

Invasive alien flora of Kanniyakumari District, Tamil Nadu, India

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Abstract

A qualitative survey of the Invasive alien Flora of Kanniyakumari District, Tamil Nadu, revealed a total of 106 species belonging to 84 genera and 37 families. The family Astraceae was found most dominant with 17 species, followed by Fabaceae (12 species), Malvaceae (11 species) and Convolvulaceae (8 species). The study highlights the widespread invasion of alien species in the region, posing a significant threat to the native flora and ecosystem. The findings of this study emphasise the need for effective management and control strategies to mitigate the impacts of invasive alien species on the Biodiversity of Kanniyakumari District.

Keywords: Invasive alien flora, land forms, life forms, Kanniyakumari District

Introduction

Biodiversity is significantly impacted by invasive alien species (IAS), which pose a threat to native ecosystems. The Convention on Biological Diversity (CBD) defines IAS as species that are outside their natural range, and their introduction or spread endangers biodiversity (Geoch *et al.*, 2010). Once established, these species can spread rapidly, causing substantial harm to local ecosystems, economies, and human health. They often outgrow native plants, suppressing their growth due to faster reproduction rates. Although native species typically have larger population sizes and greater genetic diversity, which allow them to compete with alien species, there are times when invasive species can outcompete them. In cases where invasive species proliferate and possess more viable genes, they may lead to the decline or destruction of native species. This invasion threatens native endemic species, making them critically endangered within their ecosystems. Research supports the idea that successful invasive species tend to occupy existing ecological niches rather than completely displacing native species. These alien species are often introduced through trade, tourism, and hull fouling. Over the past 30 years, numerous studies have highlighted the negative effects of IAS on native biodiversity (Taylor, 2021). Consequently, it is essential for people to be aware of IAS and to develop various methods to manage them. Several approaches can be used to prevent the spread of invasive plant species, including mechanical and chemical methods. Interestingly, many invasive species can potentially serve as alternative feed sources for ruminant animals. Thus, it's vital to develop cooperative strategies that leverage their contributions to halt soil erosion, increase grazing capacity, and support ruminant health. Techniques such as burning, composting, piling, and creating charcoal can be effective in curbing the spread of IAS. Care should be taken when disposing of these species, as they may thrive on plant fragments.

Materials and Methods

Kanyakumari is a coastal district in Tamil Nadu, India. It is famous for being the confluence of three seas: the Indian Ocean, the Arabian Sea, and the Bay of Bengal, a phenomenon referred to as Triveni Sangamam or Mukkadal

Sangamam in Tamil. The geographical coordinates of Kanyakumari range from longitudes 77° 9' 32.71" to 77° 35' 18.67" and latitudes 8° 4' 37.01" to 8° 16' 44.83". The district receives an annual rainfall of approximately 1,188.6 mm, with temperatures varying between 21°C and 31°C. Kanyakumari is bordered by Tirunelveli District and the state of Kerala to the north, west, and northwest, while the Indian Ocean lies to the south and east.

A qualitative survey was conducted to document Invasive Alien Species (IAS) in the Kanyakumari district from January 2024 to December 2025. The study included the following taluks: Agastheeswaram, Kalkulam, Thovalai, Vilavancode, Killiyur, and Thiruvattar. The research area was categorised into four different landforms: Terrestrial, Coastal, Wetlands, and the Western Ghats. All observed plants were recorded in field notes, and images were taken using a GPS camera. Species identification was carried out using available flora references. The binomial nomenclature, author citations, and family classifications adhered to the guidelines established by the Plants of the World Online (POWO, 2025) [7] and all the documented species are classified based on land forms and life forms.

Study Area Map

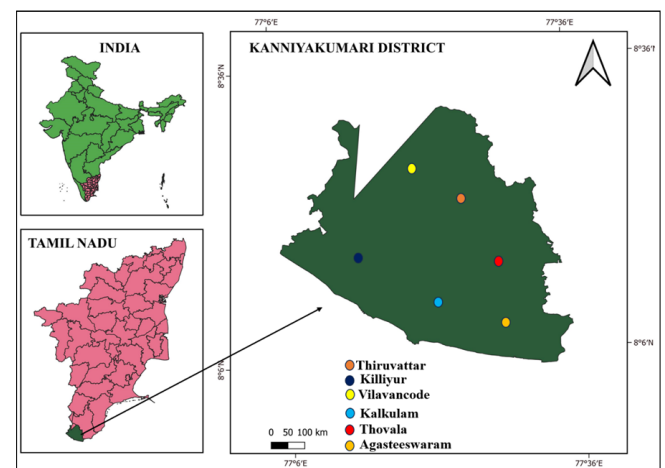


Fig 1: Map of the study area in Kanyakumari District, showing locations where invasive alien species have been recorded.

