



# Fields in Transition: Integrating Agriculture into Chennai's Urban Resilience Agenda

*Insights from the First, Second, and Upcoming Third Master Plans (1975–2026)*

*Ramachandran Arumugam( 28 Oct 2025)*



# Chennai Metropolitan Area- Master Plan

Before 1975

- Only about **20%** of the **Chennai City area** and **less than 1%** of the **rest of the CMA** were covered by **Detailed Town Planning (DTP) Schemes**.
- DTP Schemes were prepared under the **Madras State Town Planning Act, 1920** (*now repealed*)



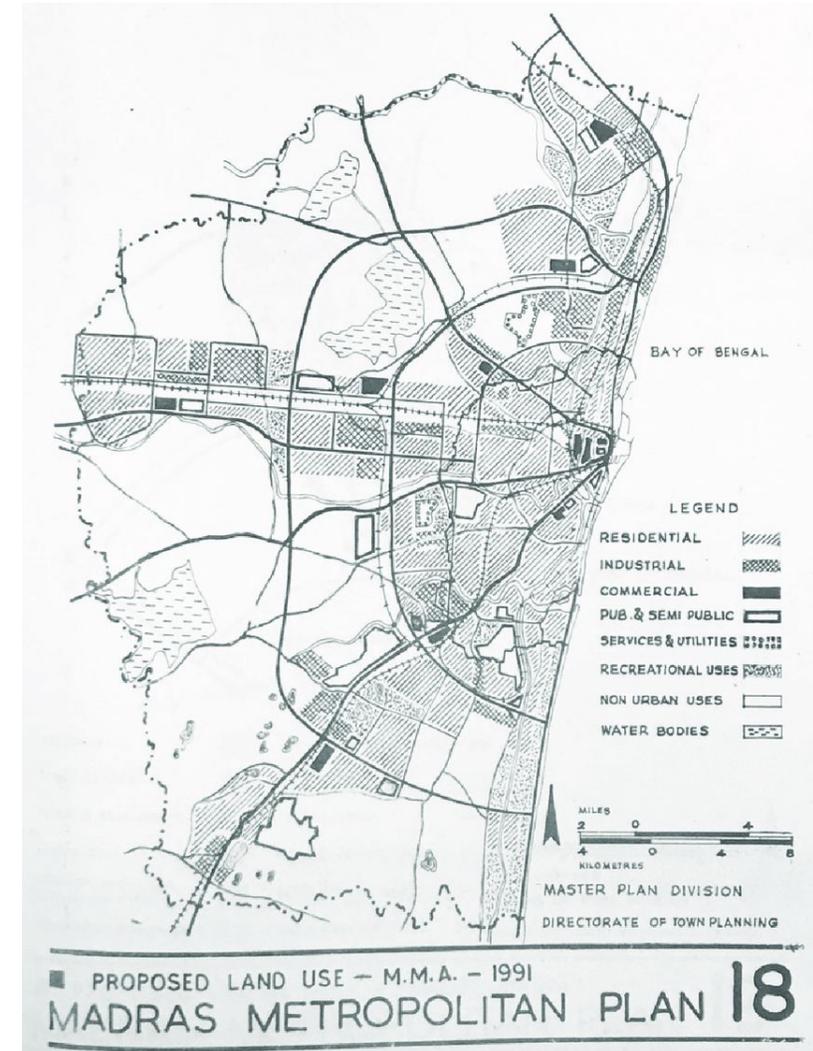
Master Plan introduced policies and programmes for the overall development of the CMA.



Land Use Plan priorities specifying permissible uses for every parcel of land.



The plan was implemented through Development Control Rules (DCRs), which formed an integral part of the Master Plan.

