



**EXECUTIVE SUMMARY**  
**RAPID ENVIRONMENTAL IMPACT ASSESSMENT**  
**ENVIRONMENTAL MANAGEMENT PLAN**

**SIPCOT INDUSTRIAL PARK**  
**ThervoyKandigai**  
GUMMIDIPOONDI.Taluk  
Thiruvallur District-601 202.

**PROJECT PROPONENT**

State Industries Promotion Corporation of Tamilnadu Limited (SIPCOT)  
Chennai-600 008

**EIA CONSULTANTS**

Centre for Environment, Health & Safety, Annamalai University  
ITCOT Consultancy and Services Limited, Chennai

## **EXECUTIVE SUMMARY**

### **1.1 GENERAL**

The proposed **SIPCOT Industrial Park** at Thervoykandigai, as per the Guidance Document of MoEF, can be classified as **Rural, Composite, Dispersal** and **Governmental**. It is proposed as “**Industrial area**”, as a classified parcel of improved land, developed and subdivided into plots for the accommodation of industrial establishments and offered for long time lease (99 years). The proposed SIPCOT industrial park will have ***unified and continuous management of land and utilities*** like water supply, electricity etc., and common infrastructures like internal roads etc.,

The **IE** will have regulated industrial development in the identified location and that the environmental conditions will be preserved.

The social and health status of human environment will further be enhanced. SIPCOT, the IE promoter is committed for the sustainable development of the project location, with requisite budget allocation of funds.

### **1.2 SIPCOT INDUSTRIAL PARK -PROJECT LOCATION**

The location of the proposed IE is at Thervoykandigai, Gummidipoondi Taluk, Thiruvallur District.

The candidate site for the proposed IE development is presently ***vacant, unoccupied, “Poramboke”*** and fully owned by Government of TamilNadu. The extent of land identified for the IE is **1127 acres (456.27 Hectares)**. The

entire land is mentioned as “**Grazing lands**” in the revenue records of the Government.

No procurement or acquisition of land is required.

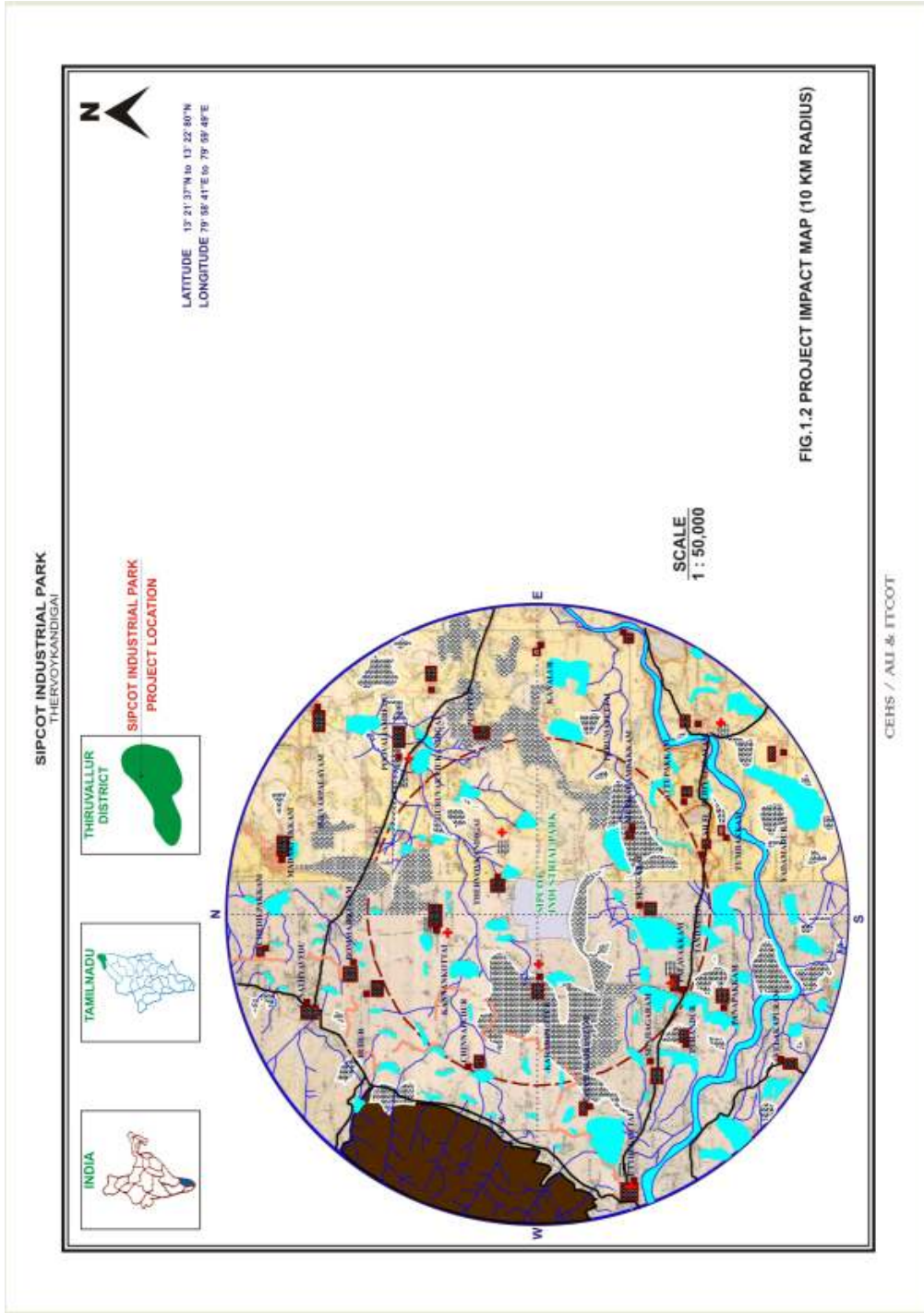
As it has no habitats or hamlets, there is no requirement of resettlement or rehabilitation plans.