Result and Discussion

Species, Genera and Family

The qualitative surveys allowed us to identify 106 species across 84 genera and 37 families in Kanyakumari district. The dominant family in the study area is Asteraceae, with 17 species, followed by Fabaceae with 12 species, and Malvaceae with 11 species. Other families include Convolvulaceae (8 species), Solanaceae (7 species), and Amaranthaceae (6 species). Euphorbiaceae and Poaceae each have 4 species, while Cleomaceae and Passifloraceae

each have 3 species. Additionally, Acanthaceae, Lamiaceae, Portulacaceae, and Verbenaceae are represented by 2 species each. The following families are represented by a single species: Apocynaceae, Arecaceae, Araceae, Cactaceae, Cyperaceae, Linderniaceae, Loranthaceae, Martyniaceae, Melastomataceae, Nyctaginaceae, Onagraceae, Oxalidaceae, Papaveraceae, Pedaliaceae, Phyllanthaceae, Piperaceae, Plantaginaceae, Polygonaceae, Pontederiaceae, Rubiaceae, Typhaceae, Urticaceae, and Zygophyllaceae (Table 1).

Table 1: A list of invasive alien species, their families, life forms, and nativity recorded from the study area.

Sl No	Binomial name	Family	Life form	Nativity
1	<i>Acacia auriculiformis</i> A. Cunn. Ex Benth.	Fabaceae	Tree	Australia
2	<i>Acanthospermum hispidum</i> DC.	Asteraceae	Herb	Brazil
3	<i>Aerva javanica</i> (Burm.f.) Juss. Ex Schult.	Amaranthaceae	Shrub	Tropical America
4	<i>Aeschynomene americana</i> L.	Fabaceae	Herb	Tropical America
5	<i>Ageratina adenophora</i> (Spreng.) R.M. King & H. Rob.	Asteraceae	Herb	Tropical America
6	<i>Alternanthera paronychioides</i> A.St.-Hil.	Amaranthaceae	Herb	Tropical America
7	<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	Amaranthaceae	Herb	Tropical America
8	<i>Alternanthera pungens</i> Kunth	Amaranthaceae	Herb	Tropical America
9	<i>Antigonon leptopus</i> Hook. & Arn.	Polygonaceae	Climber	Tropical America
10	<i>Argemone mexicana</i> L.	Papaveraceae	Herb	Tropical America
11	<i>Blumea lacera</i> (Burm.f.) DC.	Asteraceae	Herb	Tropical America
12	<i>Blumea obliqua</i> (L.) Druce	Asteraceae	Herb	Tropical America
13	<i>Borassus flabellifer</i> L.	Arecaceae	Tree	Tropical Africa
14	<i>Calotropis gigantea</i> (L.) W.T. Aiton	Apocynaceae	Shrub	Tropical Africa
15	<i>Celosia argentea</i> L.	Amaranthaceae	Herb	Tropical Africa
