Forest Act,1967
Conversion for land	As per forest laws alternate land to the extent acquired be given to the Forest Dept. duly developed or cost of development to be borne.
Particulars of connectivity	-National Highway NH 205 in 16 K.M (Pothulapattu to Naidupeta) -National Highway-NH 565 (under construction.) in 12 km (Yerpedu to Venkatagiri) Srikalahasti City – 20 km Renigunta .. .- 27 km

	Tirupati City .. – 32 km Yerpedu Rly. Station – 16 km Srikalahasti Rly. Station – 20 km Renigunta Rly. Jn. – 27 km Nearest Police Station Srikalahasti . – 20 km Renigunta Airport – 26 km Krishnapatnam Sea Port – 130 km Chennai Sea Port . – 130 km
Location of nearest power station	Vempalli – 33 kV Sub Station - 6 km from site Mannavaram- 33 kV Sub-station – 3 km from site
Water availability	- About 7- 8 small *kuntas* / percolated tanks are there. - Swarnamukhi River is about 45 km away from Site. - Proposed SS Canal (Somasila to Swarnamukhi river) passing along the border of the site. - Ground Water: 200 to 400 ft.
Soil type & strength	Red soil & loamy

5.3 SITE BOUNDARIES

East: … Survey No.81, 85 (private land at Mannavaram village)

West: … S. No. 87 & 88

North: … S. No, 90 & 95

South: … S. No. 68

5.4 LOCATION MAP

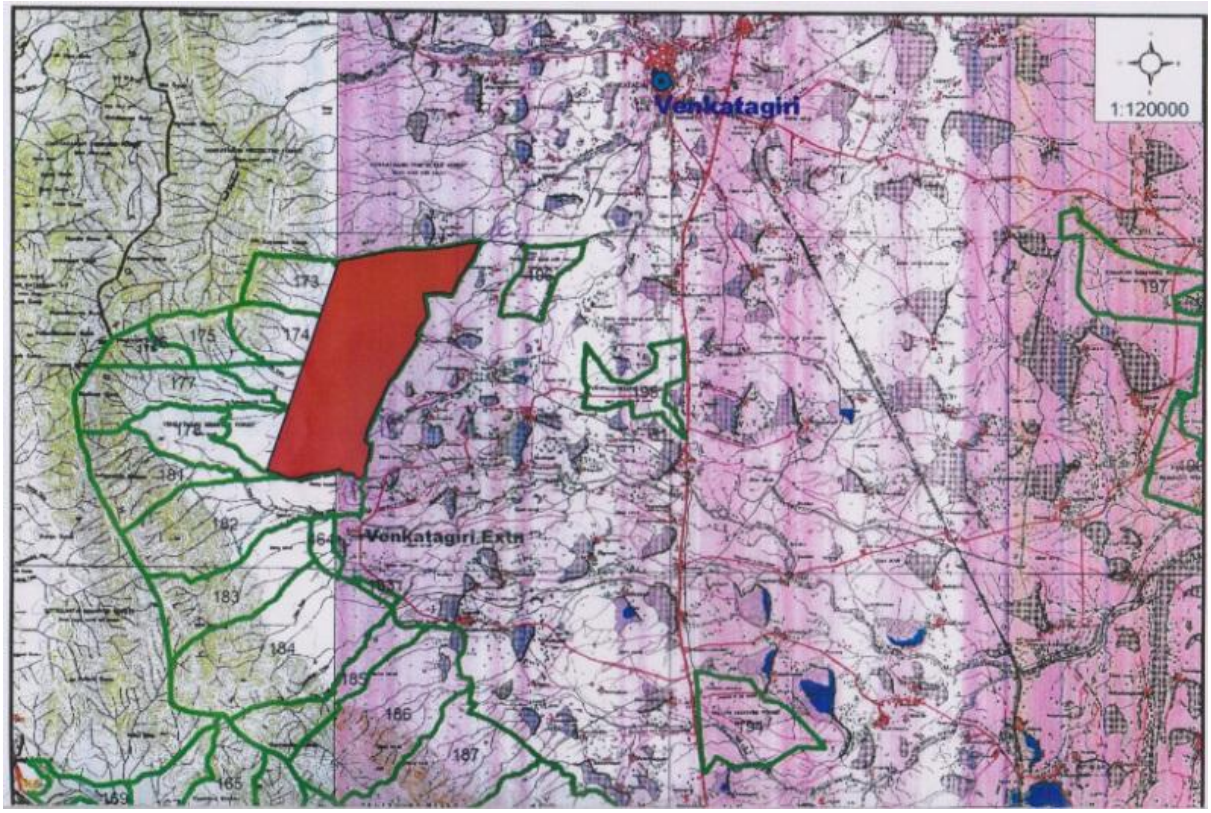

Fig. 5-1 ; Location Map

5.5 SITE VIEWS

Fig 5-2: Site Views

5.6 OTHER PARTICULARS

5.6.1 Existing Units:

Already established a company viz. NTPC BHEL Power Project Pvt. Ltd.(NBPPL) in about 900 Acres adjacent to the proposed Site.

5.6.2 Educational Institutions:

i) Indian Institute of Technology (IIT) is proposed in an area of about 550 Acres of land at Marlapaka, which is 26 km away from the proposed Site.

ii) IISER is proposed in an area of about 220 Acres of land at Pangur, which is 24 Kms away from the proposed Site.

iii) Government Degree College at Venkatagiri. 10 km from the proposed site

iv) Srikalahasti Institute of Technology (SKIT) at Srikalahasti. which is 28 km from the proposed site.

v) Sree Engineering College at Mallavaram, 32 km away from the proposed Site.

5.6.3 Medical Facilities :

I) Primary Health Centre, Yerpedu, 7 km away from Site

II) Government Hospital at Venkatagiri, 10 km from the Site

III) Srikalahasti Govt. General Hospital, Srikalahasti, 28 km from the proposed Site.

5.7 OBSERVATIONS

Location of site is in interior place at Chittoor - Nellore border and needs a lot of development in all aspects. About 40- 50% area is filled with bushes of different size and types. Tanks built during Vijayanagar rule are found near every village for the water needs of the people. Completion of Somasila Project and other projects like Handri-Neeva Sujala Sravanthi project will ensure sufficient water for the region.

5.8 SITE JUSTIFICATION

APIIC with the aim of industrial development has been developing industrial parks throughout the state. Nellore district has a port and Chittoor district has an airport which will be an added advantage for the business development and advancement of the district. Hence, APIIC has proposed plans for the Industrial Park in this district.

The connectivity of the site to port, airport, railway and road is as follows:

a. Port Connectivity - The site is about 40 Km away from the Nellore Port.

b. Airport Connectivity - The site is about 7 from the Renigunta Airport .

c. Rail Connectivity - The site is about 10 Km from Renigunta Railway Station from which railway lines could be drawn in for goods carriers.

d. Road Connectivity - The site is adjacent to NH- 05 connecting Chennai.

The proposed project will benefit the local area in the following ways.

Physical Infrastructure

Once the plant is commissioned the socio-economic status of the local people will improve and there by infrastructure facilities like communication systems will improve. The road network will improve in the area due to the proposed project.

Social Infrastructure

With the implementation of the project, the socio-economic status of the local people will improve substantially. The land rates in the area will improve in the nearby areas due to the proposed plant. This will help in upliftment of the social status of the people in the area. Educational institutions will also come-up and will lead to improvement of educational status of the people in the area. Primary health center may also come-up and the medical facilities will certainly improve due to the proposed project.

Employment Generation

The proposed project creates employment to 400 people during construction and 15000 people during operation of the Project.

Skilled

Total skilled employment in the proposed plant will be 2500 of which majority will be locals.

Semi Skilled

Total Semi-skilled employment in the proposed plant will be 7500. Priority will be given to local people for semi-skilled jobs subject to eligibility.

Unskilled

Total Unskilled employment in the proposed park will be 15000. Top priority will be given to local people for unskilled jobs subject to availability.

Socio-Economic Development Activities

The members of the IP will be committed to uplift the standards of living of the villagers by undertaking following activities / responsibilities as part of Corporate Social Responsibility (CSR):

- Health & hygiene
- Drinking water
- Education for poor
- Vocational training
- Other activities

Health & Hygiene

- Quarterly health camps offering free-checkup & medicines
- Ambulance services
- Education

5.9 LAND FORM & LAND OWNERSHIP

The proposed area for the Industrial Park of 4263 acres falls within the reserved forest area of Venkatagiri Block. The land belongs to the state government of Andhra Pradesh.

5.10 EXISTING SITE CONTOUR

The site contour survey is under preparation. However, in general, the site has several undulations and having hilly tracts with several bushes all around i.e., scrubs.

6. MARKET POTENTIAL OF INDUSTRIAL PARK AT VENKATAGIRI SITE

6.1 INTERACTION WITH STAKEHOLDERS

Detailed interaction was held with the officials of APIIC at Zonal Office, Tirupati and forest department officials at Tirupati. The consultations were carried out to ascertain the proposed development and the upcoming industries, type of industries and the scale.

6.2 MARKET STUDIES & IDENTIFICATION OF PROSPECTIVE SEGMENTS

APIIC intends to develop an industrial park in the identified land area for the allotment of industrial units in Food Processing, Animal Husbandry, Minerals (Granite), Textile sector etc. The identified sectors for development have been based on the primary assessment of market opportunity in the region, consultations with market players etc. The following sections describe the market and demand assessment carried out for the proposed industry sector at Venkatagiri. It is also proposed to encourage micro and small enterprises in a big way to help youngsters use their skills in entrepreneurship.

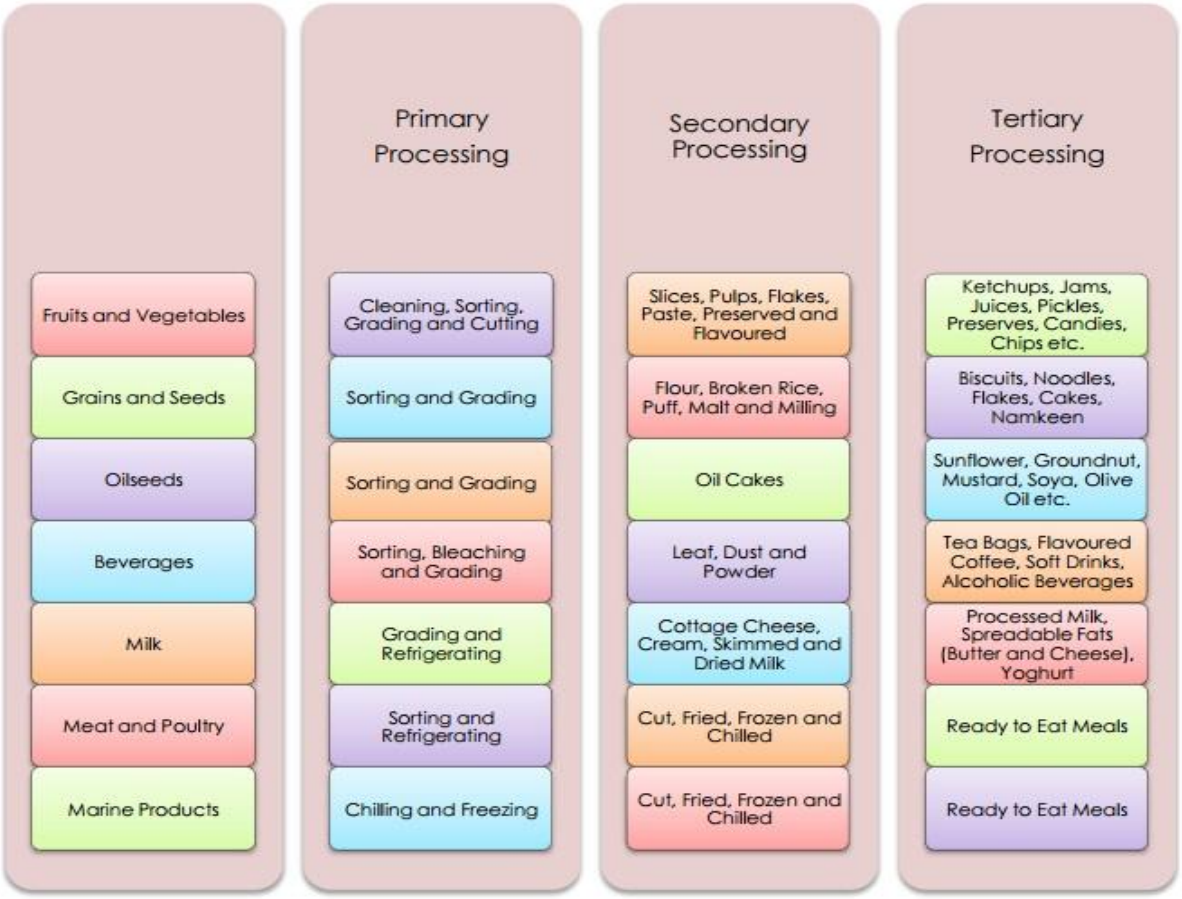

Fig. 6-1: Segments of Food Processing Sectors

6.3 FOOD PROCESSING SECTOR

The Indian food industry is poised for huge growth, increasing its contribution in world food trade every year. In India, the food sector has emerged as a high-profit sector on the back of the scope it offers for value addition, particularly with the food processing industry getting recognized as a high-priority area.

Accounting for about 32 per cent of the country's total food market, the food processing industry is one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. The total food production in India is likely to double in the next 10 years with the country's domestic food market estimated to reach US$ 258 billion by 2015.

6.3.1 Market Size

The Indian food and grocery market is the world's sixth largest, with retail contributing 70 per cent of the sales. It is projected to grow at the rate of 104 per cent, touching US$ 482 billion by 2020.

The Indian food processing industry accounts for 32 per cent of the country's total food market, 14 per cent of manufacturing GDP, 13 per cent of India's exports and six per cent of total industrial investment. Indian food service industry is expected to reach US$ 78 billion by 2018.