The key plan showing the identified candidate site is presented in **Fig.1.1**.

The project impact map, showing the site and its environ of 10Km radius for its physical features is presented in **Fig.1.2**.

The project location is geologically placed at Latitude **13° 21’ 31’’N** to **13° 22’ 80’’N** and Longitude **79° 58’ 41’’ E** to **79°59’49’’E**. The mean sea level is **+50m**.





The patches reserve forests on the south, west and eastern sides of the project site are dry and have **no sensitive reserve or biodiversity**. A clearance approval, in terms of No Objection for the proposed IE, has been taken from the Department of Forests, Government of Tamilnadu.

This location, just away by **51 Km** from Chennai, is having all credentials of “**Chennai Advantage**” and helps to regulate the industrial growth of Chennai.

### **1.3 SITING ADVANTAGES**

No specific biological diversity like *National parks, wild life sanctuaries, Tiger reserve, Habituate for migratory birds, Mangrove, Wet lands, Botanical/ Zoological gardens, Protected area under the Wild life (Protection) Act, 1972*, etc., are found in the project impact area, Thervoykandigai and its environ of **10Km** radius.

Anyhow, it must be noted that there are several patches of reserve forests available in impact area. SIPCOT is committed to preserve its boundaries and prevent any such activity that could harm the biological of the reserved forest areas.

No Sensitive land use like ground water, religious place, CRZ, monuments, Heritage sites etc., are in the project impact area.

There are many advantageous Socio-Economic factors, why among the various other candidate sites, the proposed Thervoykandigai Site has been Chosen; They are:

- Land availability, (Porambokke/Wastelands)

- No habitation (Nor even hamlets)
- No Land procurement (Fully under the control of Government of TamilNadu)
- Electricity
- Nearness to Chennai (51 Km)
- Water availability
- Existing SIPCOT (Gummidipoondi – 10 Km)
- Nearness to Roads (SH, NH<sub>5</sub>, SH<sub>51</sub>, SH<sub>52</sub>, MDR, ODR and a village Road)

The site matrix of the site suitability of the proposed Thervoykandigai location is presented in **Table 1.1**

**TABLE 1.1.**  
**SITE MATRIX FOR PROJECT SUITABILITY**  
**THERVOY KANDIGAI, GUMMIDIPOONDI TALUK**

<b>ENVIRONMENTAL PARAMETERS</b>		
Distance to sensitive zones	Weightage	Nil
	Justification	Not applicable
Suitability to air Polluting Industries	Weightage	Nil – No Significant Air Pollution
	Justification	Synthetic Rubber, Glass and Engineering industries only. None of them are air polluting in classification
Suitability to water Polluting Industries	Weightage	Nil-Water Requirement is only <b>4.5 MLD (5KL/acres )</b>
	Justification	None of the proposed industry require more water and characterized as water polluting industries
<b>PHYSICAL INFRASTRUCTURE PARAMETERS</b>		
Availability of water and nearness to water supply source	Weightage	Chennai Metro water
	Justification	Since the water requirement is less at 4.5 MLD only, it is decided to source from the tank through metro water (Government of TamilNadu)
Availability of effluent disposal places	Weightage	Not Applicable