16	<i>Chloris barbata</i> Sw.	Poaceae	Herb	Tropical America
17	<i>Chromolaena odorata</i> (L.) R.M. King & H. Rob.	Asteraceae	Shrub	Tropical America
18	<i>Chrozophora rottleri</i> (Geiseler) Spreng.	Euphorbiaceae	Herb	Tropical Africa
19	<i>Cleome gynandra</i> L.	Cleomaceae	Herb	Tropical America
20	<i>Cleome ruidosperma</i> DC.	Cleomaceae	Herb	Tropical America
21	<i>Cleome viscosa</i> L.	Cleomaceae	Herb	Tropical America
22	<i>Corchorus aestuans</i> var. <i>aestuans</i>	Malvaceae	Herb	Tropical Africa
23	<i>Corchorus fascicularis</i> Lam.	Malvaceae	Herb	Tropical America
24	<i>Corchorus tridens</i> L.	Malvaceae	Herb	Tropical Africa
25	<i>Corchorus trilocularis</i> L.	Malvaceae	Herb	Tropical Africa
26	<i>Crotalaria retusa</i> L.	Fabaceae	Herb	Tropical America
27	<i>Croton bonplandianus</i> Baill.	Euphorbiaceae	Herb	Temperate South America
28	<i>Cuscuta campestris</i> Yunck.	Convolvulaceae	Herb	Mediterranean
29	<i>Cuscuta chinensis</i> Lam.	Convolvulaceae	Herb	Mediterranean
30	<i>Cyperus iria</i> L.	Cyperaceae	Herb	Tropical America
31	<i>Datura metel</i> L.	Solanaceae	Shrub	Tropical America
32	<i>Dendrophthoe falcata</i> (L.f.) Ettingsh.	Loranthaceae	Shrub	eastern Queensland
33	<i>Dicliptera paniculata</i> (Forssk.) I.Darbysh.	Acanthaceae	Herb	Tropical America
34	<i>Digera muricata</i> (L.) Mart.	Amaranthaceae	Shrub	South West Asia
35	<i>Distimake aegyptius</i> (L.) A.R. Simões & Staples	Convolvulaceae	Herb	Tropical America
36	<i>Eclipta prostrata</i> (L.) L.	Asteraceae	Herb	Tropical America
37	<i>Emilia sonchifolia</i> (L.) DC.	Asteraceae	Herb	Tropical Africa
38	<i>Euphorbia heterophylla</i> L.	Euphorbiaceae	Herb	Tropical America
39	<i>Euphorbia umbellata</i> (Pax) Bruyns	Euphorbiaceae	Shrub	Tropical America
40	<i>Evolvulus nummularius</i> (L.) L.	Convolvulaceae	Herb	Tropical America
41	<i>Galinsoga parviflora</i> Cav.	Asteraceae	Herb	Tropical America
42	<i>Grangea maderaspatana</i> (L.) Poir.	Asteraceae	Herb	Tropical South America
43	<i>Imperata cylindrica</i> (L.) Raeusch.	Poaceae	Herb	Tropical America
44	<i>Indigofera astragalina</i> DC.	Fabaceae	Herb	Tropical Africa
45	<i>Indigofera suffruticosa</i> Mill.	Fabaceae	Shrub	Tropical America
46	<i>Ipomoea carnea</i> subsp. <i>carnea</i>	Convolvulaceae	Shrub	Tropical America
47	<i>Ipomoea obscura</i> (L.) Ker Gawl.	Convolvulaceae	Herb	Tropical Africa