6.3.2 Growth Rate

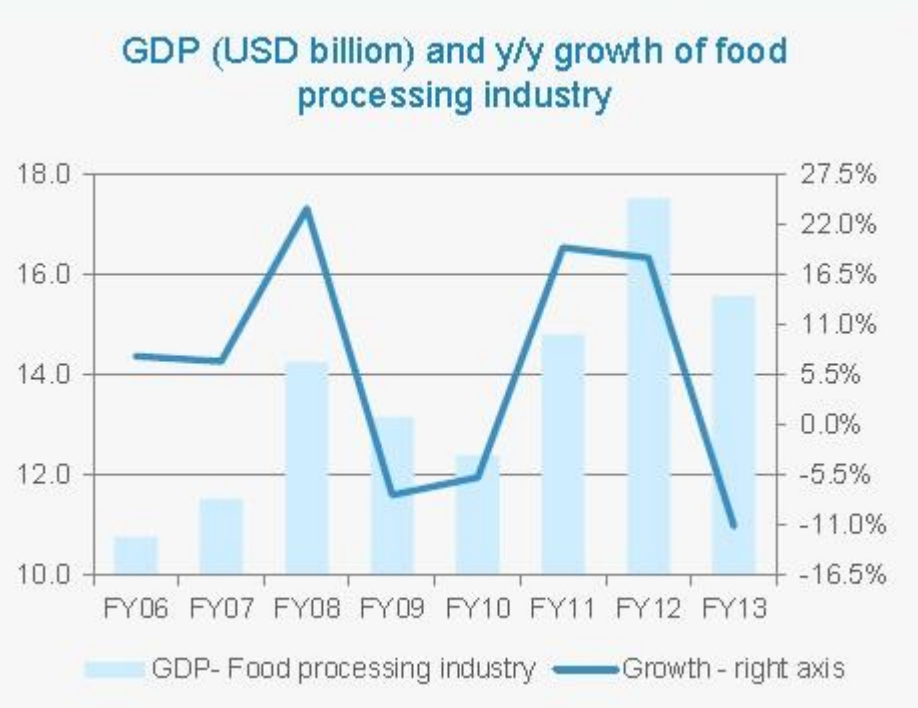

Fig. 6-2: Growth Rate of Food Processing Industry

- The food processing industry is one of the largest industries in India and ranks fifth in terms of production, consumption and exports

- With an estimated value of USD181 billion in FY13, the food processing sector is further estimated to expand at a CAGR of 10 per cent by 2015. The industry contributed 9.8 per cent to India‟ s GDP manufacturing in 2013
- The Indian gourmet food market is currently valued at US$ 1.3 billion and is growing at a CAGR of 20 per cent. It is expected to cross US$ 2.8 billion by 2015.

6.3.3 Segments

- Food processing is an important segment in terms of contribution to GDP and share in the agriculture and manufacturing sectors

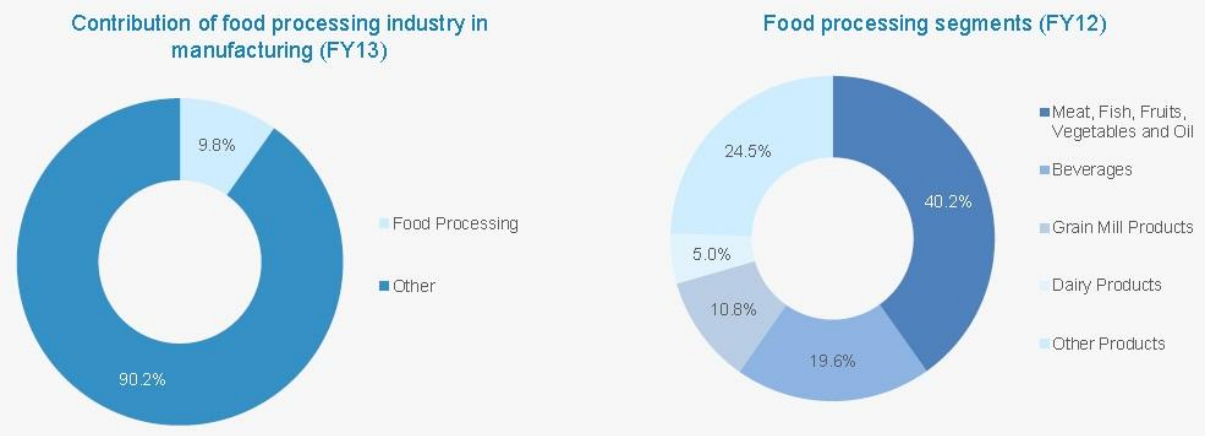

Fig. 6-3: Share of Food Processing Sectors

- According to MOFPI, in FY12, fixed capital in India‟ s food processing sector increased a significant 20.2 per cent over the last year to USD30.9 billion
- During FY06–13, the FPI GDP expanded at a CAGR of 5.4 per cent
- The industry is expected to contribute 6.5 per cent to the country‟ s GDP by FY15

6.3.4 Unorganized Sector

- In FY12, India had 36,881 registered food processing units
- The unorganised sector accounts for 42 per cent of India‟ s food processing industry
- The sizeable presence of small-scale industries points to the sector‟ s role in employment generation
- Though the market falls under the unorganised sector in the country, the organised sector has a larger share in the secondary processing segment than the primary one
- Rice mills account for the largest share of processing units in the organised sector

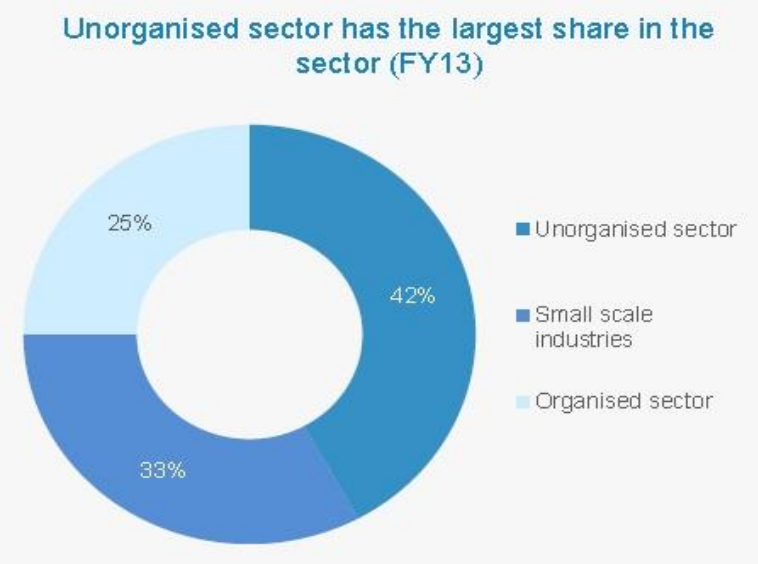

Fig. 6-4: Share of Unorganized Sector

6.3.5 Employment Potential

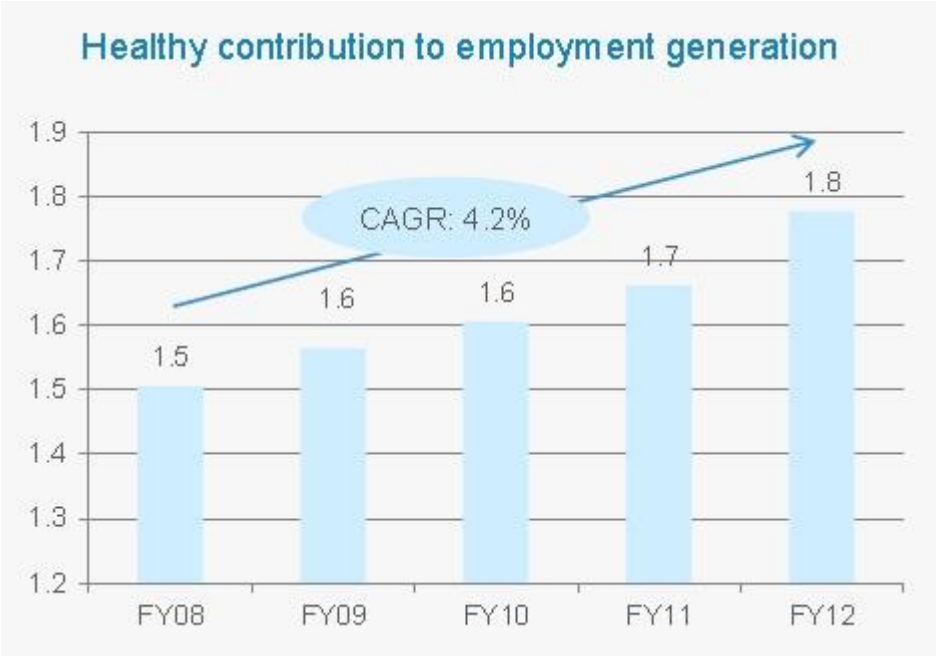

Fig. 6-5: Employment Potential of Food Processing Industry

- Policymakers have identified food processing as a key sector in encouraging labour movement from agriculture to manufacturing
- As per Annual Survey of Industries for 2011–12, there were 1.8 million persons engaged in registered food processing sector
- During FY08–12, employment in the registered food processing sector rose at a CAGR of 4.2 per cent

- As per NSSO, the unregistered food processing sector provided employment to 4.8mn people in 2010-11
- Food products generated the highest employment in the country in 2011-12 (12.1 per cent)

6.4 ANIMAL HUSBANDRY SECTOR

Table 6-1: Major Sectors of Animal Husbandry

Meat products	Dairy products	Leather	Wool	Poultry
Fresh/chilled/frozen ❖ Buffalo ❖ Mutton ❖ Pork Processed ❖ Homogenised meat ❖ Bacons ❖ Salami ❖ Cooked ❖ Ready to eat	❖ Milk & cream ❖ Yoghurt ❖ Condensed milk ❖ Powdered milk ❖ Cheese ❖ Butter ❖ Butter oil ❖ Ice cream ❖ Ghee Tertiary segment ❖ Bakery ❖ Confectionary ❖ Chocolates ❖ Health drinks ❖ Baby food	❖ Leather goods ❖ Bags footwear ❖ Vehicle accessories ❖ Sports accessories ❖ Ornamental/ decorative goods	❖ Knitwear Handloom ❖ Shawls ❖ Scarves ❖ mufflers	processed ❖ eggs ❖ chicken meat ❖ ready to eat unprocessed ❖ eggs ❖ chicken meat

6.4.1 Global Context

Animal husbandry sector is the fastest growing agricultural sub sector and is expected to contribute 50% of global agricultural output in the next 10 years. The sector contributes 33% of agricultural GDP globally. Between 1980 and 2030 the production and consumption of livestock products is expected to grow by 125% growth driven by rapidly rising per capita consumption in developing countries.

6.4.2 Demand Scenario

While in 1980, the consumption of milk and meat products in the developing economies was approximately 30% of the worldwide consumption; by 2030 the figure is expected to rise 66% of the global share. Population growth, urbanization and increasing incomes are key demand drivers for animal source foods in developing countries.

6.4.3 Indian Dairy Industry Scenario

The state of Andhra Pradesh has recorded highest growth in terms of both milk production and per-capita milk availability thereby clocking a growth rate of over 41 per cent and about 36 per cent (approx.) during the five year period of 2006-10, however the state ranked third in terms of milk production with over 1.1 million tons of milk produced annually, according to apex industry body ASSOCHAM.

“Milk production across India has grown at a significant rate of about 19 per cent during the aforesaid period with overall milk production crossing 121 mt mark as of 2010-11 but despite being the largest milk producer in the world, per-capita milk availability in India at 252 grams falls below the global average of 279 grams per person per day,” according to a study titled ‘Unlocking the growth potential of Indian dairy industry,’ conducted by The Associated Chambers of Commerce and Industry of India (ASSOCHAM).

For decades, dairy players in India have been engaged in the liquid milk processing activity only. Backed by operation White Flood in 1970s, the milk industry in India witnessed the first wave of development in the milk production which gave India its status of the largest milk producer in the world.

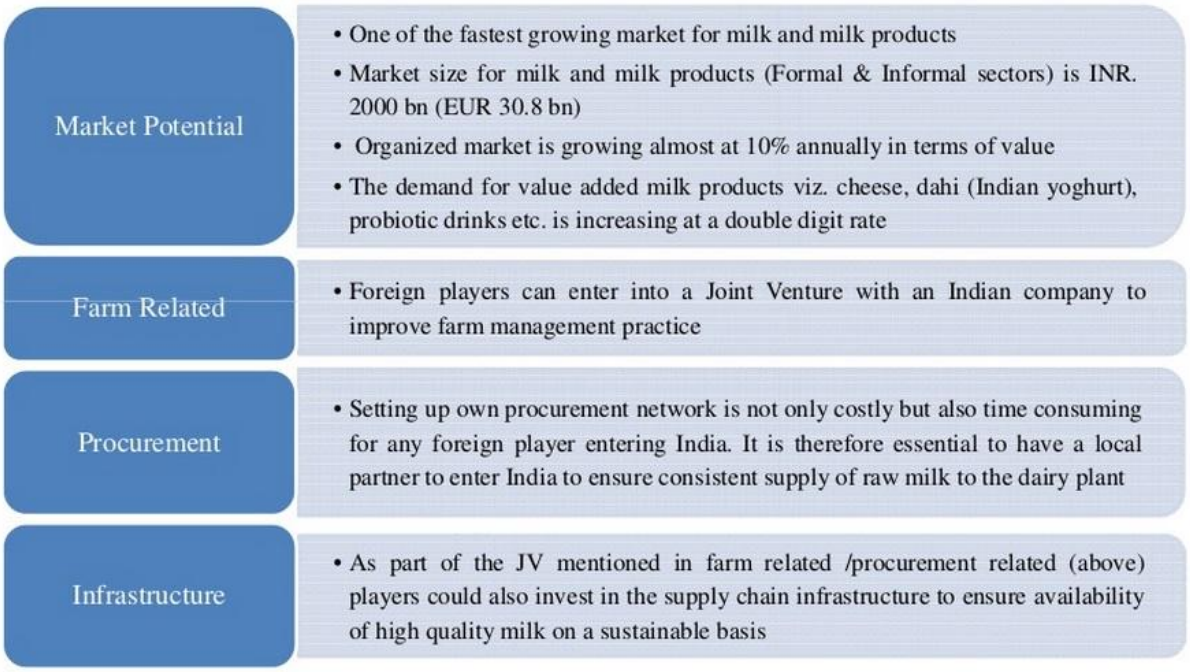

Fig. 6-6: Market Potential of Dairy Industry

Over the past decade, significant transformation took place in the Indian demographic space which led to heightened consumer interest in VADPs. This shift in the dynamics of the industry proved beneficial for the manufacturers since margins in VADPs are more than double the margins in the liquid milk segment. The profitability in liquid milk space ranges from 4-5%, whereas the profitability in VADPs ranges from 12% to 18%, attracting private participation in the industry.