	Justification	All member Enterprises will be mandated to put up <b>Zero Liquid Discharge</b> based <b>Effluent Treatment Plants</b> and will Completely recycle or reuse the treated effluent in the process, utilities and Green Belt Development.
Nearness to Road	Weightage	Palavakkam – KKK Road (ODR) 2.0 Km from west side, K.S. Road – Thervoy (Village Road) 6.4Km from North side, National Highway NH5 – 21.0 Km from East side, Kosastalaiyar Bridge –Puthur Road – 5.0km from South Side.
	Justification	A Straight approach to enter the IE site is available through K.S.Road – Thervoykandigai(Village Road). It is proposed that it will be suitably widened.  To have another approach on the southern side, a new road will be formed from SH <sub>51</sub> available at 8Km from the IE location.
Nearness to Railway Line	Weightage	Gummidipondi
	Justification	Any heavy load of raw materials requirement for Enterprises can be transported through rails
Availability of Land and Land Costs	Weightage	Poramobokke land -1127 acres classified as Grazing land
	Justification	The entire 1127 acres is unhabitated and barren
<b>SOCIO-ECONOMIC PARAMETERS</b>		

Skilled Manpower Availability	Weightage	Nil
	Justification	The available man power can be trained to suit the required level of the proposed IE industries.
Nearness to Major Settlement	Weightage	Gummidipondi – 11 Km
	Justification	Quite away
Contribution to balanced industrial development	Weightage	Chennai Metro – 51 KM Manali industrial cluster 20 Km SIPCOT, Gummidipoondi 12 Km
	Justification	Will enable to spread the industrial development in the balanced way
Social acceptance to the proposed estate development	Weightage	Encouraging
	Justification	Employment and infrastructural facilities like roads water supply etc.,

#### **1.4 ENVIRONMENTAL BASELINE MONITORING**

A well devised detailed Environmental Survey was conducted in the project environ of **10 Km radius** around the candidate site of SIPCOT IE-Thervoykandigai, during **January-February- March, 2010**.

The quality, characteristics and vulnerability of all environmental attributes viz., micrometeorology, air, water, soil, Noise, biological and Human were observed, evaluated and interpreted. The existing status of the **Value Environmental Components (VECs)** of the project site is tabulated in **Table 1.2**.

#### **1.5 IE- MEMBER ENTERPRISES**

The IE is proposed for promoting industries that fall under only three categories, namely,

- Synthetic rubber
- Glass
- Engineering Fabrication/manufacturing

The extent of **1127 acres** shall be divided into industrial plots, according to assessed need of the applicant industries. There are four industries that have been allotted **plots-in principle** by SIPCOT. The conceptual of the project layout of IE –SIPCOT is presented in **Fig. 1.3**.

The list of industrial enterprises and their project activity are listed in **Table 1.3**.

It must be noted that these listed industries are giant in their field of activities and the proposed industries are their expansion of industrial operations.

The industries have been asked to submit their complete profile of production, resources, energy and manpower. These industries are expected to incorporate the latest technologies of cleaner production that conserves resources optimally, ensures quality products and environment friendly.

The industries will also be mandated to attach priority in availing the local resources, materials and men, for their activities and should support the programs of SIPCOT for sustainable development of IE, and the IE location as whole.

**TABLE 1.2 BASELINE STATUS OF VECS**

<b>S.No.</b>	<b>Value Environmental Componants</b>	<b>Results of Objective Tests</b>	<b>Professional Judgment</b>
1	Micro Meteorology	Wind Direction : NW and SE (Predominant) Speed : Rainfall : Nil Temperature : <b>21.8°C-36.2°C</b> Humidity : <b>61-89%</b> Inversion : Nil	Calm, quite and have no disturbance by Nature
2	Air	Ambient Air Quality (24 hrs –98%) SPM : <b>32.39-38.34</b> µg/m <sup>3</sup> SO <sub>2</sub> : <b>4.26-8.23</b> µg/m <sup>3</sup> NOx: <b>8.48-9.99</b> µg/m <sup>3</sup> NH <sub>3</sub> : Nil, CO : Nil	Un polluted, serene, pure ambient air shed
3	Water	Surface Sources: Arani river and <b>3</b> number of Eri <b>64</b> numbers of small ponds Sub surface source : Yield <b>5.4</b> to <b>7.2</b>	Poor water sources