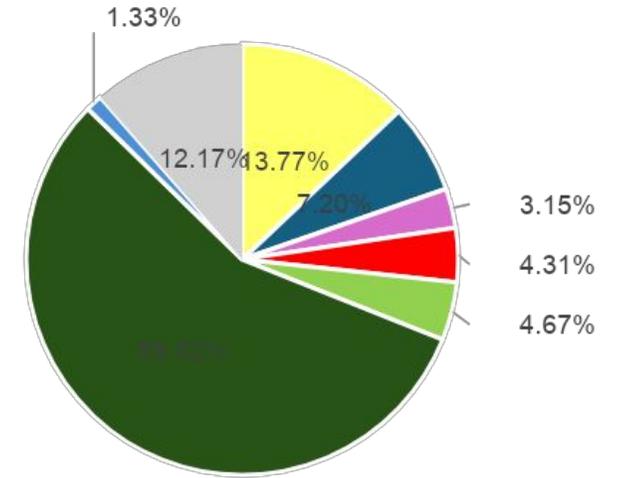


Source: CMDA

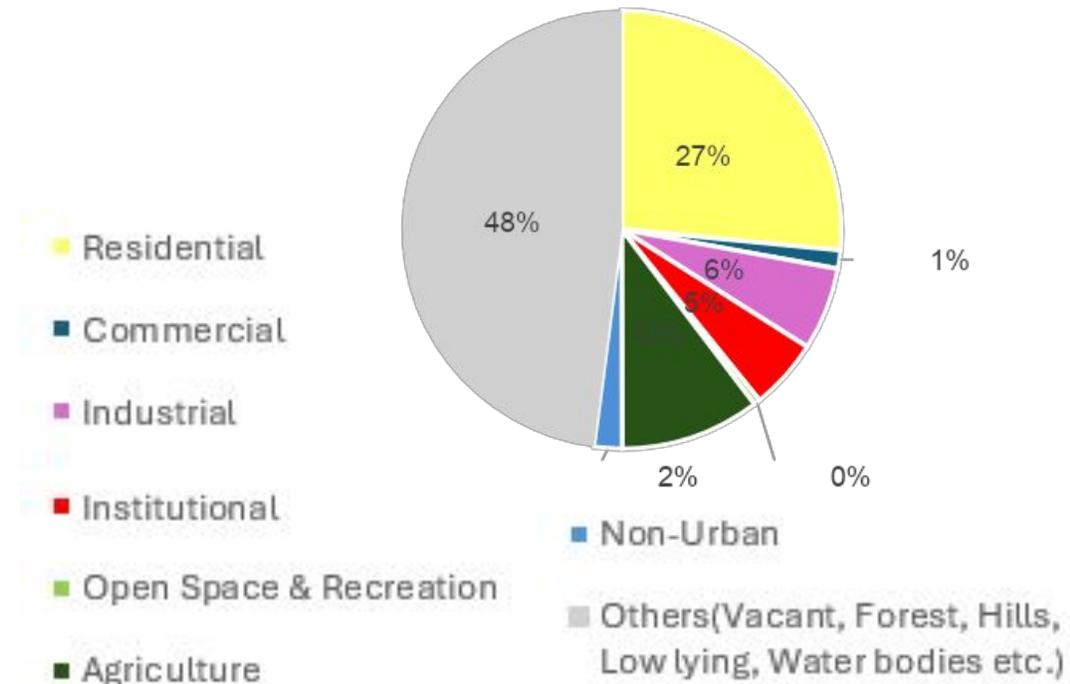
# Decline in Agricultural Land-Chennai

- **Before Master Plans (pre-1975):** ~60% of Chennai Metropolitan Area (CMA) was under agriculture.
- **First Master Plan (1976–1996):** Agricultural land reduced from ~60% to ~30%.
- **Review of First Plan:** Most developments adhered to the Master Plan; deviations included:
  - a) Introduction of commercial and institutional uses in residential and agricultural zones.
  - b) Emergence of unapproved layouts in agricultural areas.
- **Second Master Plan (2006):**
  - a) Agricultural land reduced to 10%.
  - b) Proposed that 3% of land be converted to other uses; remaining retained as agriculture.