48	<i>Ipomoea pes-tigridis</i> L.	Convolvulaceae	Climber	Tropical East Africa
49	<i>Ipomoea quamoclit</i> L.	Convolvulaceae	Climber	Tropical America
50	<i>Lagascea mollis</i> Cav.	Asteraceae	Herb	Tropical Central America
51	<i>Lantana camara</i> L.	Verbenaceae	Shrub	Tropical America
52	<i>Leonotis nepetifolia</i> (L.) R.Br.	Lamiaceae	Herb	Tropical Africa
53	<i>Leucaena leucocephala</i> (Lam.) de Wit	Fabaceae	Tree	Tropical America
54	<i>Ludwigia octovalvis</i> (Jacq.) P.H. Raven	Onagraceae	Shrub	Tropical Africa
55	<i>Malachra capitata</i> (L.) L.	Malvaceae	Herb	Tropical America
56	<i>Malvastrum coromandelianum</i> (L.) Garcke	Malvaceae	Shrub	Tropical America
57	<i>Martynia annua</i> L.	Martyniaceae	Herb	Tropical America
58	<i>Melinis ambigua</i> Hack.	Poaceae	Herb	Tropical America
59	<i>Melochia corchorifolia</i> L.	Malvaceae	Herb	Tropical America
60	<i>Miconia crenata</i> (Vahl) Michelang.	Melastomataceae	Herb	Tropical America
61	<i>Mikania micrantha</i> Kunth	Asteraceae	Climber	Tropical America
62	<i>Mimosa pudica</i> L.	Fabaceae	Herb	Brazil
63	<i>Mirabilis jalapa</i> L.	Nyctaginaceae	Herb	Peru
64	<i>Neltuma juliflora</i> (Sw.) Raf.	Fabaceae	Tree	Mexico
65	<i>Ocimum americanum</i> L.	Lamiaceae	Herb	Tropical America
66	<i>Opuntia stricta</i> (Haw.) Haw.	Cactaceae	Herb	Tropical America
67	<i>Oxalis corniculata</i> L.	Oxalidaceae	Herb	Europe
68	<i>Parthenium hysterophorus</i> L.	Asteraceae	Herb	Tropical North America
69	<i>Passiflora foetida</i> L.	Passifloraceae	Climber	Tropical South America
70	<i>Pedaliium murex</i> L.	Pedaliaceae	Herb	Tropical America
71	<i>Peperomia pellucida</i> (L.) Kunth	Piperaceae	Herb	Tropical South America
72	<i>Phyllanthus tenellus</i> Roxb.	Phyllanthaceae	Herb	Mascarene Islands
73	<i>Physalis angulata</i> L.	Solanaceae	Herb	Tropical America
74	<i>Physalis pruinosa</i> L.	Solanaceae	Herb	Tropical America
75	<i>Pilea microphylla</i> (L.) Lieb.	Urticaceae	Herb	Tropical South America
76	<i>Pistia stratiotes</i> L.	Araceae	Herb	Tropical America
77	<i>Pontederia crassipes</i> Mart.	Pontederiaceae	Herb	Tropical America
78	<i>Portulaca oleracea</i> L.	Portulacaceae	Herb	Tropical Central America
79	<i>Portulaca quadrifida</i> L.	Portulacaceae	Herb	Tropical South America
80	<i>Ruellia tuberosa</i> L.	Acanthaceae	Herb	Tropical America
81	<i>Saccharum spontaneum</i> L.	Poaceae	Herb	Tropical West Asia
82	<i>Scoparia dulcis</i> L.	Plantaginaceae	Herb	Tropical America
83	<i>Senna alata</i> (L.) Roxb.	Fabaceae	Shrub	Tropical America
84	<i>Senna occidentalis</i> (L.) Link	Fabaceae	Shrub	Tropical America
85	<i>Sesbania bispinosa</i> (Jacq.) W. Wight	Fabaceae	Shrub	Tropical America
86	<i>Sida acuta</i> Burm.f.	Malvaceae	Shrub	Tropical America
87	<i>Solanum americanum</i> Mill.	Solanaceae	Shrub	Tropical America
88	<i>Solanum seaforthianum</i> Andrews	Solanaceae	Climber	Brazil
89	<i>Solanum torvum</i> Sw.	Solanaceae	Shrub	West Indies
90	<i>Solanum viarum</i> Dunal	Solanaceae	Herb	Tropical America
91	<i>Sphagneticola trilobata</i> (L.) Pruski	Asteraceae	Herb	Tropical America
92	<i>Spermacoce hispida</i> L.	Rubiaceae	Herb	Tropical America
93	<i>Stachytarpheta jamaicensis</i> (L.) Vahl	Verbenaceae	Shrub	Tropical America
94	<i>Stylosanthes hamata</i> (L.) Taub.	Fabaceae	Herb	Tropical America
95	<i>Synedrella nodiflora</i> (L.) Gaertn.	Asteraceae	Herb	West Indies
96	<i>Torenia fournieri</i> Linden ex E. Fourn.	Linderniaceae	Herb	Australia
97	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Shrub	Tropical America
98	<i>Tridax procumbens</i> L.	Asteraceae	Herb	Tropical Central America
99	<i>Triumfetta rhomboidea</i> Jacq.	Malvaceae	Shrub	Tropical America
100	<i>Turnera subulata</i> Sm.	Passifloraceae	Herb	Tropical America
101	<i>Turnera ulmifolia</i> L.	Passifloraceae	Herb	Tropical America
102	<i>Typha angustifolia</i> L.	Typhaceae	Herb	Tropical America
103	<i>Urena lobata</i> L.	Malvaceae	Shrub	Tropical Africa
104	<i>Waltheria indica</i> L.	Malvaceae	Herb	Tropical America
105	<i>Xanthium strumarium</i> L.	Asteraceae	Herb	Tropical America
106	<i>Youngia japonica</i> (L.) DC.	Asteraceae	Herb	Tropical South America