As per the industry estimates, the share of VADP in the milk and milk derivatives segment is growing currently at around 25% every year and is expected to grow at the same rate until 2019-20.

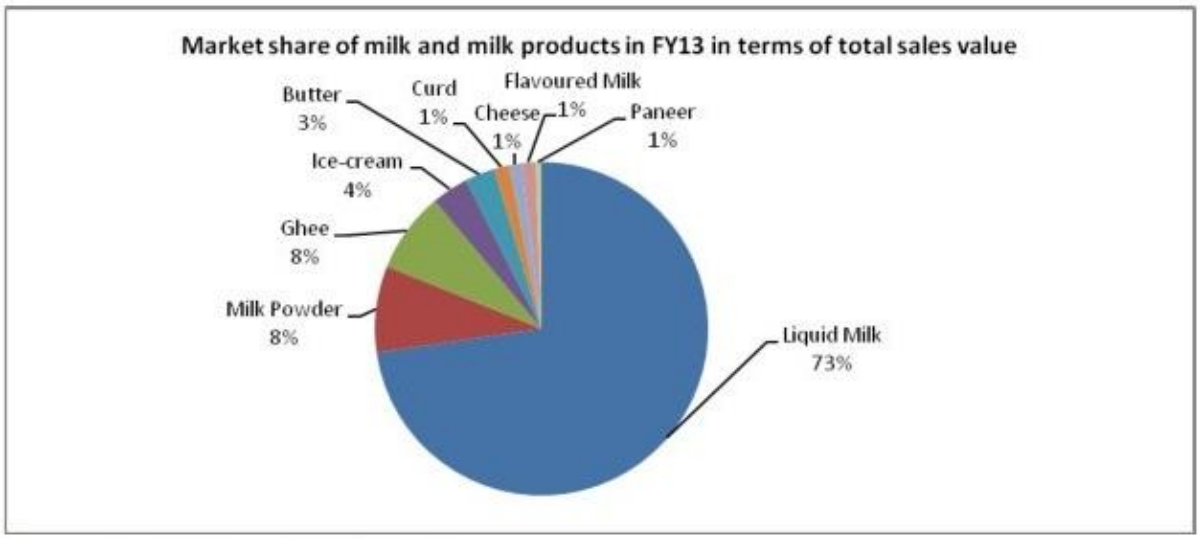

Fig. 6-7: Market Share of Dairy Products

Product innovations are likely to accelerate India's dairy market which is anticipated to improve industry margins by attaining greater scale, higher capacity use and an increasing contribution from new milk variants. Further, the development of processing and packaging technology along with improvement in retail and cold storage infrastructure has increased the shelf life of dairy products.

6.4.4 Growth Trajectory

As per NDDB, the Indian dairy industry is all set to experience high growth rates in the next eight years with demand likely to reach 200 million tonnes by 2022 from 132 million tonnes in 2013. Presently, only 20% of the milk production comes from the organized sector comprising co-operatives and private dairies. The paramount factors driving the growth in the dairy sector include rising disposable incomes, advent of nuclear families and fast/instant food gaining ground in India. Other factors such as structural changes in food habits, expansion of fast food chains and popularity of pizzas and pastas aided the usage of milk variants of mozzarella cheese, processed cheese and flavored milk etc.

The share of the total milk processing capacity by private sector is 44%of total installed capacity of 73 MLPD (Million Liters Per Day) in the country. Therefore, the total share of the organized sector, both cooperatives as well as the private sector is barely 12%. What is, therefore, disquieting is that as much as 88% share of the total milk production is commanded by the unorganized sector. Inorder to attract promote Dairy Industry and attract more investment in this sector, govt has also reduced the excise duty of 16% to Zero on Dairy processing Machineries.

The untapped potential of the dairy sector is immense and opportunity to set up a new dairy venture is great. And there is vast potential for the export of dairy products, as the cost of milk production in India being the lowest. These factors are attracting huge amount of investments in dairy processing, manufacturing dairy processing equipment, fruit packaging equipment and equipments for biotechnology related dairy industry.

6.4.5 Employment in the Sector

Animal Husbandry sector provides large self-employment opportunities. According to National Sample Survey , total number of workers in usual status engaged in farming of animals were million in rural areas and 14.9 million in rural areas combined. Total number of workers engaged in faming of animals and fishing were 14.9 million in rural area and 16.5 million in rural and urban areas combined.

6.5 MINERALS INDUSTRY (GRANITE)

Mineral Sector is an important segment of the Indian economy. Since independence, there has been a pronounced growth in the mineral production both in terms of quality and value. India produces as many as 87 minerals, which include 4 fuels, 10 metallic, 47 non-metallic, 3 atomic and 23 minor minerals (including building and other materials). The contribution of mining and quarrying sector to GDP for the 2010-11 is estimated at Rs. 1,82,278 Crores, which would indicate an increase of 18.2% over that in the previous year.

The total value of mineral production (excluding atomic minerals) during 2010-11 has been estimated at Rs.200609.38 crore which shows an increase of about 11.83% over that of the previous year. Andhra Pradesh contributes 8.98% next to Orissa (9.63%).

6.6 TEXTILE SECTOR (COTTON)

Cotton is one of the principle crops of the country and is the major raw material for domestic textile industry. It provides sustenance to millions of farmers as also workers involved in cotton industry right from processing to trading of cotton. The Indian textile industry consumes a diverse range of fibres and yarn, but is predominantly cotton based. Indian textile industry has an overwhelming presence in the economic life of the country. Apart from providing one of the basic necessities of life, the textile industry also plays a pivotal role through its contribution to industrial output, employment generation and the export earnings of the country. It contributes of about 14% of the industrial

production, 4% to GDP and 14.42% to the country's export earnings. The textile industry is the largest organized industry in the country in terms of employment (nearly one million workers) and number of units. Besides, there is a large number of subsidiary industries dependant on this sector.

Exports:

India's textiles and clothing industry is one of the mainstays of the national economy. It is also one of the largest contributing sectors of india's exports worldwide. The vision statement for the textile industry for the 11th five year plan (2077-12), inter-alia, envisages india securing a 7% share in the global textiles trade by 2012. At current prices the Indian textiles industry is pegged at US$ 55 billion, 64% of which services domestic demand. The textiles industry accounts for nearly 12% share of the country's total exports basket.

6.7 RESOURCE AVAILABILITY

6.7.1 Agro Resource

Paddy (1,71,405 MT), Groundnut (1,26,657 MT) and Sugar Cane (24,92,000 MT)

6.7.2 Horticulture

MANGO:

Mango is the major horticultural crop of Chittoor District with an average of 56800 hectares crop and producing 502212 M T per Annum. There are 48 mango processing Industries in Small & Medium scale sector and 5 large scale units. **There is scope for more units with aseptic packing which is export oriented.** Only about 1.0 – 1.4 lakh tons pulp is being produced as per trade sources. The Mango processing units produce large amount of mango peels and mango kernel, which largely remained utilized. There exists potent a in setting up units for extraction of Oil from mango kernel, which can be used in varnishes, soap etc. Similarly, mango peels can be dried and convert into protein additive for cattle feed. This is an innovative process not in use in the district, hence the appropriate technology for the same needs to be developed.

TOMATO:

Tomato is grown in abundance in the district with an average or 15,000 hectares producing 2.5 lakh M. Tons per annum. At present, about 6000 MT is being processed in the existing fruit processing industries, apart from this there is scope for tomato processing units for making tomato sauce, ketchup etc.

PAPAYA:

Papaya is grown with an average of 300 to 400 acres and producing 5000 M. Tons to 6000 M. Tons. Existing fruit processing units are processing papaya partly making papaya pulp.

TAMARIND:

Tamarind is available in plenty with an average of 12000 acres and producing 15000 M. Tons. There are 6 cold storage units for storing tamarind and two more units are under pipeline. There is good scope for tamarind processing units for making exportable concentrates, juices and starch units from seed. (*Source: Industries Department, GoAP*)

6.7.3 MILK PROCESSING:

There are about 3, 00,000 milch animals in the district yielding about 15,00,000 to 18,00,000 lts. of milk per day. Out of this 8 to 10 lakh litres is processed in all the 12 milk processing units and the processed milk are marketed in Chennai and Bangalore. There is scope for further processing of milk and making milk products such as ghee, butter, kova etc., in chittoor district with the advantage of proximity to Chennai and Bangalore. Though Parag Milk Foods set up an 8 lakh liters per day milk processing plant at Palamner, there is a great scope for all stakeholders since the dairy turnover is expected to double to $140 billion by 2020 (in India) as the CAGR of dairy industry is 15-17% while that of its products is 24% as per NDDB.

6.7.4 MINERAL RESOURCES:

Minerals available in Chittoor district are low-grade steatite, soap stone, grate and also road metal and building stones, granite in different colors of black, pink and grey are available in the district. There are about 150 such units existing in the district and there is scope for more units.

6.7.5 TEXTILE INDUSTRIES:

There are about 2300 power loom units established in and around Nagari area in Chittoor district. 13,000 power looms are working providing an employment of 40,000 people. 13 spinning mills with 3.50 lakh spindles capacity producing cotton yarn. There is very good scope for development of hosiery and knitted wear and read made garment industries.

6.7.6 INFORMATION TECHNOLOGY:

Government has identified Tirupati as potential IT-hub as Tier - II city with a strategy to develop the ITR Park. An extent of 147 acres near Renigunta is under acquisition for IT park as a part providing infrastructure to I. based industries.

6.7.7 GRANITE INDUSTRIES:

The Chittoor district is rich in granite mineral, 115 granite cutting and polishing units are in existence and 13 units are under pipeline. More number of units are expected in future.

6.7.8 FRUIT CANNING INDUSTRIES:

The Chittoor district has occupied prominent place in the state in setting up of fruit canning industries. The district has 40 small scale fruit canning units and 13 large and medium scale industries.

6.7.9 MATCH INDUSTRIES:

There are about 41 match industries existing in Chittoor providing direct employment to 828 persons and indirect employment to 4550 persons.

6.7.10 POWER LOOM INDUSTRIES:

There are about 2,300 power loom units established in and around Nagari area in Chittoor district. 30,000 power looms are working. 40,000 people are employed in this industry. To give boost to this industry 2.50 lakhs spindle capacity emerged for producing cotton yarn. 10 dyeing & bleach industries; 200 warping units are parellely existing. Government has sanctioned 5 crores infrastructure package and establishments separate industrial estate for the workers at Keelapattu near Nagari.

6.8 PROJECT DEVELOPMENT PROPOSAL

6.8.1 Demand Perspectives for Development of Industrial Parks

Based on the review and forecast of available data from respective industrial sectors, a preliminary demand assessment has been carried out for food processing, animal husbandry, minerals (granite) and textile sector. The following methodology has been adapted while assessing the space requirement by target industries.

- Review of current turnover/investment and export status for each target sector.
- Assessment future market prospects/trends for the sector (investment/exports) – based on industry projections (CAGR)
- Assessment of space requirement based on area/investment/turnover profiles of focused products in each sector.
- Assessment of space demand at identified site for industrial development n the sector.
- Estimation of investment projections and employment potential for the sector in the proposed industrial park.

The output targets for individual sectors are based on review and understanding of growth possibilities and targets for both domestic and export markets. The target share for each sector will vary depending upon the strength of the region and the global/Indian competition. There is need to allocate the space to diverse sectors and facilities in order to balance the swings in performances of individual sectors. There has to be a balance in proportion of space allocated for each sector and facility in the proposed industrial park, depending upon the country and area/location advantage critically of the sector and the overall space available to us for planning **i.e., 4263 acres.** There are

industry norms available in terms of investments, outputs and land areas required for the sector. The overall output for the sector will depend upon the total space allotted to it.

6.8.2 Project Concept

The concept for the industrial park has been developed keeping in view the envisaged development requirements and also specific requirements as assessed from the location study and demand study. Concept is also based on the vision for the proposed development.

- The industrial park planning approach is based on the concept of environmental spatial planning. This approach is based on the following fundamental principles of environmental planning:
- Using a site according to its natural (environmental) sustainability in such a way that the use is not adversely affecting environmental resources at site and in the vicinity; and
- Preserving of environmentally fragile or ecologically sensitive zones and other important features in the vicinity of a site.

6.8.3 Planning Principles

Planning principles comprising of all the components required for a fully functional Industrial Park are considered in the conceptualization of the industrial park. A sustainable development approach is considered, the basis for this being the project specific requirements arising of the industrial activities, location specific activities, legal and statutory requirements arising out of industrial policy/ rules.

Land use Allocation Strategies and Broad Land use Plan

Broad land use allocations will be given which includes the following:

- Space allocation for different categories of industries/business establishments
- Space allocation for social infrastructure
- Space allocation for public utilities and Amenities

6.9 PROPOSED CONCEPTUAL LAYOUT PLAN

6.9.1 Industrial Land for Venkatagiri Industrial Park

The proposed area for the Industrial Park is **4263 Acres**. The Conceptual Layout Plan is given in **Annexure-3** and the Area breakup of Plot area is given in **Table 6-2.**

Table 6-2 Area Break up Detail for the Proposed IP

Area Break Up	Area (Acres)	Area (SQM)	Percentage (%)
Industrial Area	2720	11007840	63.80%
Micro Units	55	222585	1.29%
Road Area	512	2072064	12.01%

Area Break Up	Area (Acres)	Area (SQM)	Percentage (%)
Greenery / Open space Area	426	1724022	9.99%
Common Facility Area	100	404700	2.35%
Commercial area	100	404700	2.35%
Residential area	350	1416450	8.21%
Total	**4263**	**17252361**	**100.00%**

6.9.2 Industrial Area

Total plotted area (tentative) for the proposed site 2720 acres. There are totally 1117 plots of sizes ranging from 1000 sqm to 10 acres tentatively proposed for the site. The industries are classified as Red, Orange and Green category. The individual plot area to be allotted for each industry is given in **Annexure-3** (Master Plan). The type of industries which could come in the proposed plots is given in **Table 6-2.** The allotments proposed for the proposed plots are based on the availability of raw materials in the district.