Land use of CMA before 1975

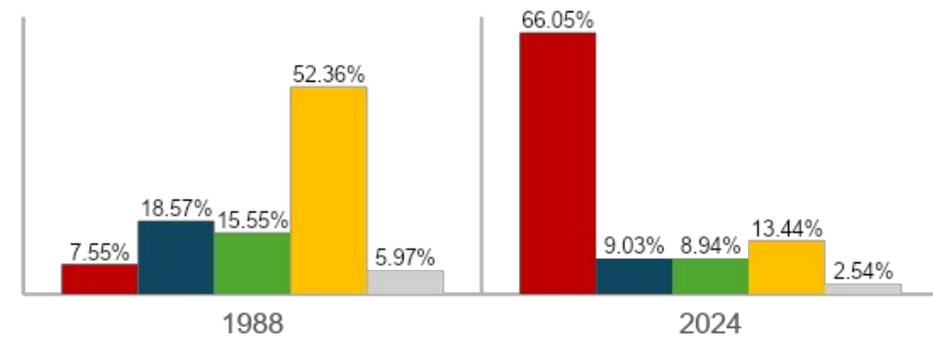
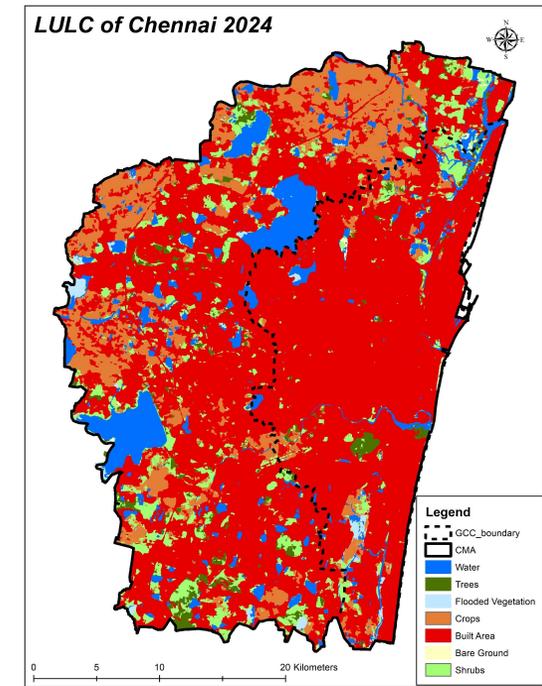
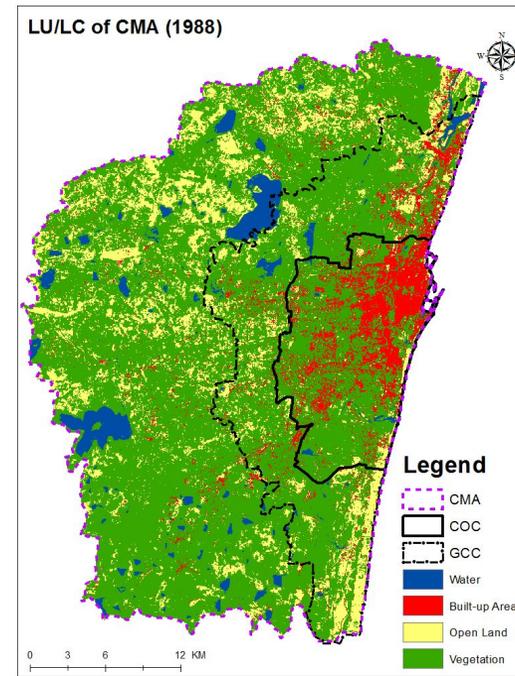
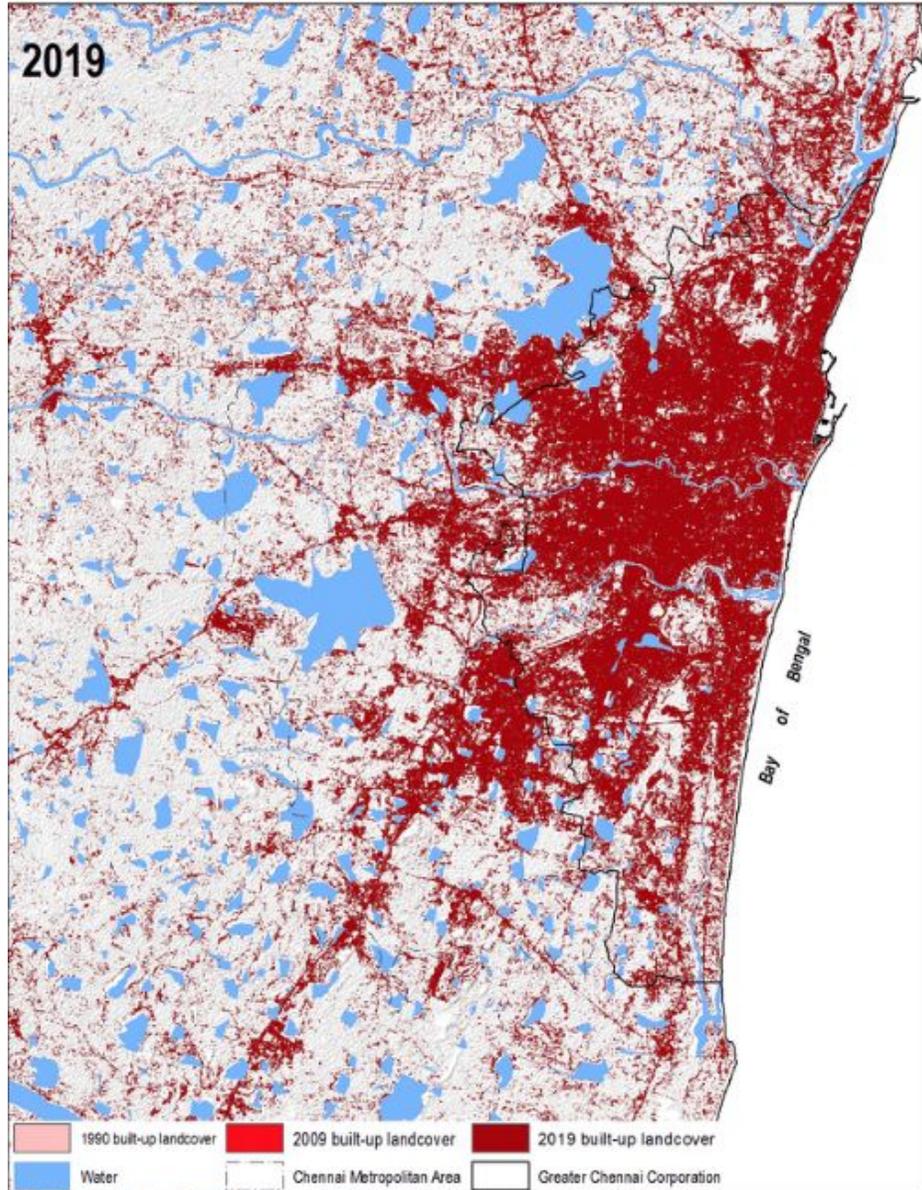