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		m <sup>3</sup> /hr	
4	Soil	Plain terrain, red gravel, well formed	Plain, No filling or excavation is required. Has good SBC at 20-25 t/sq.m.
5	Noise	Ambient Noise Night : <b>30.92-35.28 d(B)</b> Day : <b>34.22-38.47 d(B)</b>	Un polluted ambience
6	Biologicals	No national Parks or endangered species, in the Reserve forests	The reserve forests are dry and have no species of significance or facing extinction.
7	Human	Population Density: <b>1.0029</b> per sq.Km Male Female Ratio : <b>1.021: 1</b> literacy Ratio : <b>1.73 :1</b>	Social status will improve by Direct/Indirect employment, road facilities improved water supply etc.,



**TABLE 1.3 SUMMARY OF APPLICANT ENTERPRISES**

<b>Sl.No.</b>	<b>Enterprise</b>	<b>Category of Industry</b>	<b>Type of Industry</b>	<b>Products</b>	<b>Production capacity MT/Year</b>
1	Michelin India TamilNadu Tyres Private Limited. 1-9, Sintroth square, VSI Estate, Old Mahabalipuram Road, Thiruvanmiyur, Chennai-600 041 Ph:44—4340-3500 Email: <a href="mailto:nicolas.beaumont@in_michelin.com">nicolas.beaumont@in_michelin.com</a>	Synthetic rubber	Large	Radial tyres for trucks/cars	3,00,000
2	Hunter Douglas India Private Limited Cor. Office: C102, Mangalya, Mano Maroshi Road, Andheri (E), Mumbai – 400 059. Email: <a href="mailto:Swami@hunterdouglas.in">Swami@hunterdouglas.in</a>	Engineering Industry	Medium	Metal ceilings,metal claddings, sun louvers and window Blinds (Aluminum and Ferrous Alloy Metal Members)	1000

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3	Harsha Exito Engineering Private Limited No1, Tass Industrial Estate, Ambatterr SIDCO M.G. Road, Chennai – 600 098. Email:Nathans@harshagroup.net	Engineering Industry	Large	Heavy Engineering Equipments & Components for Oil, Gas, Power and Other Process Industries.	1800
4	Harsha Float Glass India Private Limited No1, Tass Industrial Estate, Ambattur SIDCO,M.G. Road, Chennai – 600 098. Email:aman@harshagroup.net	Glass Industries	Large	Float glass with on line reflective and Tinted Coating	1,65,000

## **1.6 IMPACT ASSESSMENT, PREVENTION AND CONTROL**

The categories of enterprises have been chosen to suit the conditions of the candidate site of IE. These Industries do not require more water and categorized for non-intensive on the water front.

None of the industry will have **any major process stack**. The emission from the stacks are limited and to carry pollutants viz., *SPM, PM, SO<sub>2</sub>, NO<sub>x</sub>* etc., only within the permissible limits, with APC measures installed in each stack.

The effluent streams will be treated in state of the art treatment plant and treated effluent will be reclaimed. Hence there will be no disposal of treated or untreated waste streams.

The process solid waste and ETP sludge will be collected, stored temporarily and disposed in **off-site management facility** and hence there will not be any impact due to solid waste.

A statement on the conceptual impacts of IE on the surrounding environment are framed and presented in **Table 1.4**.

## **1.7 ENVIRONMENTAL MANAGEMENT PLAN**

SIPCOT envisaged its own **Environmental Management Plan** and mandated to adhere the Environmental laws and guidelines of **State PCB** and **CPCB**.

EMP has been devised for three different phases of IE implementation Viz., **Planning** and **Designing Phase, Construction Phase** and **Operation and maintenance phase**.

SIPCOT will have its own official group, exclusively for implementing the EMP, on site and off-site from their corporate office.

EMP for SIPCOT is largely to get the member industries for implementing their own EMP, as per guidelines of state PCB and CPCB.

Anyhow, SIPCOT will assume the responsibility of common aspects of EMP viz.,

- Risk Management
- Disaster Management
- Emergency Plan (On-site / Off-site)
- Green belt development
- Ground water Harvesting
- Road and Safety

Table -1.4

**IMPACT ANALYSIS & ASSESSMENT**

Sl. No.	Applicant Enterprises	Water Environment			Air Environment			Soil Environment		Noise Environment	Human Environment		Biological Environment		
		Water (KLD)	Wastewater (KLD)		Disposal of Treated effluent	Point Sources		Fugitive dust	Solidwaste MT/year		Employees	Occupational Health Hazards	Area Development (acres)	Cutting of trees	
			Trade Effluent	Sewage		Processes	Utilities		Hazardous waste						Non Hazardous waste
1	Michelin India TamilNadu Tyres Private Limited.	1500	1155	95	NIL	NIL	DG Set	Carbon black, rubber and metal	50000	150	Nil	1500	Dust allergy carcinogenic	290	Nil
2	Hunter Douglas	25	5	5	NIL	Powder	DG Set	Metal	0.5	2.5	Nil	60	Nil	15	Nil

