

Biodiversity Report and Management plan

Introduction about the Project Proponent and Project Site

State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) is the nodal agency of Government of Tamil Nadu to ensure sustainable development of industries. The objective of SIPCOT is to establish, develop, maintain and manage industrial complexes, parks and Growth Centres at various places across the State of Tamil Nadu.

SIPCOT has so far developed 21 Industrial Parks/Complexes/Growth Centres in 12 districts and 7 Sector Specific Special Economic Zones (SEZs) across Tamil Nadu. SIPCOT is the Nodal Agency for Government of Tamil Nadu to sanction and for the disbursement of Structured Package of Financial Assistance to large industrial units. The role of SIPCOT in the industrialization of the State is not only quantitative but also qualitative. Instead of just accelerating the pace of industrial growth, SIPCOT strives to ensure that disbursal of financial incentives, which resulted in the growth of industries in backward and hitherto under developed areas.

Thoothukudi is already an important location for industrial development with VOC Port. SIPCOT Industrial Complex which is functioning since 1990 with major industries like VV Titanium Pigments, KOG KTV Food Products, Amulya Sea Food, N.CJohn & Son, Coco Tufters, Ramesh Flowers, etc.,. Considering the demand for further industrial development with increased activities of VOC Port and growing number of Thermal Power Plants, SIPCOT proposes to develop Industrial park. The proposed Project site is located at **Therkuveerapandiyapuram Village** (61/1, 62/2, 63/1, 70/1, 70/2, 71, 72/2A, 72/2B, 73/1, 73/2, 73/4, 74/1, 74/3, 74/4, 75/1, 75/2, 75/3A, 75/3B, 75/4, 76/1, 76/2, 76/3, 76/4, 76/5, 76/6, 76/7, 77/1, 77/2, 77/3, 77/4, 77/5, 285/1A, 285/1B, 285/1C, 285/2, 286, 287, 288/1, 288/2, 288/4, 289/3, 326/1, 339, 342, 349, 362/2, 372/2, 374/4, 343/1, 343/2, 343/3A, 343/3B, 350/1, 350/2, 351/1, 351/2A, 351/2B, 351/4, 351/5, 351/6, 353/3, 358/1A, 358/1B, 359/1, 359/2, 359/3, 359/4, 360/1, 360/2, 361/1, 364, 371/1, 371/2, 371/3, 373/1, 373/2, 373/3, 373/4, 363/1, 363/2, 363/3, 363/4, 366/1, 366/2, 366/3, 366/4, 372/1, 372/3, 374/2, 374/3, 375, 376/1A, 376/1B, 406/1, 406/2, 406/3, 301/1, 315/4, 316/3, 317/3, 318/1, 288/3, 351/3, 353/4, 358/2, 361/2, 363/5, 374/1, 61/3, 62/5, 63/5, 65/2, 72/1, 73/1, 74/2, 1/2, 2/1, 2/3, 3/1, 3/3, 14/5, 17/2, 18/2, 19/3, 21/7, 38/1, 38/2, 44/4, 48/3, 51/3, 128/1, 12, 13, 22, 23, 24, 29, 35, 39/2, 50/2, 52/2, 55, 56, 79, 80, 81, 47/1, 47/3, 47/4, 47/5, 47/6, 62/1, 62/3A, 62/3B, 62/3C, 62/3D, 62/4, 62/6A, 62/6B, 62/7, 62/8, 63/2, 63/3, 63/4A, 63/4B, 63/4C, 63/6A, 63/6B, 64/1, 64/2, 65/1, 65/3, 65/4, 65/5, 307/1, 307/2, 308/1, 308/2, 309, 316/1, 316/2, 316/4, 316/5, 317/1, 317/2, 61/2, 61/4, 310, 311/1A, 311/1B, 311/2A, 311/2B, 311/2C, 312, 313/1, 313/2, 314, 315/1, 315/2, 315/3, 1/1A, 1/1B, 1/3, 2/2, 2/4, 2/5, 3/2A, 3/2B, 4/1, 4/2, 4/3, 6/1, 6/2, 6/3, 6/4, 7, 8/1, 8/2, 9, 10/1, 10/2, 10/3, 10/4, 11/1, 11/2, 11/3, 17/1, 18/1, 19/1, 19/2, 21/1, 21/2, 21/3, 21/4A, 21/4B, 21/4C, 21/4D, 21/5, 21/6, 5, 82/1, 82/2, 83/1, 83/2, 88/1, 88/2, 88/3A, 88/3B, 88/3C, 84/1, 84/2, 85/1, 85/2, 86/1, 86/2, 87, 89, 90/1A, 90/1B, 90/2, 124/1, 124/2,