Land use of CMA Second Master Plan 2006



Source: Second Master Plan CMDA

# Decline in Agricultural Land-Chennai



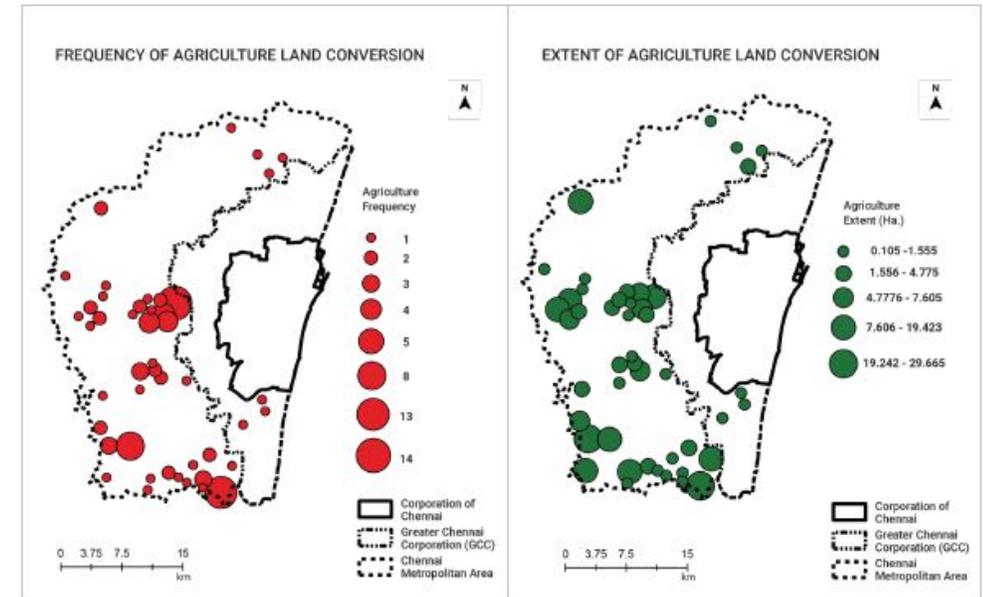
# Structural Drivers of Decline

- **Residual Category in Plans:** Agriculture was often a default/residual land-use, not proactively protected. Vulnerable to reclassification into “developable” zones.
- **Conversion Pressures:** Real estate expansion, infrastructure corridors, and revenue-driven reclassification of farmland conversion
- **Fragmentation & Livelihood Impact:** Farmland parcel into small residential plots- unviable for farming. Loss of income for farmers, disruption of irrigation/water links.
- **Planning gaps:** Agriculture seen as peripheral, limited recognition of its role in peri-urban food supply, flood buffering, soil fertility, and groundwater recharge.