Other floristic studies in the Kanniyakumari District have reported the following findings: Akash *et al.* (2025) ^[1] documented 311 species belonging to 233 genera across 75 families in the entire coastal flora. Felix *et al.* (2017) ^[4] identified 720 species from 449 genera under 126 families in the river basin. Additionally, Sukumaran and Jeeva (2011) ^[9] listed 124 species across 81 genera and 31 families from the district's wetlands. Notably, there has been no previously documented invasive alien flora in the Kanniyakumari District. Therefore, the present study aims to fill this gap.

Land forms

The recorded species in the study area are classified according to landforms, with a total of 106 species identified. The distribution by landform is as follows: Terrestrial (52 species, 49%), Coastal (25 species, 24%), Wetlands (19 species, 18%), and Western Ghats (10 species, 9%).

Terrestrial species

The species recorded from inland include *Acanthospermum hispidum* DC., *Ageratina adenophora* (Spreng.) R.M.King & H.Rob., *Alternanthera paronychioides* A. St.-Hil., *Alternanthera pungens* Kunth, *Blumea lacera* (Burm.f.) DC., *Borassus flabellifer* L., *Calotropis gigantea* (L.) W.T.Aiton, *Celosia argentea* L., *Chromolaena odorata* (L.) R.M.King & H.Rob., *Chrozophora rottleri* (Geiseler) Spreng., *Cleome gynandra* L., *Cleome rutidosperma* DC., *Cleome viscosa* L., *Corchorus aestuans* var. *aestuans*, *Corchorus fascicularis* Lam., *Corchorus tridens* L., *Corchorus trilocularis* L., *Croton bonplandianus* Baill., *Dendrophthoe falcata* (L.f.) Ettingsh., *Emilia sonchifolia* (L.) DC., *Galinsoga parviflora* Cav. *Indigofera astragalina* DC., *Indigofera suffruticosa* Mill., *Ipomoea quamoclit* L., *Lagascea mollis* Cav., *Lantana camara* L., *Leonotis nepetifolia* (L.) R.Br., *Leucaena leucocephala* (Lam.) de Wit, *Malachra capitata* (L.) L., *Malvastrum coromandelianum* (L.) Garcke, *Martynia annua* L., *Mirabilis jalapa* L., *Ocimum americanum* L., *Parthenium hysterophorus* L., *Passiflora foetida* L., *Phyllanthus tenellus* Roxb., *Physalis angulata* L., *Physalis pruinosa* L., *Ruellia tuberosa* L., *Scoparia dulcis* L., *Senna occidentalis* (L.) Link, *Sida acuta* Burm.f., *Solanum americanum* Mill., *Solanum torvum* Sw., *Solanum viarum* Dunal, *Spermacoce hispida* L., *Synedrella nodiflora* (L.) Gaertn., *Tridax procumbens* L., *Triumfetta rhomboidea* Jacq., *Turnera ulmifolia* L., *Urena lobata* L., *Xanthium strumarium* L. The distribution of invasive alien species (IAS) across different landforms in the study area provides valuable insights into their ecological preferences and potential impacts on native ecosystems. The high proportion of IAS in terrestrial habitats (49%) suggests that these areas are particularly vulnerable to invasion, likely due to human activities such as agriculture, urbanisation, and infrastructure development.

Coastal

The species documented from sand dunes and coastal areas contains *Acacia auriculiformis* A. Cunn. ex Benth., *Aerva javanica* (Burm.f.) Juss. Ex Schult., *Antigonon leptopus* Hook. & Arn., *Argemone mexicana* L., *Blumea obliqua* (L.)

Druce, *Chloris barbata* Sw., *Crotalaria retusa* L., *Cuscuta campestris* Yunck., *Cuscuta chinensis* Lam., *Datura metel* L., *Dicliptera paniculata* (Forssk.) I, *Distimake aegyptius* (L.) A.R. Simões & Staples, *Euphorbia heterophylla* L., *Grangea maderaspatana* (L.) Poir., *Ipomoea pes-tigridis* L., *Melochia corchorifolia* L., *Neltuma juliflora* (Sw.) Raf., *Opuntia stricta* (Haw.) Haw., *Pedaliium murex* L., *Portulaca oleracea* L., *Portulaca quadrifida* L., *Sesbania bispinosa* (Jacq.) W. Wight, *Stylosanthes hamata* (L.) Taub., *Tribulus terrestris* L., *Waltheria indica* L. The significant presence of IAS in coastal areas (24%) is also noteworthy, as these ecosystems are already under pressure from natural and anthropogenic stressors. The introduction of invasive species can exacerbate these impacts, leading to changes in coastal ecosystem processes and potentially affecting the livelihoods of communities that depend on these ecosystems.

Wetlands

The species noted from mangrove, lake, pond, river, paddy fields and dune slacks comprise *Cyperus iria* L., *Digera muricata* (L.) Mart., *Eclipta prostrata* (L.) L., *Ipomoea carnea* subsp. *Carnea*, *Ipomoea obscura* (L.) Ker Gawl., *Ludwigia octovalvis* (Jacq.) P.H. Raven, *Aeschynomene americana* L., *Alternanthera philoxeroides* (Mart.) Griseb., *Euphorbia umbellata* (Pax) Bruyns, *Imperata cylindrica* (L.) Raeusch., *Mimosa pudica* L., *Pistia stratiotes* L., *Pontederia crassipes* Mart., *Saccharum spontaneum* L., *Senna alata* (L.) Roxb., *Sphagneticola trilobata* (L.) Pruski, *Stachytarpheta jamaicensis* (L.) Vahl, *Turnera subulata* Sm., *Typha angustifolia* L. Lower proportion of invasive alien species (IAS) observed in wetlands (18%) may be attributed to the fact that only a limited subset of invasive species are physiologically adapted to persist under the continuously saturated conditions characteristic of these ecosystems. Most of the IAS present are aquatic or semi-aquatic taxa introduced primarily through pathways such as the ornamental plant and aquarium trade, which restricts the range of species capable of establishing in wetland habitats.