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Flora and Fauna Species in study area

1. List of flora in the study area

S. No	Scientific Name	Family	Common Name	IUCN status
Trees				
1	<i>Prosopis juliflora</i>	Fabaceae	Vaelikaruvai	LC
2	<i>Azadirachta indica</i>	Meliaceae	Veppamaram	LC
3	<i>Acacia nilotica</i>	Fabaceae	Karuvelamaram	LC
4	<i>Annona squamosa</i>	Annonaceae	Sitapalam	NA
5	<i>Acacia auriculoformis</i>	Fabaceae	Kaththi Savukku	
6	<i>Cocos nucifera</i>	Arecaceae	Thennai	NA
7	<i>Ficus religiosa</i>	Moraceae	Bothimaram	NA
8	<i>Mangifera indica</i>	Anacardiaceae	Mamaram	DD
9	<i>Psidium guajava L.</i>	Myrtaceae	Koiyya	NA
10	<i>Syzygium cumini</i>	Myrtaceae	Navva Pazham	NA
11	<i>Tamarindus indica</i>	Fabaceae	Puliyamaram	LC
12	<i>Ziziphus mauritiana</i>	Rhamnaceae	Elenthai	NA
13	<i>Borassus flabilifer. L</i>	Arecaceae	Panaimaram	NA
14	<i>Cassurina equistifolia</i>	Casuarinaceae	Savukku Maram	NA
15	<i>Phoenix pusilla</i>	Arecaceae	Eecham	NA
16	<i>Phyllanthus emblica</i>	Phyllanthaceae	Nelli	NA
17	<i>Acacia leucophloea</i>	Fabaceae	Velvelam	NA
18	<i>Ailanthus excelsa</i>	Simaroubaceae	Perumaram	NA
19	<i>Anacardium occidentale L.</i>	Anacardiaceae	Mundhirimaram	NA
20	<i>Thespesia populnea</i>	Malvaceae	Poovarasa Maram	NA
21	<i>Anogeissus latifolia</i>	combrataceae	Vellai nakai,	NA
22	<i>Ficus religiosa</i>	moraceae	Arasa-maram	NA
23	<i>Ficus hispida</i>	Moraceae	Pei-atthi	NA
24	<i>Ficus bengalensis</i>	Moraceae	Alamaram	NA
25	<i>Pithecellobium dulce</i>	Fabaceae	Kodukapuli	G5
26	<i>Aegle marmelos</i>	Rutaceae	Vilva maram	NA
27	<i>Manilkara zapota</i>	Sapotaceae	Sappotta	NA
Herbs				
1	<i>Solanum torvum</i>	Solanaceae	Sundaikkai	NA
2	<i>Ocimum tenuiflorum</i>	Lamiaceae	Thulasi	NA
3	<i>Senna auriculata</i>	Fabaceae	Avaarai	NA
4	<i>Cissus quadrangularis</i>	Vitaceae	Pirandai	NA
5	<i>Carrisa spinarum</i>	Apocynaceae	Kalakai	NA
6	<i>Solanum trilobatum</i>	Solanaceae	Thoodhuvalai	NA
7	<i>Calotropis gigantea</i>	Apocynaceae	Erukkan Chedi	NA
8	<i>Ipomea carnea</i>	Convolvulaceae	Kattamanakku	NA
9	<i>Croton bonplandianus</i>	Euphorbiaceae	Reil Poondur	NA