## Reclassification in CMA from 1977 to 2005

Land Use from/Land Use To	Res.	Inst.& Com.	Indust.	Agri.	OS&R	Non-Urban	Total
Residential (PR to MR)	213	168	112	20	3	-	516
Institution & Commercial	99	11	18	4	4	1	137
Industrial	29	7	5	6	1	-	48
Agriculture	501	46	153	-	8	17	725
OS & R	60	8	28	6	-	-	102
Non-Urban	6	6	2	-	-	-	14
<b>Total</b>	<b>908</b>	<b>246</b>	<b>318</b>	<b>36</b>	<b>16</b>	<b>18</b>	<b>1542</b>

## Reclassification in CMA from 2006 to 2018



# Chennai Third Master Plan Opportunities (2026-2046)

## Planning Scope

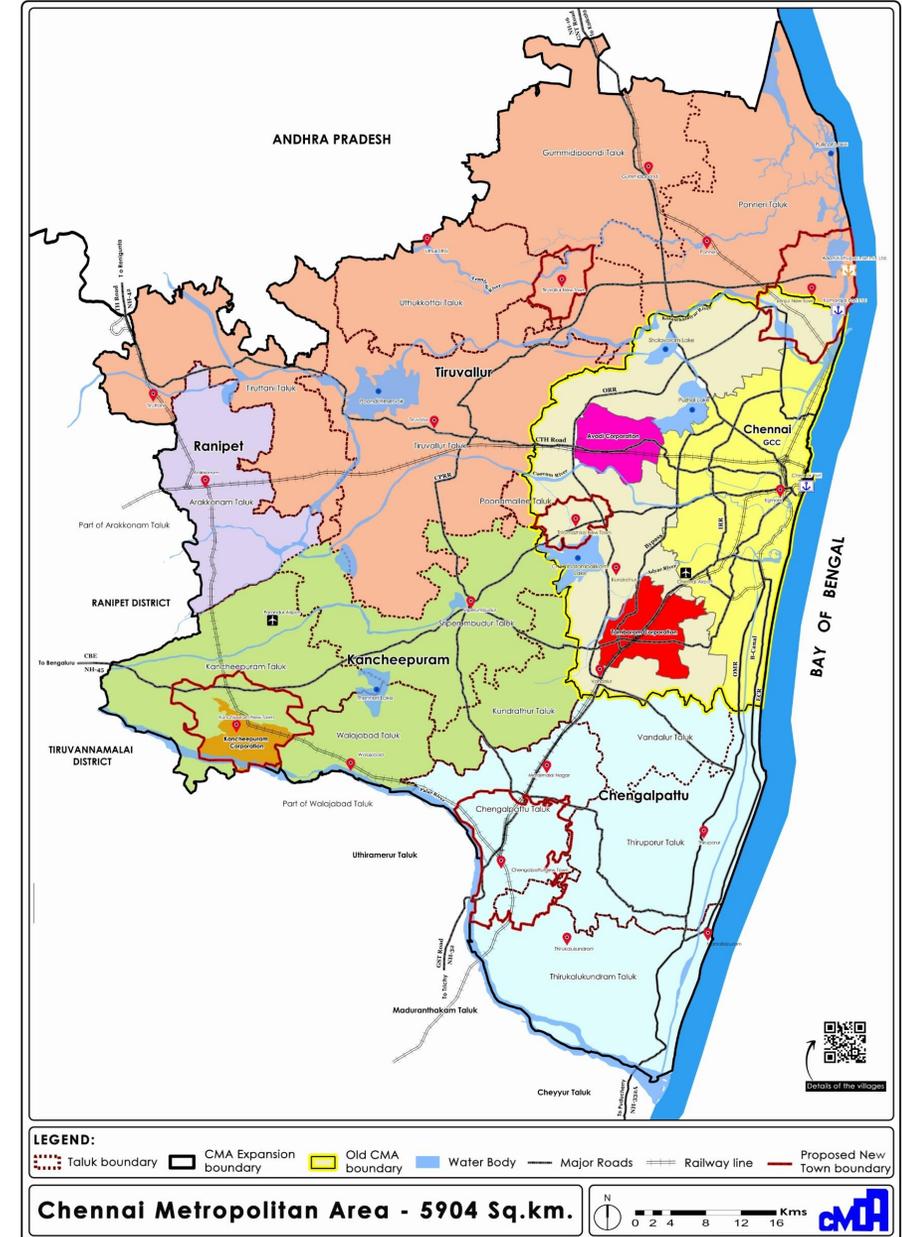
- Prepared for 1,189 sq.km (CMA core), not entire expanded 5934sq.km.
- To be notified within ~1 years.