Table 6-3 Industry wise area break up Detail for the Proposed IP

S. No.	Type of Industry	Classification as per PCB	EIA Category A / B	No. Of Units Proposed (tentative)	Area, acres
1	Agro, Food and Allied Industries	Orange	-	60	600
2	Automobile body building	Green	-	10	50
3	Automobile components	Green	-	25	50
4	Automobile Servicing	Green	-	10	20
5	Chemical, plastic and Rubber based	Red	-	20	200
6	Coconut based products	Green / Orange	-	25	50
7	Cold Storage	Green	-	50	100
8	Commercial Purposes	Green	-	50	75
9	Dairy & Dairy Products	Orange / Red	-	75	450
10	Electrical	Green	-	50	50
11	Electronics Items	Green	-	100	50
12	General Engineering & Fabrication			10	30
13	Glass and Ceramics	Green	-	50	50
14	Leather and Foot Wear	Green	-	100	50
15	Mechanical and Metallurgical	Green	-	25	50

S. No.	Type of Industry	Classification as per PCB	EIA Category A / B	No. Of Units Proposed (tentative)	Area, acres
16	Paper Products	Green	-	80	20
17	Pollution Control Equipments	Green	-	5	15
18	Power generation	Red	-	2	100
19	Repairing of electrical motors	Green	-	40	20
20	Textile Based	Orange / Red	-	100	500
21	Wooden Products	Green	-	30	90
22	Micro Units & Misc. Services			200	100
	Total			**1117**	**2720**

6.9.3 Road Area

Internal roads will be provided by APIIC. Total area of **512** Acres (12.01%) is considered for providing internal roads..

6.9.4 Greenery / Open Area

Open area of which 10% will be provided by APIIC which can be used for Green belt development. The open area allotted is **426** Acres.

6.9.5 Common Facility Area

Total area allotted for common facilities is **100 Acres**. This includes an Administration Building proposed in the plot and common Facilities like Bank, ATM, canteen, post office, weigh bridge, truck parking area, fire station, water harvesting pits, security posts, fencing / compound wall, gate and Occupational Health Centre to facilitate the industries within the Estate.

It is proposed to provide truck parking area for 100 trucks in within an area of 20000 Sqm. Apart from this, raw water storage tank, waste processing area, electrical substation, play parks etc. are proposed. Also 3000 sqm is proposed to be allotted for small vendors

6.9.6 Commercial Area

Total area allotted for common facilities is **100** Acres.

6.9.7 Residential Area

Total area allotted for residential area to be developed by PPP mode is **350 Acres** which will accommodate 10,000 employees and also provide educational institutions, entertainment halls, recreational parks, shopping complexes etc.

6.10 ESTIMATED INVESTMENT OPPORTUNITIES – VENKATAGIRI IP

The total industrial investment in Venkatagiri Industrial Park when fully commissioned is estimated at **Rs. 7500 Crores.**

6.11 ESTIMATED EMPLOYMENT POTENTIAL – VENKATAGIRI IP

One of the prime objectives of the proposed industrial park development is to generate employment opportunities by which the socio-economic status of the region will be improved. The estimated **direct employment** in the Venkatagiri Industrial Park will be about **25000** persons. The likely **indirect employment** will be around 30,000 persons. ***Thus, the total employment potential due to the development of proposed Venkatagiri Industrial Park would be around 55,000 persons in the next 5-10 years which will have significant positive / beneficial impact on the socio-economic conditions of the region as well as the state.***

7. RESOURCE REQUIREMENT

7.1 WATER REQUIREMENT

7.1.1 Construction Phase

Water requirement during the construction phase will be around 400 KL per day for development of Infrastructure facilities. The water will be sourced from the bore wells as this is the only source till the area starts getting canal water from Somasila Project. Approximate people working will be around 400 nos.

Table 7-1 Water Requirement during construction phase

S. No.	Activities	Water Requirement (KLD)
1.	Labour	50
2.	Construction water	300
3.	Other purposes	50
	Total	**400**

7.1.2 Operational Phase

During the Operational Phase, the water requirement is approximately calculated as 10 KL/ acre. The total plotted industrial area calculated for water requirement is 3000 Acres (including commercial area and common facilities). Hence the water requirement is calculated as approximately 30,000 KLD, taking into consideration the water requirement for facility area. The water supply line from the raw water tank to the industries will be provided by APIIC or a third party. The water will be sourced from bore wells.

Table 7-2 Water Requirement during operational phase

S. No.	Type of Industry	No. of Industries	Area, Acres	Total Water Requirement @ 10 KL/ Acre (KLD)
1	Red category	110	800	8000
2	Orange category	160	1100	11000
3	Green category	848	900	9000
4	Commercial Plot		100	1000
5	Common Facilities		100	1000
Total		**1117**	**3000**	**30000**

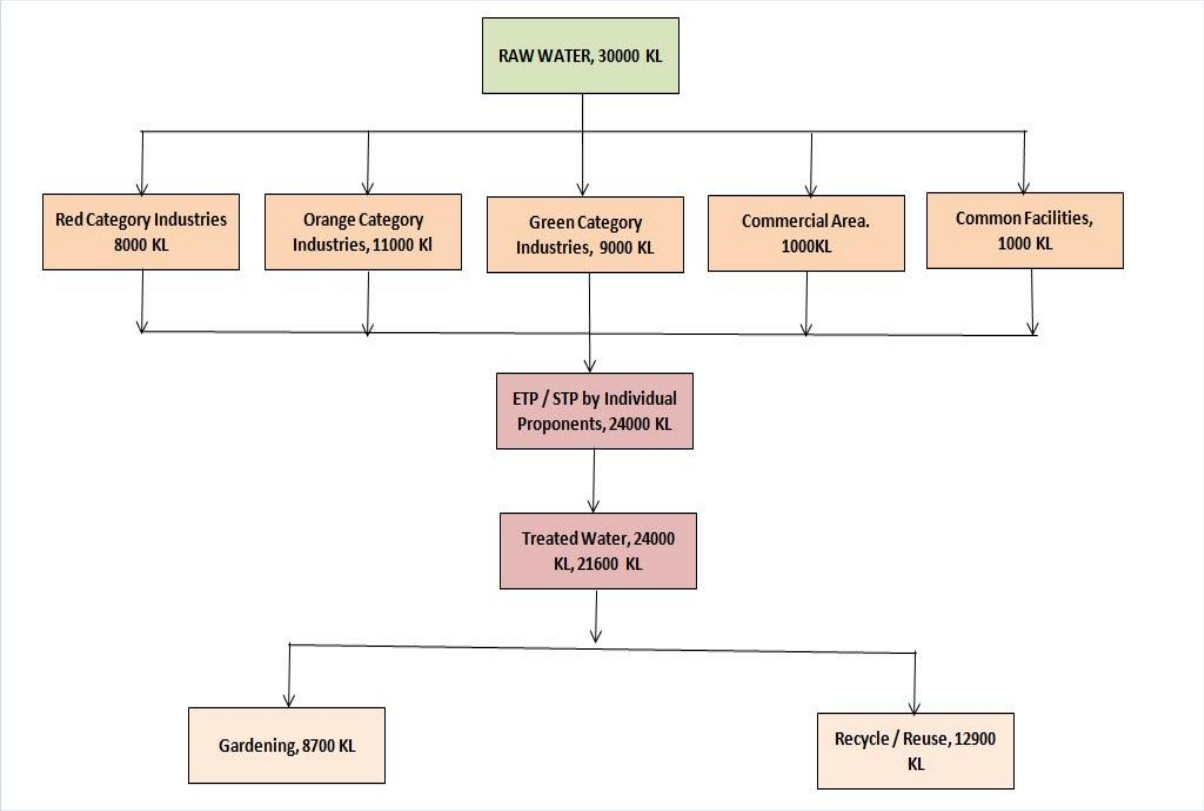

Fig. 7.1 Water Balance

7.2 POWER AND FUEL REQUIREMENT

The overall power requirement for the proposed project is approximately, 200 MVA and the source of power is APSPDCL.

Table 7-3 Power Requirement Breakup

S. No.	Type of Industry	No. of Industries	Power Requirement, kVA	Total Power Requirement, kVA
1	Engineering & Fabrication	232	50	11600
2	Food Processing	60	500	30000
3	Dairy Products	75	300	22500
4	Chemical units	95	300	28500
5	Textile units	100	250	25000
6	Others	555	70	38850
7	Common facilities & Commercial			4000
8	Street lighting			400
Total		**1117**		**160850**

7.3 STORM WATER DRAINAGE

It is proposed to provide storm water drain along the boundary of the site and road. Excess storm water will be led to the rain harvesting pits. .

7.4 MANPOWER REQUIREMENT

The proposed project required about 400 personnel during construction phase and 25000 personnel during operation phase.

7.5 MATERIALS REQUIREMENT

All construction materials will be procured locally from 50 km radial area.

7.6 PROJECT SCHEDULE WITH TIME LINE

The project schedule is given in **Fig. 7-2.**

Activity	Months																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Environmental Clearance																								
CFE																								
Roads																								
Storm Water Drains																								
Water Line																								
Sub-Station & Power Line																								
Admn. & Common Facilities																								
Allotment of Plots																								

Fig. 7-2 Project Implementation Schedule

8. ASSESSMENT OF FUNDING REQUIREMENTS

8.1 INVESTMENT REQUIREMENTS

The collective investment for the development of the Industrial Park has been arrived upon the estimation of investments required in the three major components of the infrastructure namely,

• Core Infrastructure

• Industrial Infrastructure

• Commercial / Township Infrastructure

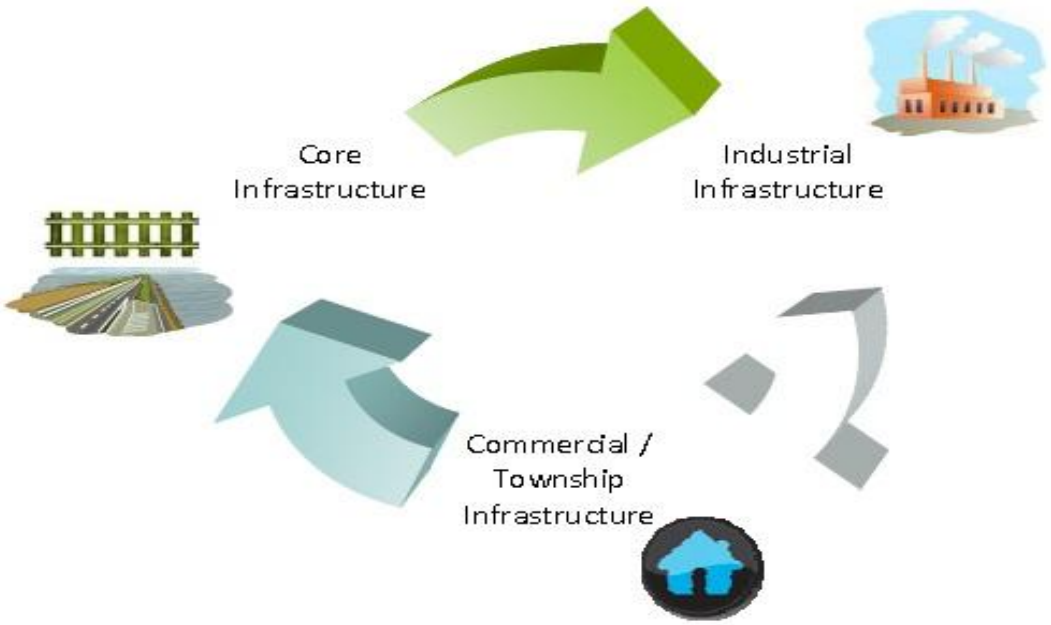

Fig. 8-1 Infrastructure Components

However, the present study concentrates on the development of core infrastructure as this component address the needs of the industry and the residents.

Infrastructure facilities proposed at Venkatagiri IP include the following:

- World class 8-lane expressway
- A multimodal public transport system
- Excellent and reliable power infrastructure, with adequate backup.
- Uninterrupted water supply and consistent water pressure.
- Fully integrated sewage collection, treatment and disposal facilities.
- A solid waste management system that aims to achieve “Zero Waste Disposal”
- Extensive use of renewable energy – particularly solar power and waste-to-energy plants;
- Fibre optic cabling network designed to support a wide range of telephone, video and data applications.

8.2 BASIS FOR ESTIMATION OF INFRASTRUCTURE COST

8.2.1 Quantity Estimates

The basis for the investment details proposed in this chapter is sketched below in the table:

Table 8-1 Quantity Assumptions for Core Infrastructure Cost

S. No.	Activity	Measurable
1	Land use conversion charges	4263 acres
2	Land compensation	4263 acres
3	Contour survey	4263 acres
4	Approach Road	5 km
5	Land development	3200 acres
6	Fencing around open spaces	20000 meters
7	Site office building	1000 sqm
8	Construction quarters	12500 sqm
9	Internal Roads	150 km, 14 M wide (average)
10	Demarcation and sign boards	
11	Water supply, treatment and distribution	27080 KLD
12	Storm water drains	150 km, 2 m wide
13	Power supply including substation	200 MVA
14	Internal Street Lights	3000 No.
15	Avenue Plantation / Greenery	600 acres
16	Construction of Bridges and culvert works for natural water courses.	
17	Water harvesting pits	50 acres
18	Sewage collection, treatment & disposal	
19	SWM system	
20	Telephone cabling and network	
21	Solar panels for common facilities & commercial areas	
22	Staff maintenance expenses	400 persons, 30 months
23	Miscellaneous and other unforeseen activities	

8.2.2 Cost / Rate Assumptions

The cost / rate assumptions are based upon prevailing trends in the industry. While every care has been exercised in the assessment of infrastructure costs by comparing with some thumb rules, it may be mentioned that some unforeseen costs may spring up based on the location and trends in the economy.

- One important aspect of the assessment is with regard to the cost of de-forestation which has been assumed as Rs 10.50 lakhs per acre as per media reports.
- Further, equivalent area displaced is to be provided and developed for afforestation which has been assumed to cost Rs. 5.00 lakhs per acre.