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S. No	Scientific Name	Family	Common Name	IUCN status
Shrubs				
1	<i>Phoenix pusilla</i>	Arecaceae	Eecham	NA
2	<i>Jasminum unguistifolium</i>	Oleaceae	Kaatu malli	NA
3	<i>Parthenium hysterophorus</i>	Asteraceae	Famine weed	NA
4	<i>Crotolaria verrucosa</i>	legume	Salangaichedi	NA
5	<i>Canthium coromandelicum</i>	Rubiaceae	Karai Chedi	NA
6	<i>Jatropha gossypifolia</i>	Euphorbiaceae	Kaattu Amanakku	NA
Creepers				
1	<i>Abrus precatorius</i>	Legumes	Kundumani	NA
2	<i>Asparagus racemosus</i>	Asparagaceae	Thannir-vittan	NA
3	<i>Clitoria ternatea</i>	Fabaceae	Asian pigeonwings	NA
4	<i>Diplocyclos palmatus</i>	Cucurbitaceae	Aivirali	NA
5	<i>Hemidesmus indicus</i>	Apocynaceae	Nannari	NA
6	<i>Clitoria ternatea</i>	Fabaceae	Kannikodi	NA
7	<i>Mimosa pudica</i>	Fabaceae	Thottal Chiningi	LC
8	<i>Gloriosa superba</i>	Colchicaceae	Kallappai Kilangu	LC
Grass				
1	<i>Chloris montana</i>	Poaceae	-	NA
2	<i>Digitaria bicornis</i>	Poaceae	kutai pul	NA
3	<i>Heteropogon contortus</i>	Poaceae	-	NA
4	<i>Aristida setacea</i>	Poaceae	-	NA

Mangroves				
S. No	Scientific Name	Family	Common Name	IUCN
1	<i>Avicennia marina</i>	Acanthaceae	Grey mangrove	LC
2	<i>Suaeda maritima</i>	Chenopodiaceae	Umiri	LC
3	<i>Rhizophora apiculata</i>	Rhizophoraceae	Sllrapllllnai	LC
4	<i>Rhizophora mucronata</i>	Rhizophoraceae	Surapunnai	LC
5	<i>Bruguiera cylindrica</i>	Rhizophoraceae	Pannukuchi	LC
6	<i>Aegiceras corniculatum</i>	Myrsinaceae	Narikandal	LC
Sea Grass				
S. No	Scientific Name	Family	IUCN	
1	<i>Halophila ovalis</i>	Hydrocharitaceae	LC	
2	<i>Halophila ovata</i>	Hydrocharitaceae	LC	
3	<i>Halophila beccari</i>	Hydrocharitaceae	LC	
4	<i>Halophila stipulacea</i>	Hydrocharitaceae	LC	
5	<i>Thalassia hemprichii</i>	Hydrocharitaceae	LC	
6	<i>Cymodocea serrulata</i>	Hydrocharitaceae	LC	
7	<i>Cymodocea rotundata</i>	Hydrocharitaceae	LC	
8	<i>Halodule uninervis</i>	Hydrocharitaceae	LC	
9	<i>Syringodium isoetifolium</i>	Hydrocharitaceae	LC	
10	<i>Enhalus acoroides</i>	Hydrocharitaceae	LC	