## Sectoral Studies-25

- Flood Control Master Plan for Chennai(JICA)
- Integrating Blue Green Infrastructure
- Urban Heat Island Effects
- Climate Strategic Plan

## Key Proposals

1. Compact, Vertical Growth – Higher FSI, mixed-use development, phased infrastructure upgrades.
2. Urban Nodes & New Towns – Decentralisation to reduce congestion in core Chennai.
3. Private Sector Push for Flexible Land Use – Developers demand reducing agricultural zoning and expanding mixed-use categories to simplify reclassification.



# Emerging Focuses



**No-development / conservation zones:** Identifies key natural areas (e.g., Pallikaranai marsh) for protection with buffer zones.



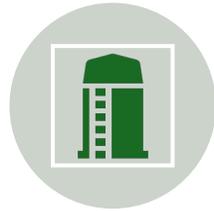
**Floodplain and drainage protection:** Conserves natural drainage corridors and limits encroachment on floodplains.



**Climate resilience focus:** Links agriculture with flood control, groundwater recharge, and heat reduction.



**Enhanced blue-green mapping:** Strengthens mapping of waterbodies, wetlands, and drainage to safeguard adjoining farmlands.



**Controlled land-use change:** Reduces ad-hoc reclassification; tighter rules for converting agricultural zones.



**Livelihood and food security lens:** Recognizes peri-urban agriculture as vital for urban resilience and local food systems.



## Urban master plan J27 - 2046

JMDA invites eligible consulting firms to assist for providing the services mentioned below.

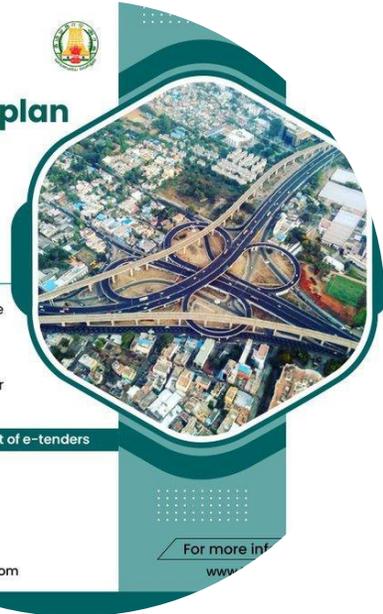
To provide technical assistance for multi-sectoral analysis and strategy development to promote **resilient, green and Inclusive Land Use Planning** for Chennai Metropolitan Area.

Last date and time of receipt of e-tenders

20.02.2024 up to 3:00 PM

For contact  
jmda@jmda.com

For more info  
www.jmda.com



# Land-Use policies protecting the agricultural land

## **Draft Sustainable Land Use Policy (2024)**

Introduces four zones: Development, Conservation, Agricultural, Transition.

Seeks to protect prime cultivable land and avoid diverting fertile / eco-sensitive terrain into land banks.

Integrates climate resilience and natural resource conservation.

## **Land Conversion Rules, 2017**

Agricultural to non-agricultural conversion requires government permission + fee (3% of market value).

Creates a regulatory barrier to discourage speculative land conversion.

## **Encroachment & Waterbody Protection Laws**

Prevent illegal occupation of public tanks, canals, and watercourses.

Indirectly secures farmland dependent on these resources.

## **Land Reforms & Tenancy Acts**

Land ceiling laws prevent concentration/speculation.

Tenancy rights protect cultivators from displacement, limiting forced conversion.

## **Protected Agricultural Zone (Mayiladuthurai Act, 2023)**

Declares Mayiladuthurai as a protected agricultural zone.