Table 8-2 Basis for Core Infrastructure Cost

S. No.	Activity	Basis of Cost
1	Land use conversion charges	Rs. 10.50 lakhs per acre; 10% extra statutory charges
2	Land compensation	Rs. 5 lakhs per acre; 10% extra statutory charges
3	Contour survey	Rs. 1000 per acre
4	Approach Road	Rs 300 Lakhs per km
5	Land development	Rs. 100000 per acre
6	Fencing around open spaces	Rs. 500 per meter
7	Site office building	Rs. 20000 per sqm
8	Construction quarters	Rs. 15000 per sqm
9	Internal Roads	Rs. 3000 per sqm
10	Demarcation and sign boards	Lump sum
11	Water supply, treatment and distribution	Rs. 3000 /KLD
12	Storm water drains	Rs. 10 lakh per km
13	Power supply including substation	Rs. 5 lakh per MVA
14	Internal Street Lights	Rs 5000 each
15	Avenue Plantation / Greenery	Rs 15000 per acre
16	Construction of Bridges and culvert works for natural water courses.	Lump Sum
17	Water harvesting pits	Rs 10 Lakhs Per acre
18	Sewage collection, treatment & disposal	Lump Sum
19	SWM system	Lump Sum
20	Telephone cabling and network	Lump Sum
21	Solar panels for common facilities & commercial areas	Lump Sum
22	Staff maintenance expenses	Rs. 20 lakh per month
23	Miscellaneous and other unforeseen activities	

8.2.3 Total Estimated Core Infrastructure Cost

The total estimated core infrastructure development cost for APIIC for the Industrial Park is as follows:

Table 8-3 Total Estimated Infrastructure Development Cost for the Industrial Park

S. No.	Activity	Measurable	Basis of Cost	Total Cost, Rs. Lakhs
1	Land use conversion charges	4263 acres	Rs. 10.50 lakhs per acre; 10% extra statutory charges	49238
2	Land compensation	4263 acres	Rs. 5 lakhs per acre; 10% extra statutory charges	23447
3	Contour survey	4263 acres	Rs. 1000 per acre	85
4	Approach Road	5 km	Rs 300 Lakhs per km	1500
5	Land development	3200 acres	Rs. 100000 per acre	3200
6	Fencing around open spaces	20000 meters	Rs. 500 per meter	200
7	Site office building	1000 sqm	Rs. 20000 per sqm	200
8	Construction quarters	12500 sqm	Rs. 15000 per sqm	1875
9	Internal Roads	150 km, 14 M wide (average)	Rs. 3000 per sqm	54000
10	Demarcation and sign boards		Lump sum	25
11	Water supply, treatment and distribution	27080 KLD	Rs. 3000 /KLD	812
12	Storm water drains	150 km, 2 m wide	Rs. 10 lakh per km	1500
13	Power supply including substation	200 MVA	Rs. 5 lakh per MVA	1000
14	Internal Street Lights	3000 No.	Rs 5000 each	150
15	Avenue Plantation / Greenery	600 acres	Rs 15000 per acre	90
16	Construction of Bridges and culvert works for natural water courses.		Lump Sum	150
17	Water harvesting pits	50 acres	Rs 10 Lakhs Per acre	500
18	Sewage collection, treatment & disposal		Lump Sum	500
19	SWM system		Lump Sum	200
20	Telephone cabling and		Lump Sum	100

S. No.	Activity	Measurable	Basis of Cost	Total Cost, Rs. Lakhs
	network			
21	Solar panels for common facilities & commercial areas		Lump Sum	500
22	Staff maintenance expenses	400 persons, 30 months	Rs. 20 lakh per month	500
23	Miscellaneous and other unforeseen activities			228
Total				**140000**

The total estimated cost of developing the core infrastructure for the Industrial Park is Rs. 140000 lakhs or **Rs. 1400 Cr.**

8.3 FUNDING OPTIONS FOR CORE INFRASTRUCTURE DEVELOPMENT

The funding option for the core infrastructure development is denoted in the following figure:

Infrastructure	Phase 1 (months)							Phase 2 (months)					
	2	4	6	8	10	12		2	4	6	8	10	12
Internal Roads	■	■	■					■	■				
NH-SH Widening & Core Infrastructure Components	■	■	■										
Bypasses		■	■	■									
Railway	■	■	■	■							■	■	■
Water supply & sewerage,			■	■	■	■						■	■
Telecom				■	■						■	■	
Power generation	■	■	■					■	■	■			
Power distribution				■	■	■					■	■	■
SWM & Effluent Treatment		■	■	■					■	■			
Logistics Parks				■	■	■		■	■				
	Rs 840 Cr. (60%)							*Rs. 560 Cr. (40%)*					

Fig. 8-2: Planned Phases of Industrial Park

8.4 FUNDING SOURCES FOR THE IP

The financing by the government stakeholders for the components of the industrial park development project could be undertaken through either the nodal agencies (budgetary/ extra-budgetary) or Government of India schemes applicable at the point of time, as long-term finances made available by multi-lateral agencies.

Implementing projects through a Public Private Partnership (PPP) arrangement is increasingly becoming a preferred mode for infrastructure development in the country. Last few years have witnessed a significant increase in projects being promoted under PPP modes. In order to suitably structure a project for equitable risk allocation, most State Governments and Central Government agencies invest in project preparatory (project development) activities. The project development funds (PDFs) (most of them revolving in nature) set up by the Central Government and State Government, meet these requirements.

These PDFs are usually funded by a combination of budgetary allocation, success fees from the project and loans/grants by multi-lateral/bi-lateral agencies. In addition, some developers/ financial institutions are also actively setting up their own funds and assisting various government agencies in project development and recoup their costs/ profits through success fees.

8.5 SOURCE OF REVENUE

APIIC can obtain revenues in the following ways:

- Lease payments from the prospective investors
- Maintenance charges of the park

8.6 APPROACH TO PROJECT IMPLEMENTATION

• PPP and Non-PPP projects are identified based on the scope of economic and financial viability of the project

• The funding for the Non-PPP projects would be basically provided by the government.

• The PPP projects would also have the government's contribution either as equity or quasi-equity or grant depending upon the risk appetite of government and the private developer.

Table 8-4: Project Implementation – PPP / Non PPP

S. No.	Activity	PPP, Rs. Cr.	Non PPP, Rs. Cr.	Total Cost, Rs. Cr.
1	Land use conversion charges	0	492	492
2	Land compensation	0	234	234
3	Contour survey	0	1	1
4	Approach Road	0	15	15
5	Land development	0	32	32
6	Fencing around open spaces	0	2	2
7	Site office building	0	2	2
8	Construction quarters	0	19	19
9	Internal Roads	90	450	540
10	Demarcation and sign boards	0	0	0

S. No.	Activity	PPP, Rs. Cr.	Non PPP, Rs. Cr.	Total Cost, Rs. Cr.
11	Water supply, treatment and distribution	8	0	8
12	Storm water drains	5	10	15
13	Power supply including substation	8	2	10
14	Internal Street Lights	2	0	2
15	Avenue Plantation / Greenery	0	1	1
16	Construction of Bridges and culvert works for natural water courses.	0	2	2
17	Water harvesting pits	3	2	5
18	Sewage collection, treatment & disposal	4	1	5
19	SWM system	2	0	2
20	Telephone cabling and network	0	1	1
21	Solar panels for common facilities & commercial areas	5	0	5
22	Staff maintenance expenses	0	5	5
23	Miscellaneous and other unforeseen activities	0	2	2
Total		**127**	**1273**	**1400**

The above table shows the investment in core infrastructure with the PPP and Non-PPP breakup. The projects are categorized as PPP or Non-PPP or the combination of both sector-wise. The funding for the non-PPP projects would be basically provided by the government. The PPP projects would also have the government's contribution either as equity or quasi-equity depending upon the risk appetite of government and the private developer.

Out of the total investment of Rs. 1400 Cr., about 90% would be Non-PPP funding i.e. governmental investment and 10% would be invested through PPP structure of funding. The cost of residential quarters for about 10,000 employees is proposed in the PPP mode whose cost has not been considered in the infrastructure cost estimate of Rs. 1400 Cr. The estimate for the residential area would be about 12 million sft estimated to incur a construction cost of Rs. 1800 to 2000 Cr. The developer can consider sale / rent of apartments to recover his costs under the PPP mode.

8.7. OPTIONS FOR DEVELOPMENT UNDER PPP FRAMEWORK

A range of possible PPP options are set out below:

8.7.1 Service Contract:

The government procures a specific service (discrete and clearly defined) from a private operator. Payment is usually on fee per task basis. Service contracts are subject to frequent competition and usually of short term duration. It is also common to give out separate contracts for different parts of the same city to more than one operator, thereby enabling comparative competition.

8.7.2 Management Contracts

Under this arrangement, the private sector assumes the responsibility for management of core functions such as operations and maintenance to specified standards but using the staff, equipment, vehicles and buildings of the government. In such a situation the private sector brings in its management expertise, however is unlikely to make major capital expenditure and the assets remains the ownership of the government.

8.7.3 BOT / Concession Contracts

The private operator is responsible for financing new investment over the life of the contract. The assets are nominally owned by the public entity; however, the private operator takes over responsibility of managing assets, creating new assets where required, raising finance for the new investments, providing the service, operations and maintenance, billing and collection of charges, if applicable.

8.8 SOCIAL COST BENEFIT ANALYSIS

Social Cost Benefit Analysis is an appraisal tool to evaluate a project from the view point of the society as a whole. It refers to the analysis of the costs and/or the benefits that a society may have to bear and/or get from the proposed project. It is a study of feasibility of a project in terms of its total economic cost and total economic benefits. In general, any project appraisal must distinguish between three components: Financial, Economic, and Social Appraisal.

a. **Financial Appraisal** examines the financial flows generated by the project itself, and the direct costs of the project measured at market prices.

b. **Economic Appraisal** adjusts costs and benefits to take account of costs and benefits to the economy at large, including the indirect effects of the project that are not captured by the price mechanism.

c. **Social Appraisal** examines the distributional consequences of project choices, both inter- temporal concerns (i.e. effects over a period of time, today versus the future); and also intra-temporal concerns (e.g. concerns between groups in society at a specific point in time).

8.8.1 UNIDO Approach

UNIDO Approach to public projects is a standard method adopted for Social Cost Benefit Analysis and is a five stage methodology:

1. Calculation of financial profitability measured at market prices.
2. Obtaining the net benefit of the project measured in terms of economic prices.
3. Adjustment for the impact of the project on savings and investment.
4. Adjustment for the impact of the project on income distribution.
5. Adjustment for the impact of the project on merit goods and demerit goods.

The principle of the exercise is to determine whether any project is worth pursuing even if it is financially unviable i.e., the Net Present Value of future financial gains from operation over the project's life time is negative. The exercise aims at finding the Economic Rate of Return (ERR) by considering shadow prices (i.e., opportunity costs) of indirect costs and benefits caused to the society as a consequence of the project.

8.8.2 Investments made:

Estimated investments made over a 5 year period are mentioned in **Table 8-5**

Table 8-5: Estimate of investments in the proposed industrial park

Year	Stakeholder	
	APIIC / Government, Rs. Cr.	**Prospective Entrepreneurs, Rs. Cr.**
1st	840	0
2nd	560	0
3rd	0	2250
4th	0	3000
5th	0	2250
Total	**1400**	**7500**

It is assumed that APIIC / Sate Government put(s) the infrastructure in place within a period of 2 (two) years, incurring 60% cost in the first year and remaining cost in the second year of project implementation. (The amount under PPP mode which is about 10% is neglected in this analysis).

The private / public entrepreneurs are expected to start setting up their units from the third year onwards. Accordingly, investments in the 3rd, 4th and 5th years are assumed to be 30%, 40% and 30% respectively of their total investment in the project i.e., Rs. 7500 Cr.

8.8.3 Social Costs:

- Loss of health to workers and the general public in the ecosystem
- Ground water pollution

- Air pollution caused by boilers, ash, fumes etc.
- Forest degradation

8.8.4 Social Benefits:

- Employment generation for about 15000 unskilled workers
- Employment generation for about 10000 skilled work force
- Revenue to government in the form of taxes and duties
- Generation of foreign exchange from exports

8.8.5 Assumptions made in the analysis:

- Plant & Machinery cost is considered as 65% of the total investment to arrive at the excise duty and tax components which is calculated at a modest average value of 8% considering exemptions etc.
- Asset Turnover Ratio is considered modestly as 0.5 (though engineering firms can have a very high ATR) to estimate the sales revenue.
- VAT / Sales Tax on sales is considered at an average value of 50% for the first five years (in view of the new industrial policy)
- Life time cycle is assumed to be 15 years, though, it could be more.
- Income to employees is assessed @3.5% on sales revenue
- Employee costs are assumed to increase @8% YOY basis
- Health costs @5% (ESI basis) of salaries multiplied by 5 (members of a family)
- Loss of wood sales to government calculated @1500 per ton on 5 tons per acre on 3 year basis
- Carbon sink assumed as 100 tons of CO2 per acre and carbon credit as Rs 30 per ton.
- For evaluating the taxes to government (MAT @20.96% on PBT), the PBT% Sales is assumed modestly @8%
- Revenues are expected to rise @2,5% YOY basis.
- Social Discount Rate is assumed @10%.
- MPS (maximum propensity to savings) to the government, entrepreneur and employees is assumed as 0.6, 0.5 and 0.3 respectively for calculating the net savings impact.
- Social value of savings is assumed as 1.5 times to estimate the shadow price of savings
- Impact of the project on income distribution is considering by applying a factor of 0.8 on the net income from operations over the life time i.e., 15 years.

Based on the above the social costs and benefits are tabulated below in **Table 8-6**:

Table 8-6: Social Costs & Benefits from the IP

Costs		Benefits	
Health	293.74	ED & CST on P & M	540.00
Water	637.33	Regn Charges	88.13
Air pollution	12.85	IT on Profits	664.83
Forest degradation	10.71	Savings to entrepreneurs	1292.72
		Savings to employees	528.74
Total	**954.63**		**3114.41**

The net benefit on Net Present Value (NPV) is **Rs. 2160 Cr**. which is higher than the infrastructure cost invested by APIIC / Government of **Rs. 1400 Cr**. Hence, the project is economically viable at a social discount rate of 10%. The Benefit to Cost Ratio is 3.26 while the Net benefit to Investment ratio is 1.54 which weighs heavily in favour of the project.

8.8.6 Sensitivity Analysis:

The net benefit is found to be feasible at a social discount rate of 10% for an asset turnover ratio of 0.4 (i.e., 20% lower than assumed standard value) which is an acceptable figure both from rate of inflation as well as deposit rate for any investment.