2. List of fauna in the study area

S. No.	Scientific Name	Family Name	Common Name	IUCN Status
Mammals				
1	<i>Bandicota bengalensis</i>	Muridae	Sind Rice Rat	LC
2	<i>Cynopterus sphinx</i>	Pteropodidae	Short-nosed Fruit bat	LC
3	<i>Funambulus palmaram</i>	Sciuridae	Squirrel	LC
4	<i>Herpestes edwardii</i>	Herpestidae	Mongoose	LC
5	<i>Rattus norvegicus</i>	Muridae	Field mouse	LC
6	<i>Rattus rattus</i>	Muridae	House rat	LC
7	<i>Vulpes bengalensis</i>	Canidae	Fox	LC
8	<i>Canis aureus</i>	Canidae	Jakal	LC
Birds				
1	<i>Tachybaptus ruficollis</i>	Podicipedidae	Little grebe	LC
2	<i>Francolinus pondicerianus</i>	Phasianidae	kowdhari	LC
3	<i>Eudynamys scolopaceus</i>	Cuculidae	Asian Koel	LC
4	<i>Phalacrocorax niger</i>	Phalacrocoracidae	Little cormorant	LC
5	<i>Ardeola grayii</i>	Ardeidae	Paddy bird	LC
6	<i>Ardea alba</i>	Ardeidae	Large egret	LC
7	<i>Haliastur indus</i>	Accipitridae	Brahminy kite	LC
8	<i>Ardea cinerea</i>	Ardeidae	Grey Heron	LC
9	<i>Mirafra erythroptera</i>	Alaudidae	vaanambadi	LC
Reptiles				
1	<i>Calotes ellioti</i>	Agamidae	Elliot's Forest Lizard	LC
2	<i>Chameleo zeylanicus</i>	Chamaeleonidae	Indian chameleon	LC
3	<i>Ptyas mucosa</i>	Clubridae	Rat snake	LC
4	<i>Eutropis macularia</i>	Scincidae	Aranai	LC
5	<i>Calotes versicolor</i>	Agamidae	Common garden lizard	NA
6	<i>Naja naja</i>	Elapidae	Indian Cobra	LC
Amphibians				
1	<i>Bufo Melanostictus</i>	Buфонidae	Toad	LC
2	<i>Hyla arborea</i>	Hylidae	Tree frog	LC
3	<i>Rana cyanophlyctis</i>	Buфонidae	Frog	LC
4	<i>Hoplobatrachus tigerinus</i>	Buфонidae	Bull Frog	LC
5	<i>Rana hexadactyla</i>	Dicroglossinae	Common frog	LC
6	<i>Bufo bufo</i>	Buфонidae	Toad	LC

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Environmental Management measures

1. **Zero liquid discharge system**– The individual industries in the Industrial Park will be mandated to strictly adhere to Zero liquid Discharge concept.
2. **Air Pollution Control Measures**- The industries to be proposed, will have their own utilities like stack, scrubbing system, process vents etc. in this Industrial Park and the incremental load of Ambient Air Quality will be marginal.
3. **Municipal Solid Waste Management**- Municipal Solid Waste storage area is proposed in this Industrial Park and the generated waste will be segregated as organic and inorganic wastes. Organic waste will be sent for composting and inorganic wastes will be sold to authorized recyclers.
4. **Hazardous Waste Management** – Individual industries will have their own hazardous waste storage area and the wastes will be disposed as per Hazardous Waste (Management, handling and Transboundary movement) Rules, 2016.
5. **Ecology** – 40% green belt is proposed for the project. Native plant species will be developed in the project site. The project site is 8.33 Km from Gulf of Mannar Marine National Park ESZ. There will not be any impact due to the project to the Gulf of Mannar National Park.
6. **Soil** – Top soil will be preserved and used for green belt development within the site. Municipal solid wastes and hazardous wastes will be properly managed, so that there is no impact on the soil.
7. **Others** –Storm water drainage and rainwater harvesting system is proposed for the project, to recharge ground water.
8. **Plant and animal communities** may be directly affected by changes in their environment through variations in water, air and soil/sediment quantity and through disturbance by noise and changes in vegetation cover. Such changes may directly affect the ecology for example, habitat, food and nutrient supplies, breeding areas, migratory routes, vulnerability to predators. The Industrial Development is located in a barren land. No exotic plant species occur within the study area except for some grasses and wild plant species.



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