Western Ghats

The species documented from the southern Western Ghats consists of *Evolvulus nummularius* (L.) L., *Melinis ambigua* Hack., *Miconia crenata* (Vahl) Michelang., *Mikania micrantha* Kunth, *Oxalis corniculata* L., *Peperomia pellucida* (L.) Kunth, *Pilea microphylla* (L.) Liebm., *Solanum seafortianum* Andrews, *Torenia fournieri* Linden ex E. Fourn., *Youngia japonica* (L.) DC. In the Western Ghats, only 9% may indicate that these ecosystems are less susceptible to invasion, possibly due to their unique environmental conditions or the presence of native species that compete with invaders. However, this does not imply that these ecosystems are immune to invasion, and continued monitoring and management efforts are necessary to prevent the establishment and spread of IAS.

Life Forms

The recorded species is classified based on life forms. Herbs are the dominant life forms in the study area (74 species), followed by shrubs (22 species), climbers (6 species) and trees (4 species). (Table 1; Figure 2)

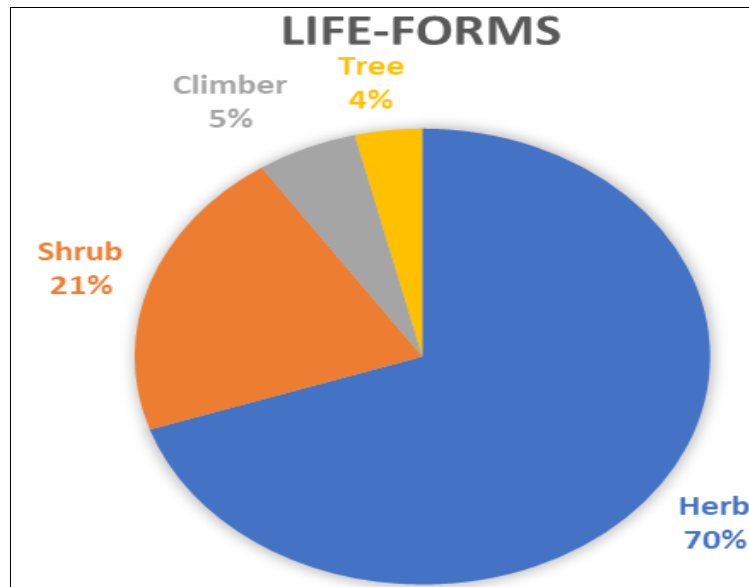


Fig 2: Classification based on the life forms of invasive alien species recorded in Kanyakumari district

Nativity of invasive species

Between 106 species; 65 species native to Tropical America, Thirteen from Tropical Africa, six from Tropical South America, three each from Brazil and Tropical Central America, two each from Australia, Mediterranean and West

Indies, one each from Eastern Queensland, Europe, Mascarene Islands, Mexico, Peru, South West Asia, Temperate South America, Tropical East Africa, Tropical North America, Tropical West Asia were recorded from Kanyakumari District, Tamil Nadu. (Table 2)

Table 2: List of species along with their vernacular and Tamil names recorded in the study area.

Si no	Binomial name	Vernacular	Tamil name
1	<i>Acacia auriculiformis</i> A. Cunn. Ex Benth.	Australian Wattle	Pencil maram
2	<i>Acanthospermum hispidum</i> DC.	Brisly Starbur	Kanthimul
3	<i>Aerva javanica</i> (Burm.f.) Juss. Ex Schult.	Desert Cotton	Peelai
4	<i>Aeschynomene americana</i> L.	American joint-vetch	Thakkai poondu
5	<i>Ageratina adenophora</i> (Spreng.) R.M. King & H. Rob.	Crofton weed	Banmara
6	<i>Alternanthera paronychioides</i> A.St.-Hil.	Joyweed	Ponnanganni
7	<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	Alligator weed	Saimai ponnankanni
8	<i>Alternanthera pungens</i> Kunth	Khaki Weed	Ottaramul
9	<i>Antigonon leptopus</i> Hook. & Arn.	Railway creeper	Kodirosaa
10	<i>Argemone mexicana</i> L.	Prickly poppy	Brahmathandu
11	<i>Blumea lacera</i> (Burm.f.) DC.	Blumea	Kattumullangi
12	<i>Blumea obliqua</i> (L.) Druce	Oblique Blumea	Cuvarru mullanki
13	<i>Borassus flabellifer</i> L.	Palmyra palm	Panai
14	<i>Calotropis gigantea</i> (L.) W.T. Aiton	Madar	Erukku
15	<i>Celosia argentea</i> L.	Wool flower	Kozhi poo
16	<i>Chloris barbata</i> Sw.	Swollen Finger Grass	Mayirkondaipul
17	<i>Chromolaena odorata</i> (L.) R.M. King & H. Rob.	Christmas bush	Tivragandha
18	<i>Chrozophora rottleri</i> (Geiseler) Spreng.	Rottler's Chrozophora	Purapirakkai
19	<i>Cleome gynandra</i> L.	African Cabbage	Nalvelai
20	<i>Cleome rutidosperma</i> DC.	Purple Cleome	Neelavela
21	<i>Cleome viscosa</i> L.	Asian Spider Flower	Naikadugu
22	<i>Corchorus aestuans</i> var. <i>aestuans</i>	Jew's Mallow	Talakkaiippoond
23	<i>Corchorus fascicularis</i> Lam.	African Jute	Naru valli
24	<i>Corchorus tridens</i> L.	Wild Jute	Kattu sanappai
25	<i>Corchorus trilocularis</i> L.	African Jute	Kattu sanappai
26	<i>Crotalaria retusa</i> L.	Rattle Weed	Kilukiluppai
27	<i>Croton bonplandianus</i> Baill.	Ban Tulsi	Rayil poondu
28	<i>Cuscuta campestris</i> Yunck.	Golden dodder	Thooththumak kottan
29	<i>Cuscuta chinensis</i> Lam.	China Dodder	Aakashavalli
30	<i>Cyperus iria</i> L.	Rice-Field Flat Sedge	Yanaikkitti
31	<i>Datura metel</i> L.	Mad Plant	Oomaththai