Costs		Benefits	
Health	234.99	ED & CST on P & M	540.00
Water	637.33	Regn Charges	88.13
Air pollution	12.85	IT on Profits	531.86
Forest degradation	10.71	Savings to entrepreneurs	1034.18
		Savings to employees	422.99
Total	**895.88**		**2617.15**

The net benefit on Net Present Value (NPV) is **Rs. 1721 Cr**. which is higher than the infrastructure cost invested by APIIC / Government of **Rs. 1400 Cr**. The Benefit to Cost Ratio is 2.92 while the Net benefit to Investment ratio is 1.23 which is in favour of the project.

9. ENVIRONMENTAL MANAGEMENT PLAN

9.1 INTRODUCTION

Environmental Management Plan (EMP) is aimed at mitigating the possible adverse impact of a project and ensuring the existing environmental quality. The EMP converse all aspects of planning, construction and operation of the project relevant to environment. It is essential to implement the EMP right from the planning stage continuing throughout the construction and operation stage. Therefore the main purpose of the Environmental Management Plan (EMP) is to identify the project specific activities that would have to be considered for the significant adverse impacts and the mitigation measure required.

9.2 CONSTRUCTION PHASE

The environmental impact during the construction phase will be of short term and reversible nature and will gradually eliminate after the construction activity is over. Further the area of the unit is small in size. Still the following measures will be considered on priority basis to minimize the impacts.

9.2.1 Modification of Drainage Pattern

- Rainwater harvesting prevents the flooding of low-lying areas in the project premises.
- A basic surface drainage system will be provided for the site to avoid water runoff on to the surrounding properties and roads, especially during the monsoon months.
- If during excavation, water accumulates in the excavated areas, then it will be pumped out and disposed off into recharge soak pits of dry bore wells.

9.2.2 Materials Transportation

APIIC will insist the individual industries to comply with the following conditions and individual industries will make the contractors responsible for maintaining the following

- All fine earth materials will be covered during transportation to the site to prevent spillage and dusting.
- The cleanup of spilled earth and construction material on the main roads will be the responsibility of the contractor and should be done in a timely manner (say within 4 hours) so as not to inconvenience or endanger other road users. These requirements will be included as clauses within contracts made with relevant sub-contractors.
- The transportation of lubricants and fuel to the site will only be done in the appropriate vehicles and containers, i.e. fuel tankers and sealed drums.
- As far as possible, transport of construction materials will be scheduled for off-peak traffic hours. This will reduce the risk of traffic congestion and of road accidents on the access roads to the site.

9.2.3 Materials Storage

- The stockpiling of construction materials will be properly managed and controlled. Fine grained materials (sand, marl, etc.) will be stockpiled away from surface drainage channels and features.
- Low beams will be placed around the piles and/or tarpaulin used to cover open piles of stored materials to prevent them from being washed away during rainfall.
- Safe storage areas will be identified and retaining structures constructed prior to the arrival of material.
- Hazardous chemicals (e.g. fuels) will be properly stored in appropriate containers and these should be safely locked away. Conspicuous warning signs (e.g. 'No Smoking') will also be posted around hazardous waste storage and handling facilities.

9.2.4 Air Environment

- Site clearance, excavation and earthmoving -The working area for the uprooting of shrubs or vegetation or for the removal of boulders or temporary or permanent structures shall be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet.
- Access road -Every main haul road shall be paved with concrete, bituminous materials, hardcore or metal plates, and kept clear of dusty materials; or sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet.
- Construction equipments

a. All machineries to be used for construction purpose will be of highest standard of reputed make and company will emphasize compliance of noise pollution control norms by these equipments.

b. Transport vehicles and construction equipments / machineries will be properly maintained to reduce air emissions.

c. Equipments will be periodically checked for pollutant emissions against stipulated norms.

d. Exhaust vent of DG set will be kept at proper height to ensure quick dispersal of gaseous emissions.

- Excavation and earth moving - The working area of any excavation or earth moving operation should be sprayed with water or a dusty suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet.
- Stock Piles

a. All loose material either stocked or transported will be provided with suitable covering such as tarpaulin, etc.

b. Water sprinkling will be done at the location where dust generation is anticipated.

c. Over Burden (OB) waste dumps will be sprayed with water as they are major sources of air borne particulate matter/dust.

d. OB waste dumps will be reclaimed / afforested to bind the loose soil and to prevent soil erosion.

9.2.5 Noise Environment

- Construction activities that will generate disturbing sounds should be restricted to normal working hours.
- Workers operating equipment that generates noise should be equipped with noise protection gear. Workers operating equipment generating noise levels greater than 80 dBA continuously for 8 hours or more should use earmuffs. Workers experiencing prolonged noise levels of 70 – 80 dBA should wear earplugs.
- The construction activities will be restricted to the daytime and no construction will be practiced during night.
- Barricades will be provided around the construction site to confine noise within the site.
- To reduce the impact of air and noise pollution and to provide a clean, healthy environment, it has been proposed to create and maintain a green belt within the site and along the roadsides.

9.2.6 Water Environment

- Excavation will be avoided during monsoon season
- Check dams will be provided to prevent construction runoff from the site to the surrounding water bodies.
- Pit latrines and community toilets with temporary soak pits and septic tanks will be constructed on the site during construction phase to prevent wastewater from entering the ground water or surrounding water bodies.
- To prevent surface and ground water contamination by oil/grease, leak proof containers shall be used for storage and transportation of oil/grease.

9.2.7 Biological Environment

- The dust emissions will be suppressed by spraying water and then the activities will be carried out.
- Emissions from D.G sets and vehicles will be minimized by proper maintenance and by avoiding use of adulterant fuels and will be maintained below the standard limits prescribed by competent authority.
- Important species of trees will be identified and marked and will be merged with landscape plan.

9.2.8 Construction Waste Disposal

- The contractor should prepare a site waste management plan prior to commencement of construction work. This should include the designation of appropriate waste storage areas, collection and removal schedule, identification of approved disposal site, and a system for supervision and monitoring. Preparation and implementation of the plan must be made the responsibility of the building contractor with the system being monitored independently.

- Special attention will be given to minimizing and reducing the quantities of solid waste produced during site preparation and construction. To reduce organic waste, softer vegetation may be composted onsite and used for soil amendment during landscaping.
- Most of the construction materials like soil, bricks, concrete will be reused in the backfilling, road construction, sub-grade reparation etc. works. Metals, word scraps & bitumen junks will be recycled either within site or outside with help of the local authority. The measures like reusing materials on-site and /or donating /selling salvaged items reduces waste, virgin material use and disposal cost.
- Vegetation and combustible waste will not be burnt on the site.
- Reusable inorganic waste (e.g. excavated sand) will be stockpiled away from drainage features and used for in filling where necessary.
- Unusable construction waste, such as damaged pipes, formwork and other construction material, will be disposed of at an approved dumpsite.

9.2.9 Land Environment

- The soil will be collected separately and preserved in stacks with side slopes not exceeding 1:5. The topsoil (soil on the top 15 cm patch) will be preserved separately in a stack covered by tarpaulin. Efforts will be made to reinstate the soil for backfilling purposes. Topsoil will be reused for horticultural areas.
- The spillage of oil from the machinery or cement residue from concrete mixer plants might contaminate the soil if not properly collected and disposed off. Thus most stringent safety and construction management norm will be implemented at site.

9.2.10 Health & Safety Measures

- Construction related activities will be confined only to project site area, hence no health related impact are envisaged within the project influenced area during the construction stage and will be limited to occupant levels.
- Proper drinking water, sanitation and first aid facility will be provided at the construction site, with trained shift supervisors, which will ensure minimum adverse occupational health impacts on the construction worker.
- A qualified and experienced safety officer shall be appointed. The responsibilities of the safety officer include identification of the hazardous conditions and unsafe acts of workers and advise on corrective actions, conduct safety audit, organize training programs and provide professional expert advice on various issues related to occupational safety and health. He is also responsible to ensure compliance of Safety Rules/ Statutory Provisions.

9.3 OPERATION PHASE

Since the proposed development is an Industrial Estate, only common facilities like Roads, Storm water drains, Rainwater harvesting pits, water supply line, Municipal Solid Waste processing area are proposed. Individual Industries upon establishment, will have their own treatment system for treating sewage/ effluent and apply for separate EC/ CFE as applicable.

9.3.1 Air Environment

- Proper stack height as per CPCB guidelines will be provided for DGs.

9.3.2 Water Environment

Water pollution from process can be divided into process and domestic wastewater. Individual industry upon establishment will have their own facility for treating the sewage and effluent.

9.3.3 Solid and Hazardous Wastes

- During construction phase, solid waste, scrap will be generated and will be suitably disposed off.
- Individual Industries will be insisted to dispose their hazardous waste generated to the common TSDF facility at Jawaharlal Nehru Pharma City, Parawada Village, Parawada Mandal, Visakhapatnam District which is located approximately at 30 Km from site.

9.3.4 Rainwater Harvesting System

Rainwater harvesting structures are proposed for the proposed project for utilization and to recharge the water resources in the region. Rain water harvesting structures are proposed to recharge the groundwater resources in the region. The run-off water from the roof of the structures and paved areas will be collected through storm water drainage system and led to rain water harvesting structures. The Storm water drainage plan and Rainwater Harvesting facility layout is given in Annexure-9. Apart from this individual industries, upon establishment will be insisted to have their own rainwater storage and harvesting facility.

9.4 GREEN BELT DEVELOPMENT

The individual industries will be insisted to provide 33% green belt area in the plots. Of which 10% is already provided by APIIC as open space. Lush greenery with extensively landscaped areas will be set. Linear planting will be carried out along the roads, mass planting will be proposed for landscaping areas. Buffer zone area will be planted with quick growing trees.

9.5 OCCUPATIONAL HEALTH AND SAFETY

The problem of occupational health, in the operation and maintenance phase is primarily due to noise, which could affect hearing. APIIC will insist the individual industries who will in turn insist the contractors on providing necessary personal protective equipments to all the workers. The working personnel shall be given the following appropriate personnel protective equipments.

- Industrial Safety Helmet;
- Safety Helmets;
- Face shield with replacement acrylic vision;
- Zero power plain goggles with cut type filters on both ends;

- Goggles;
- Welders equipment for eye and face protection;
- Cylindrical type earplug;
- Ear muffs;
- Electrically tested electrical resistance hand gloves; and
- Industrial safety shoes with steel toe.

9.6 RESETTLEMENT & REHABILITATION

Since the land in question is a reserve forest, there will not be any impact leading to resettlement etc. since there is no displacement of population involved. However, equivalent land will be developed elsewhere as a forest as required by law.

9.7 ZONING REGULATIONS

The proposed project site location is a reserve forest land which needs approval of the governments (State and Central) for de-forestation. Once it is approved, the zoning regulations as per DTCP norms would be applicable.

10. STATUTORY & LEGAL FRAMEWORK

This chapter gives brief outline of the Forest Conservation Act and the New Government Land Allotment Policy,2012 (GO Ms No.571, dated:b14/09/2012) and more specifically on the procedure to be followed for the APIIC proposals on Alienation of government lands. The compatibility of the proposed site with the provisions of the land allotment policy is also discussed in this chapter.

10.1 FOREST (CONSERVATION) ACT & RULES

As per section 6 of the Forest (Conservation) Rules, 2003,

(1) Every user agency, who wants to use any forest land for non-forest purposes shall make his proposal in the appropriate Form appended to these rules, i.e. Form 'A' for proposals seeking first time approval under the Act and Form 'B' for proposals seeking renewal of leases where approval of the Central Government under the Act had already been obtained earlier, to the concerned nodal officer authorized in this behalf by the State Government, alongwith requisite information and documents, complete in all respects, well in advance of taking up any non-forest activity on the forest land.

(2) Every State Government or other authority, after having received the proposal under sub-rule (1) and after being satisfied that the proposal requires prior approval under section 2 of the Act, shall send the proposal to the Central Government in the appropriate forms, within ninety days of the receipt of the proposal from the user agency for proposals seeking first time approval under the Act and within sixty days for proposals seeking renewal of leases where approval of the Central Government under the Act had already been obtained earlier:

Provided that all proposals involving clearing naturally grown trees in forest land or portion thereof for the purpose of using it for reforestation shall be sent in the form of Working Plan or Management Plan.

(3) The proposal referred to in sub-rule (2) above, involving forest land of more than forty hectare shall be sent by the State Government to the Secretary to the Government of India, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110 003, with a copy of the proposal (with complete enclosures) to the concerned Regional Office.

(4) The proposal referred to in sub-rule (2) above, involving forest land up to forty hectare shall be sent to the Chief Conservator of Forests or Conservator of Forests of the concerned Regional Office of the Ministry of Environment and Forests.

(5) The proposal referred to in sub-rule (2) above, involving clearing of naturally grown trees in forest land or portion thereof for the purpose of using it for reforestation shall be sent to the Chief Conservator of Forests or Conservator of Forests of the concerned Regional Office of the Ministry of Environment and Forests.

10.2 LAND ALLOCATION POLICY

10.2.1 Introduction

The Revenue (assignment 1) Department, Government of Andhra Pradesh issued Government Order **vide G.O Ms No. 571 dated 14.09.2012- "Government Land Allotment Policy" - uniform guidelines with regard to government land to be allotted for various purposes to different Government Departments and Private Organizations both in terms of Extent and Rate.**

10.2.2 Guidelines on land allotment

The guidelines for the allotment of land under the new land allotment policy are briefly given as below.

a) Scientific and Judicious Allotment of Land:

The Government land shall be allotted only for public purposes (such as strategic purposes. infrastructure and industry where benefits largely accrue to the general public, land acquired for R&R purposes, village or urban sites: planned development- residential purpose for the poor and educational and health schemes, land for private companies for public purpose, and needs arising from natural calamities.

b) Norms on extent:

(I) the norms are prescribed by the concerned administrative department of the government shall be scrupulously followed in recommending proposes for allotment or acquisition of land for each project. In case a particular project requires an extent more than a specified norm, the proponent of the project and the department concerned shall provide concrete justification for the same.

(II) Only waste and dry lands should be proposed for alienation and wet, irrigated lands should not normally be considered for such purpose. Further, environmentally sensitive and fragile areas such as tank beds, river beds, hillocks with afforestation etc., shall not be alienated or allotted.

(III) The government lands should not be auctioned for resource mobilization.