	India Private Limited					Coating <b>Insignif icant</b>		alloys							
3	Harsha Exito Engineering Private Limited	150	43	46	NIL	Painting Booth Sand Blasting <b>Insignif icant</b>	DG Set	Paint Sand	6.5	12.5	Nil	1000	Nil	25	Nil
4	Harsha Float Glass India Private Limited	450	280	21	NIL	Furnace <b>Insignif icant</b>	DG Set Boiler	Mineral	600	10	Nil	5000	Nil	85	Nil

SIPCOT, other than the regular monitoring activities of state PCB, will ensure environmental monitoring by its own initiatives.

### **1.8 SOCIAL IMPACT ASSESSMENT**

There is no displacement of peoples as the IE area of **1127** is barren and unoccupied. There is no requirement for **Resettlement** and **Rehabilitation (R&R)** plans.

Anyhow, SIPCOT is committed to allot **100 acres**, exclusively for fodder development and the live stocks from the nearby villages will be allowed to graze. This grazing area will be continuously handed over to Local Panchayat which will maintain the said area. This will enable the local people who live on their yields of livestock will not be disturbed; rather, their yield will be enhanced.

The member industries will be mandated to use the local resources in their activities. This shall be continuously be carried out by industries in concurrence with SIPCOT.

The health of the people will be continuously monitored by, exclusive **Health Surveillance Plan (HSP)**, implemented by SIPCOT with coordination from member industries.

The cultural and religious activities of the people around the project site will never be intervened by any of the industrial enterprises; rather they get supported for successful conductance.

### **1.9 RISK AND DISASTER MANAGEMENT PLAN**

There are no hazardous, toxic chemical storages or gas usage in the proposed industries. None of the activities have any credible probability for any release of toxic gases or substances.

The risk within the building could be rated as accidents which may cause physical impairment or any occupational health Hazard.

Requisite account of **Emerging Management Plans, on-site** and as well for **off site**, be prepared and kept under surveillance by industries and as well by SIPCOT administration, to meet any situations of emergency due to fire or accident.

The IE location has been surveyed for no natural calamity. Strom of any devastating nature have never been recorded in that location. Flood and other related issues have not be reported, although there is a river, called Arani River.

Anyhow, to manage any likely accident or fire, SIPCOT will maintain an exclusive wing of fire brigades from TamilNadu Fire Service Department and required physical systems like equipment, chemicals, transportation etc.

#### **1.10 INTERNAL ROADS AND TRAFFIC**

The internal roads within the IE to connect all industries will be laid as Two lane with **12m** on either side and making the overall width of road at **24m**.

A central road divider with considerable of green belt will be developed to regulate the traffic. The junctions of roads will be provided with auto – operated traffic signals and will have **40m** width.

The industries concern will be mandated to have their **own service roads**, along the main roads, to have their vehicles parked temporarily.

### **1.11 GREEN BELT DEVELOPMENT**

SIPCOT is committed to create and maintain a “**green corridor**” all around with boundary for a width of **40m**, with compatible species of trees and shrubs.

SIPCOT is also committed to develop green belt with a great deal of trees, plants and shrubs, all along their inner roads, road junctions and open spaces.

### **1.12 ENVIRONMENTAL CELL**

An exclusive team of managers with required number of skilled and trained man power will be formed to implement and monitor the Environmental Management Plan.

The Cell shall have financial allocation from the regular annual budget of the IE administration.

Executives from member enterprises shall be accommodated in the **Consultative Committee** of the Cell. At least, one Manager level person from each enterprise, be enlisted member of the committee, that coordinate the activities of the Environmental Cell.

The Cell can also be extended, if need be with laboratory and library facilities, to enable the industries for better environmental management.

The protocol of the Environmental Cell is presented in **Fig. 1.4**.

### **1.13. CONCLUSION**

SIPCOT is committed with well devised plans and programs and supported by required budgetary allocation, to promote, develop and maintain the said IE to have sustainable development of the project location-Thervoykandigai, Gummudipoondi.

**Fig. 1.4 PROTOCOL OF ENVIRONMENTAL CELL**