32	<i>Dendrophthoe falcata</i> (L.f.) Ettingsh.	Honey Suckle Mistletoe	Pulluruvi
33	<i>Dicliptera paniculata</i> (Forssk.) I.Darbysh.	Panicled Foldwing	karakkanciram
34	<i>Digera muricata</i> (L.) Mart.	False Amarantha	Kattu keerai
35	<i>Distimake aegyptius</i> (L.) A.R. Simões & Staples	Egyptian Woodrose	Mochukkodi
36	<i>Eclipta prostrata</i> (L.) L.	False Daisy	Karisalaankanni
37	<i>Emilia sonchifolia</i> (L.) DC.	Lilac Tassel Flower	Muyalcevi
38	<i>Euphorbia heterophylla</i> L.	Fire Plant	Paal perukki keerai
39	<i>Euphorbia umbellata</i> (Pax) Bruyns	African Milk Bush	Maanshevikkalli
40	<i>Evolvulus nummularius</i> (L.) L.	Roundleaf Bindweed	Elikkadhu ilai
41	<i>Galinsoga parviflora</i> Cav.	quickweed	Mookuthi poo
42	<i>Grangea maderaspatana</i> (L.) Poir.	Madras Carpet	Masipathri
43	<i>Imperata cylindrica</i> (L.) Raeusch.	Cotton Grass	Darbhaipul
44	<i>Indigofera astragalina</i> DC.	Hairy Indigo	Tattaikkarunkollu
45	<i>Indigofera suffruticosa</i> Mill.	Anil Indigo	Shimaiyaviri
46	<i>Ipomoea carnea</i> subsp. <i>carnea</i>	Morning Glory Bush	Onanthalai
47	<i>Ipomoea obscura</i> (L.) Ker Gawl.	Obscure Morning Glory	Siruthali
48	<i>Ipomoea pes-tigridis</i> L.	Tiger's foot	Pulichchuvadi
49	<i>Ipomoea quamoclit</i> L.	Cypress Vine	Mayirmanikkam
50	<i>Lagascea mollis</i> Cav.	Silk Leaf	Kasakazappu pull
51	<i>Lantana camara</i> L.	Wild Sage	Unnchedi
52	<i>Leonotis nepetifolia</i> (L.) R.Br.	Lion's Ear	Ranaperi
53	<i>Leucaena leucocephala</i> (Lam.) de Wit	Subabul	Thagarai maram
54	<i>Ludwigia octovalvis</i> (Jacq.) P.H. Raven	Water Primrose	Neer kiraambu
55	<i>Malachra capitata</i> (L.) L.	Brazil Jute	Paracin Pat
56	<i>Malvastrum coromandelianum</i> (L.) Garcke	False Mallow	Sinnathurupi
57	<i>Martynia annua</i> L.	Tiger's Claw	Pulinagam
58	<i>Melinis ambigua</i> Hack.	–	–
59	<i>Melochia corchorifolia</i> L.	Chocolate Weed	Pinnakku keerai
60	<i>Miconia crenata</i> (Vahl) Michelang.	Soapbush	Kattalai
61	<i>Mikania micrantha</i> Kunth	American rope	Tuni-kodi
62	<i>Mimosa pudica</i> L.	Touch-Me-Not	Thottaalsurungi
63	<i>Mirabilis jalapa</i> L.	4 'o' Clock plant	Andhimalli
64	<i>Neltuma juliflora</i> (Sw.) Raf.	Mesquite	Velikkaaththaan
65	<i>Ocimum americanum</i> L.	Hoary Basil	Kaattu Thulasi
66	<i>Opuntia stricta</i> (Haw.) Haw.	Prickly Pear	Sappaaththikalli
67	<i>Oxalis corniculata</i> L.	Creeping Wood Sorrel	Puliyarai
68	<i>Parthenium hysterophorus</i> L.	Parthenium	Mookkuththi poondu
69	<i>Passiflora foetida</i> L.	Stinking Passion-flower	Kurangu pazham
70	<i>Pedaliium murex</i> L.	Puncture Vine	Nerunjimul
71	<i>Peperomia pellucida</i> (L.) Kunth	Shining bush	Mashitandu Chedi
72	<i>Phyllanthus tenellus</i> Roxb.	Mascarene Island leaf-flower	Meelarnelli
73	<i>Physalis angulata</i> L.	Cutleaf Groundcherry	Thol thakkaali
74	<i>Physalis pruinosa</i> L.	Husk Tomato	Periya-takkali
75	<i>Pilea microphylla</i> (L.) Lieb.	Rockweed	Chanapatti
76	<i>Pistia stratiotes</i> L.	Water Lettuce	Antara-T-Tamarai
77	<i>Pontederia crassipes</i> Mart.	Water hyacinth	Aagaya Thamarai
78	<i>Portulaca oleracea</i> L.	Purslane	Paruppukeerai
79	<i>Portulaca quadrifida</i> L.	Chicken Weed	Pasalai keerai
80	<i>Ruellia tuberosa</i> L.	Menow Weed	Pattaasukaay
81	<i>Saccharum spontaneum</i> L.	Townsend's Grass	Peikarumbu
82	<i>Scoparia dulcis</i> L.	Sweet Broom Weed	Sarakkotthini
83	<i>Senna alata</i> (L.) Roxb.	Roman Candle	Seemai Agathi
84	<i>Senna occidentalis</i> (L.) Link	Negro's Coffee	Peyaavarai
85	<i>Sesbania bispinosa</i> (Jacq.) W. Wight	Prickly Sesban	Mulchembai
86	<i>Sida acuta</i> Burm.f.	Common Wireweed	Pazhampasi
87	<i>Solanum americanum</i> Mill.	Night Shade	Manithakkaali
88	<i>Solanum seforthianum</i> Andrews	Brazilian nightshade	Kodik kathirikkaai
89	<i>Solanum torvum</i> Sw.	Turkey Berry	Sundaikaay
90	<i>Solanum viarum</i> Dunal	Tropical soda apple	Mullukathri