(IV) Lands assigned to poor people for agriculture purpose should not be resumed and in case of inevitable resumption, alternate land should be given to the said assignees apart from rehabilitation.

c) Rational Norms on Fixing Cost of Land:

The allotment / alienation shall be in market value as recommended by the RDO / District Collector (up to Rs. 1 Cr of total land value) and the A.P.L.M.A (above Rs. 1 Cr of Total land value).

d) Mechanism for Observation of Various Environmental and Zonal Regulations: Environmental and zonal regulations in regard to land use are to be taken into consideration before allotment of land for a specific purpose. NOC from urban local body or urban development authority and DT&CP for the areas falling outside ULBs and UDA areas may be insisted before taking a decision on the allotment of land by APLMA.

e) Share for the Government and Community in Commercial Projects:

Allotment of lands for commercial purposes shall be based not only on the market value prevailing at the time of allotment, but also on a specific plan of enterprise to provide sufficient employment, skill

up-gradation to the locals (project affected families qualified for the employment), etc.,

f) Earmarking a portion of Government Land Proposed for Allotment:

Wherever large extents of the lands, exceeding 100 acres in urban areas and 500 acres in the rural areas, are proposed to be allotted, it is mandated to set apart 10% of the government land that is proposed to be allotted to such major project, to meet the future needs of the government and public purposes as ancillary to the project and also housing facility to the EWS/LIG, except in the case of polluting industries.

g) Comprehensive Rehabilitation & Resettlement Scheme:

A comprehensive plan for R&R on the basis of the G.O Ms No. 68, Irrigation & CAD (Project Wing-LA-IV-R&R) Department dated: 08:04/2005 shall be followed while acquiring the lands.

h) Green Belt Area:

As per the stipulations of G.O. Ms. No.86, MA & UD Dept. Dt: 03.03.06, a minimum of 10% of site area shall be earmarked for organized open space over and above the mandatory open spaces and to be utilized as greenery or soft landscaping (one or more pockets) etc. Further, wherever applicable, the allottee shall also provide green buffer along the nalas, tanks and water bodies as specified in the building rules. The responsibility for developing and maintaining the greenbelt shall lie with the land allottee.

i) Ban on Alienation on certain Government Lands:

All the vacant Government lands situated within 2 km from the peripheral areas of Mandal Headquarters shall be got entered in the Prohibitive Order Book and alienation of such government lands banned, except in the case of house sites the land could be utilized with prior permission of concerned District collector.

10.3 LAND ALLOTMENT PROCEDURE AS PER POLICY

The government of Andhra Pradesh allots lands to industrial units in the industrial parks through the Andhra Pradesh Industrial Infrastructure Corporation Ltd (APIIC) and sometimes to industries directly. The new land allotment policy provides guidelines on various parameters on allotment of land to industries. The procedures to be followed by APIIC for land allotment are given below.

- APIIC shall prepare DPRs for industrial clusters in different parts of the state to meet the industrial land requirement for the next twenty years.
- Land requirement for industry shall be made on scientific basis.
- Govt. allots land to APIIC based on DPR which details the extent of land required, proposed investment, employment potential, infrastructure needs and the likely impact on environment.
- On the basis of the DPR, land alienation proposals are required to be submitted to the concerned District Collector.
- The concerned District Collector shall initiate land alienation proceedings as per the requisition made by APIIC.

- The Collector shall recommend the proposal to APLMA, which appraises the same and makes appropriate recommendations to the Government.
- Allotments to the individual industries within the industrial parks shall be done by APIIC only, following its internal process.

APIIC allots lands on lease basis only w.e.f. 29th April 2015 in tune with the New Industrial Policy 2015-20 of the state government (described subsequently)**.**

10.4 NEW INDUSTRIAL POLICY 2015-20

The proposal for the land allotment from government to APIIC for development of proposed industrial park at Venkatagiri, Yerpedu Mandal, Chittoor Dist, takes into consideration of the new government industrial policy 2015-20.

Salient features of the industrial policy are given below:

Under the new "Industrial Development Policy (IDP) 2015-2020", the Government approved the following fiscal benefits covering the categories of (a) Micro, Small & Medium Enterprises (b) Large Industries (c) Scheduled Caste & Scheduled Tribe Entrepreneurs (d) Backward Class Entrepreneurs (e) Women Entrepreneurs and (f) Mega Projects:-

1.0. Micro and Small Enterprises (MSE's)

Small Enterprise means a Unit having the investment on plant and machinery up to limit as defined by the Government of India from time to time.

Micro Enterprise means a Unit in which Investment on plant and machinery up to limit as defined by the Government of India from time to time.

Medium Enterprise means an industry in which Investment on plant and machinery up to limit as defined by the Government of India from time to time.

1.1. Reimbursement of 100% stamp duty and transfer duty paid by the industry on purchase of land meant for industrial use

1.2. Reimbursement of 100% stamp duty for lease of land/shed/buildings, mortgages and hypothecations

1.3. Stamp duty will be reimbursed only one time on the land. Stamp duty will not be reimbursed on subsequent transactions on the same land

1.4. GoAP is committed to supplying uninterrupted 24x7 quality power to all industries operating in the state.

1.5. Fixed power cost reimbursement @ 1.00 per unit for a period of five years from the date of commencement of commercial production.

1.6. Reimbursement of 100% net VAT/CST/SGST for a period of 5 years from the date of commencement of commercial production to Micro and Small Enterprises.

1.7. Reimbursement of 75% net VAT/CST/SGST for a period of 7 years from the date of commencement of commercial production or up to realization of 100% fixed capital investment, whichever is earlier to Medium Enterprises

1.8. MSME projects engaged in recycling waste into environment friendly products/energy (such as waste to energy, waste to bio-gas, waste to manure) will be brought under zero rated category schedule of the VAT Act.

1.9. 35% subsidy on cost of plant & machinery for specific cleaner production measures limited to -35lakhs for MSME, provided the measures are certified by Andhra Pradesh Pollution Control Board (APPCB).

1.10. 25% subsidy for sustainable green measures on total fixed capital investment of the project (excluding cost of land, land development, preliminary and pre-operative expenses and consultancy fees) for below mentioned green measures with a ceiling of 50 crore.

a) Waste water treatment: Constructing effluent treatment plant and sewage treatment plant and using recycled water for industrial purpose, especially zero discharge systems.

b) Green Buildings: Buildings which obtain green rating under the Indian Green Building Council (IGBC/LEED Certification) or Green Rating for Integrated Habitat Assessment (GRIHA) systems.

c) Use of renewable source of power (erecting captive sun, wind and biomass plants etc.).

d) Installing Continuous Emission Monitoring System (CEMS) for red category industries. The information should be disseminated continuously to APPCB.

e) Adopting rain water harvesting; restoring water bodies by de-stilting defunct water bodies.

f) Any other environment management project approved by Empowered Committee of Secretaries.

An exclusive MSME Policy will be brought out separately to address the needs of MSME sector

2.0. Large Industries

Large Industry means an industry in which the investment on plant and machinery is less than Rs 500 crores except Micro, Small and Medium Enterprises.

2.1**. Reimbursement of 100% stamp duty** and transfer duty paid by the industry on purchase of land meant for industrial use.

2.2. Reimbursement of 100% stamp duty for lease of land/shed/buildings, mortgages and hypothecations

2.3. Stamp duty will be reimbursed only one time on the land. Stamp duty will not be reimbursed on subsequent transactions on the same land

2.4. GoAP is committed to supplying uninterrupted 24x7 quality power to all industries operating in the state.

2.5. Fixed power cost reimbursement @ 1.00 per unit for a period of five years from the date of commencement of commercial production.

2.6. Reimbursement of 50 % net VAT/CST/SGST for a period of 7 years from the date of commencement of commercial production or up to realization of 100% fixed capital investment, whichever is earlier to Large Industries.

2.7. Large Industries engaged in recycling waste into environment friendly products/energy (such as waste to energy, waste to bio-gas, waste to manure) will be brought under zero rated category schedule of the VAT Act.

2.8. 10 % subsidy on cost of plant & machinery for specific cleaner production measures limited to -35lakhs for large industries, provided the measures are certified by Andhra Pradesh Pollution Control Board (APPCB).

2.9. 25% subsidy for sustainable green measures on total fixed capital investment of the project (excluding cost of land, land development, preliminary and pre-operative expenses and consultancy fees) for below mentioned green measures with a ceiling of 50 crore.

a) Waste water treatment: Constructing effluent treatment plant and sewage treatment plant and using recycled water for industrial purpose, especially zero discharge systems.

b) Green Buildings: Buildings which obtain green rating under the Indian Green Building Council (IGBC/LEED Certification) or Green Rating for Integrated Habitat Assessment (GRIHA) systems.

c) Use of renewable source of power (erecting captive sun, wind and biomass plants etc.).

d) Installing Continuous Emission Monitoring System (CEMS) for red

category industries. The information should be disseminated continuously to APPCB.

e) Adopting rain water harvesting; restoring water bodies by de-silting defunct water bodies.

3.0. Scheduled Castes / Scheduled Tribe Entrepreneurs

SC/ST Entrepreneurs mean those units established as sole Proprietor or invariably having 100% share in Partnership/Private Limited Companies. Scheduled Caste and Scheduled Tribe entrepreneurs can also set up industries covered in the separate list as specified in the Guidelines.

3.1. 100% reimbursement of Stamp duty and transfer duty paid by the industry on purchase of land meant for industrial use.

3.2. 100% reimbursement of Stamp duty for Lease of Land/Shed/Buildings and also mortgages and hypothecations.

3.3. 50% rebate in land cost limited to 20 lakhs in Industrial Estates/Industrial Parks

3.4. 25% Land conversion charges for the industrial use limited to 10 lakhs.

3.5. Fixed power cost reimbursement @ 1.50 per unit for 5 years from the date of commencement of commercial production.

3.6. Seed capital assistance to First Generation Entrepreneurs @25% of the Machinery cost, which will be deducted from the eligible investment subsidy.

3.7. 35% investment subsidy on fixed capital Investment by SC & ST Entrepreneurs and additional 10% investment subsidy for SC Women & ST Women Entrepreneurs, with a maximum limit per unit is 75 lakhs (i.e. 35% for SC & ST Entrepreneurs and 45% for SC Women and ST Women

entrepreneurs). Additional 5% investment subsidy for units set up in Scheduled Areas by ST entrepreneurs with a maximum limit per unit is 75 lakhs.

3.8. Reimbursement of 100% net VAT/CST/SGST to Micro and Small Enterprises for a period of 5 years from the date of commencement of commercial production.

3.9. Reimbursement of 75% net VAT/CST/SGST to medium enterprises for a period of 7 years from the date of commencement of commercial production or up to realization of 100% fixed capital investment, whichever is earlier.

3.10. Reimbursement of 50% VAT/CST/SGST to large enterprises for a period of 7

years from the date of commencement of commercial production or up to realization of 100% fixed capital investment, whichever is earlier.

3.11. Interest subsidy on the term loan taken on the fixed capital investment in

excess of 3% per annum subject to a maximum reimbursement of 9% per annum for a period of 5 years from the date of commencement of commercial production. This benefit is also applicable to the Service Sector units set-up under this policy.

3.12. 50% Reimbursement of cost involved in skill upgradation and training local manpower limited to 5,000 per person.

3.13. 100% subsidy on the expenses incurred for quality certification/ patent registration limited to 3 lakhs for micro and small enterprises.

3.14. Incentives under Swachh Andhra will be applicable for SC/ST entrepreneurs.

3.15. For enterprises set up by SC/ST entrepreneurs, infrastructure like roads, power and water will be provided at doorstep of the industry for standalone units by contributing 50% of the cost of infrastructure from IIDF with a ceiling of 1 crore, subject to:

a. The location should be beyond 10 Kms from the existing Industrial Estates/IDAs having vacant land/shed for allotment.

b. Cost of the infrastructure limited to 15% of the eligible fixed capital investment made in the industry. 50% of the cost of infrastructure is raised to 75% in respect of units set up by ST entrepreneurs in Scheduled areas.

Note: 50% of the budget will be allocated to manufacturing activities and 50% for service sector activities. However, in service sector high end vehicles (except taxies, lorries, tippers, water tanker etc. meant for self-employment) will not be allowed under the scheme.

4.0. Special Package for BC entrepreneurs

The provisions in the package are applicable to those units established as sole Proprietor or invariably having 100% share in Partnership/Private Limited Companies.

4.1. 100% reimbursement of Stamp duty and transfer duty paid by the industry on purchase of land meant for industrial use.

4.2. 100% reimbursement of Stamp duty for Lease of Land/Shed/ Buildings and also mortgages and hypothecations.

4.3. 50% rebate in land cost limited to 20 lakhs in Industrial Estates/Industrial Parks.

4.4. 25% Land conversion charges for the industrial use limited to 10 lakhs.

4.5. Fixed power cost reimbursement @ 1.50 per unit for 5 years from the date of commencement of commercial production.

4.6. Seed capital assistance to First Generation Entrepreneurs @25% of the Machinery cost, which will be deducted from the eligible investment subsidy.

4.7. 35% investment subsidy on fixed capital Investment by BC Entrepreneurs and additional 10% investment subsidy for BC Women Entrepreneurs, with a maximum limit per unit is 75 lakhs (i.e. 35% for BC Entrepreneurs and 45% for BC Women entrepreneurs).

4.8. Reimbursement of 100% net VAT/CST/SGST to Micro and Small Enterprises for a period of 5 years from the date of commencement of commercial production.

4.9. Reimbursement of 75% net VAT/CST/SGST to medium enterprises for a period of 7 years from the date of commencement of commercial production or up to realization of 100% fixed capital investment, whichever is earlier.

4.10. Reimbursement of 50% VAT/CST/SGST to large enterprises for a period of 7 years from the date of commencement of commercial production or up to realization of 100% fixed capital investment, whichever is earlier

4.11. Interest subsidy on the term loan taken on the fixed capital investment in excess of 3% per annum subject to a maximum reimbursement of 9% per annum for a period of 5 years from the date of commencement of commercial production.

4.12. 50% Reimbursement of cost involved in skill upgradation and training local manpower limited to 5,000 per person.

4.13. 50% subsidy on the expenses incurred for quality certification/patent registration limited to 3 lakhs for micro and small enterprises.