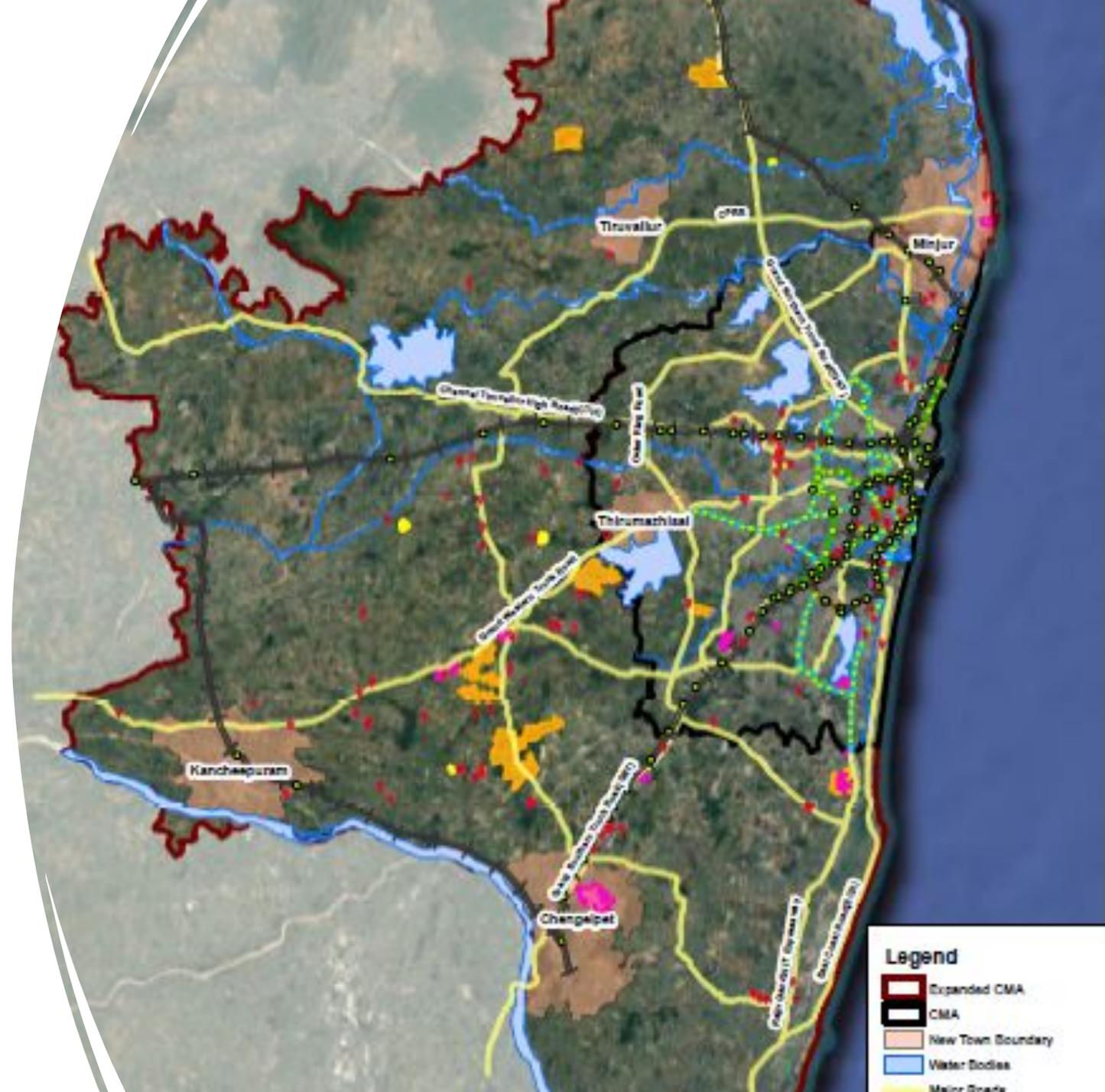
Extends “agriculture” to cover animal husbandry and inland fisheries.

Establishes a special authority to safeguard agriculture.



# Key Takeaways

- CMA farmland declined from 60% to 10% in 50 years due to planning choices, conversion, and speculative pressures.
- Tamil Nadu has introduced stronger policy frameworks (SLUP, Protected Agricultural Zones, conversion rules, reforms).
- Third Master Plan shows a shift toward protecting wetlands, floodplains, and peri-urban resilience.
- However, developer pressure, reclassification practices, and weak enforcement risk repeating earlier patterns.
- Future planning must integrate agriculture into urban resilience strategies for flood mitigation, food security, and groundwater recharge.



**Thank You**

---