91	<i>Sphagneticola trilobata</i> (L.) Pruski	Singapore daisy	Karaippulli
92	<i>Spermacoce hispida</i> L.	Ken Fern	Naththaichoori
93	<i>Stachytarpheta jamaicensis</i> (L.) Vahl	Blue Rats' tail	Seemai Nayuruvi
94	<i>Stylosanthes hamata</i> (L.) Taub.	Caribbean stylo	Muyal Masal
95	<i>Synedrella nodiflora</i> (L.) Gaertn.	Cynderalla Weed	Mulpachilai
96	<i>Torenia fournieri</i> Linden ex E. Fourn.	Wishbone Flower	Kandi poo
97	<i>Tribulus terrestris</i> L.	Land Caltrops	Seruppada
98	<i>Tridax procumbens</i> L.	Mexican Daisy	Vettukaaya poondu
99	<i>Triumfetta rhomboidea</i> Jacq.	Bur Weed	Aadai otti
100	<i>Turnera subulata</i> Sm.	White Alder	Vellai Amala
101	<i>Turnera ulmifolia</i> L.	Yellow Alder	Kasakasa Bush
102	<i>Typha angustifolia</i> L.	Cat tail	Poonaiyaal pul
103	<i>Urena lobata</i> L.	Caesar Weed	Ottatti
104	<i>Waltheria indica</i> L.	Velvet Leaf	Shengalipoondu
105	<i>Xanthium strumarium</i> L.	Cocklebur	Marul oomathai
106	<i>Youngia japonica</i> (L.) DC.	Apanese hawkweed	Kasakazappu Mull

Conclusion

The Indian government should take necessary action to remove the invasive species and allocate funding for projects that utilise invasive weeds for beneficial purposes. This includes extracting bioactive compounds for pharmaceutical applications, converting these weeds into organic fertiliser, and producing charcoal from invasive tree species for energy and industrial uses. Additionally, invasive weeds can be used as nutritious feed for livestock. Furthermore, the World Trade Organisation (WTO) and Plant Quarantine (PQ) must adhere to stringent rules and regulations to safeguard native biodiversity from invasive species.

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