4.14. Incentives under Swachh Andhra will be applicable for BC entrepreneurs.

4.15. For enterprises set up by BC entrepreneurs, infrastructure like roads, power and water will be provided at doorstep of the industry for standalone units by contributing 50% of the cost of infrastructure from IIDF with a ceiling of 1 crore, subject to:

i. The location should be beyond 10 Kms from the existing Industrial Estates/IDAs having vacant land/shed for allotment.

ii. Cost of the infrastructure limited to 15% of the eligible fixed capital investment made in the industry.

5.0. Women Entrepreneurs

Women entrepreneurs mean those units established as sole Proprietress or invariably having 100% share in Partnership/Private Limited.

5.1 25% investment subsidy on fixed capital investment by women entrepreneurs, with a maximum limit per unit of 30 lakhs.

5.2 Seed capital assistance to First Generation Entrepreneurs @15% of the Machinery cost, which will be deducted from the eligible investment subsidy.

5.3 All other incentives as per Industrial Development Policy 2015-20.

6.0. Mega Projects

Projects with an investment of at least 500 crore or direct employment generation of 2,000 will be accorded mega industry status. Further, for sectors such as textiles, food processing, biotech etc. definition of mega project may be different. The Government will extend tailor-made benefits to mega projects to suit particular investment requirements on case to case basis based on the gestation period, pioneering nature, locational aspects, technology, project's importance to the state's industrial growth and its ability to generate large scale employment for people or revenues for the state.

7.0. Land

The state of Andhra Pradesh has an identified land bank of 3 lakh acres and is further in the process of consolidating an additional industrial land bank of approximately 7 lakh acres. The consolidated land bank of 10 lakh acres would give the state a strategic edge in attracting investments. To achieve the same, government shall identify and acquire land through a transparent and farmer friendly land pooling/acquisition policy. This land will be administered within the following framework:

7.1. Inventory of public/pooled/acquired lands: All such lands shall be surveyed and the information made available in the public domain. It is envisaged that GIS will be used to create land inventory and update information of land parcels on real time basis

7.2. Land Information System: Key details and parameters about land parcels (e.g. soil type, distance from sea-ports, airports, railway stations etc.) will be made available online.

7.3. Land Pooling/Acquisition and Allotment

a. Land consolidation

Consolidation of Industrial Land will be done by the Industries & Commerce Department following the state's land pooling/acquisition policy.

b. Land allotment

Land shall be allotted on 99 years lease. SIPB may consider outright sale of land in the following cases:

i. the investment is exceeding Rs.100 Crores;

ii. the gestation period of the project is more than 5 years;

iii. the industry is located in backward areas to be notified by the Government, for this purpose;

iv. departments, PSUs and agencies of the Central Government;

v. financial closure of the project requires a sale;

vi. projects identified by the Government as critical and prestigious;

vii. other categories to be notified by the Government from time to time.

8.0. Ease of Doing Business

GoAP accords highest priority to improve 'Ease of Doing Business'. Timely clearances and responsive post investment facilitation services have been identified as the cornerstone for improving business environment and boosting investor confidence. To that end, the State shall provide both pre and post investment services to facilitate rapid industrialization.

GoAP will create an e-platform, for facilitating all necessary clearances for starting and operating an industry within 21 working days. This platform shall integrate

requisite pre-establishment and pre-operation stage clearances provided by multiple agencies/departments with provision for online filing and tracking.

9.0. State Investment Promotion Board (SIPB)

For creating an enabling structure to expedite decision making pertaining to industrial projects, SIPB has been constituted with the Chief Minister as the Chairman and the Chief Secretary to the Government as Member Convener. The SIPB shall meet once a month for taking final decision on investments/promotion activities and for approval of mega projects.

10.0. Empowered Committee of Secretaries

An Empowered Committee of Secretaries chaired by the Chief Secretary to the Government and convened by Secretary, Industries shall meet every month to monitor and review the following:

i. Performance of single desk system

ii. Policy issues relating to investment facilitation and project grounding

iii. Implementation of all large/mega ongoing projects

iv. Screening of all mega project proposals

v. Scrutiny of all issues/proposals which may merit consideration of the SIPB

vi. Any other issue governing industrial environment proposed by Commissioner Industries.

11. KEY ISSUES

11.1 Land acquisition

The acquisition of the land is the primary issue for any infrastructure development projects in the country. The land acquisition issue is also intertwined with the ownership of the land, usage of the land and also the terrain. Hence the land acquisition would be the complex exercise for such infrastructure development projects. These factors need to be taken into consideration during land acquisition for the development purpose.

11.2. Availability of Water

The major source of water supply for the region of **Venkatagiri i**s Ground Water, which is available at 80 to 120 meters depth. There is a proposed SS Canal – Somasila to Swarnamukhi river passing along the border of the proposed site of Venkatagiri and recently the work also commenced in this direction. When the Handri - Neeva Project is completed, the area will have sufficient waters.

11.3. Funding sources

The total investment for the development of infrastructure facilities in Venkatagiri is estimated to be approximately Rs 1400 Cr. Out of this, the funding for non-PPP would be around 90% of the total investment requirement which is about Rs. 1273 Cr. which would be majorly funded by the Government of Andhra Pradesh / Government of India. Hence the sources of such governmental fund needs to be clearly identified which could be budgetary allocation.

11.4. Environmental Issues

The area being considered i.e., Venkatagiri is a reserve forest area away from the sanctuary. The power to de-notify the area for industrial / commercial rests with the Government of India. The entire area of **Venkatagiri** including hilly area lie away from the SVWL the sanctuary and very far away from human habitat. It may not pose any environmental problems. Already a company has been set-up viz., M/s NTPC BHEL Power Project Pvt. Ltd.(NBPPL) in about 900 acres adjacent to the proposed site of Venkatagiri. This land is considered suitable for industries as it is free from any river streams nor major habitation.

ANNEXURE 1


Venkatagiri
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Venkatagiri Extn
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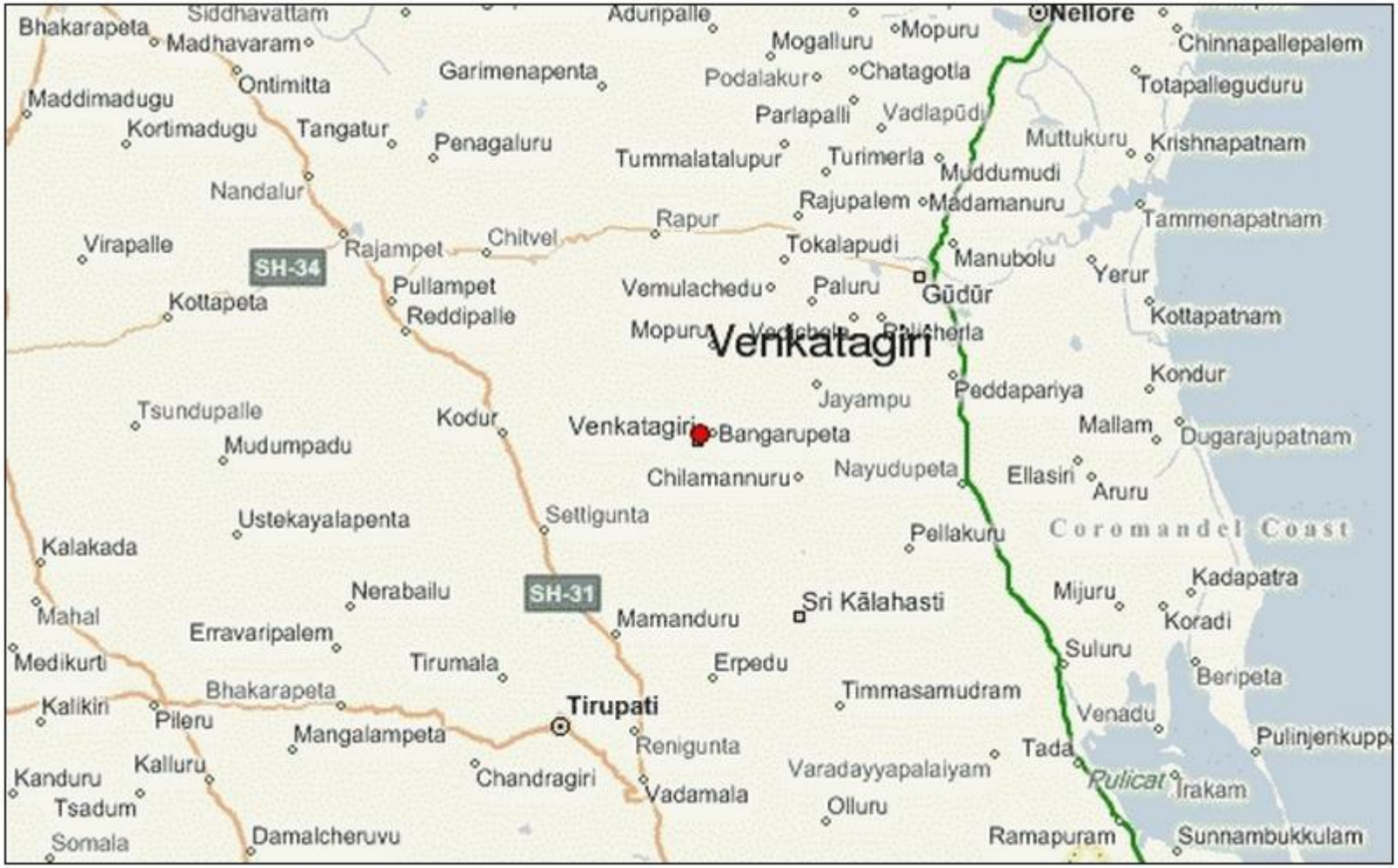
ANNEXURE 2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Madhavaram
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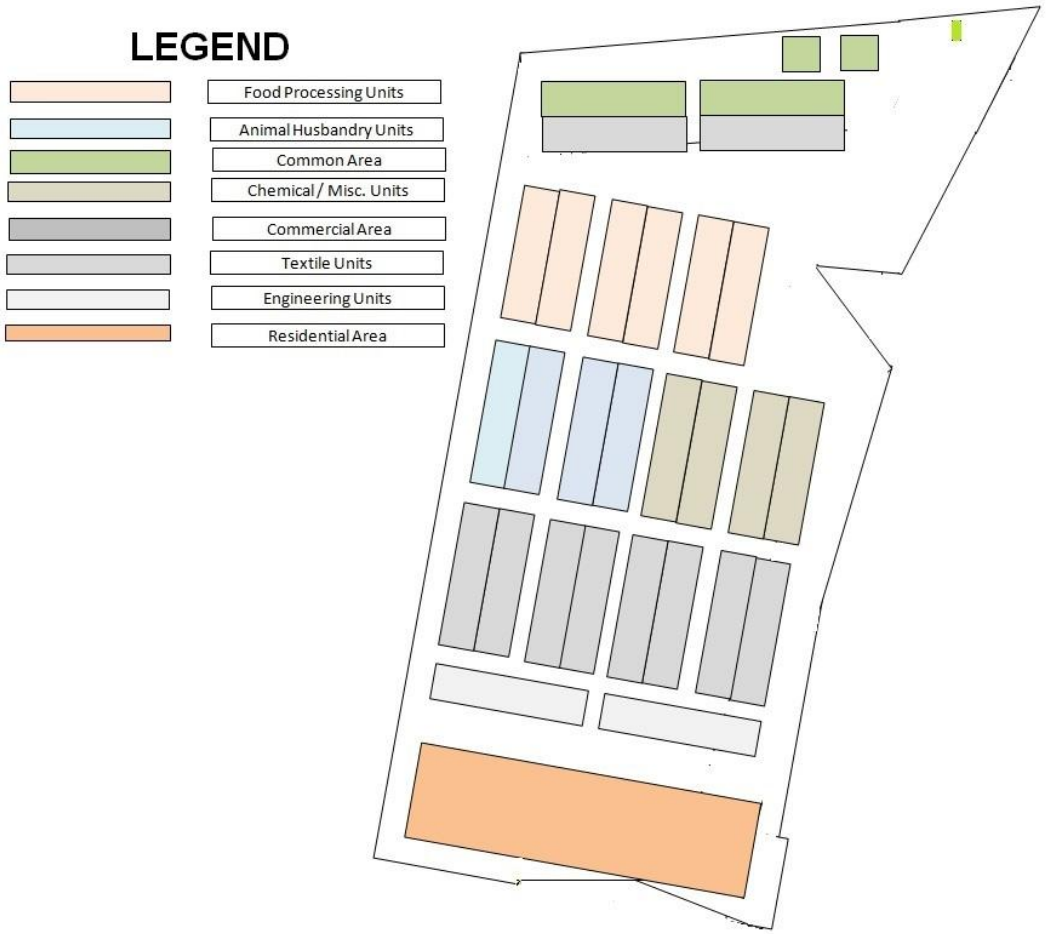
Garimenapenta
Podalakur
Chatagotla
Totapalleguduru
Ontimitta
Maddimadugu
Parlapalli
Vadlapūdi
Kortimadugu
Tangatur
Penagaluru
Tummalatalupur
Turimerla
Muttukuru
Krishnapatnam
Muddumudi
Nandalur
Rajupalem
Madamanuru
Tammenapatnam
Rapur
Virapalle
Chitvel
Rajampet
SH-34
Tokalapudi
Manubolu
Yerur
Pullampet
Vemulachedu
Paluru
Gūdūr
Kottapeta
Reddipalle
Kottapatnam
Mopuru
Venkatagiri
Kondur
Jayampu
Peddapariya
Tsundupalle
Kodur
Venkatagiri
Bangarupeta
Mallam
Dugarajupatnam
Mudumpadu
Chilamannuru
Nayudupeta
Ellasiri
Aruru
Ustekayalapenta
Settigunta
Pellakuru
Coromandel Coast
Kalakada
Kadapatra
Nerabailu
SH-31
Mijuru
Sri Kālahasti
Mahal
Mamanduru
Koradi
Erravaripalem
Suluru
Medikurti
Tirumala
Erpedu
Beripeta
Bhakarapeta
Timmasamudram
Kalikiri
Tirupati
Venadu
Pileru
Mangalampeta
Renigunta
Tada
Pulinjerikupp
Kalluru
Varadayyapalaiyam
Pulicat
Irakam
Kanduru
Chandragiri
Vadamala
Tsadum
Olluru
Somala
Damalcheruvu
Ramapuram
Sunnambukkulam

ANNEXURE 3



CONCEPTUAL LAYOUT PLAN