

Chennai

Urban Farming Initiative

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• DURATION

Ongoing since 2020

• POPULATION 2024

Chennai: 12,053,700 (Growth rate 2.36%)

• URA SCOPE

SOCIETY. Staying Human
STRATEGY. Shared Vision

• TOPICS

FOOD SECURITY
URBAN FARMING
CLIMATE RESILIENCE
COMMUNITY DEVELOPMENT
EDUCATION

• MAIN ACTORS

Chennai Resilience Centre.
Sempulam Sustainable Solutions
Okapi Research and Advisory
Residents of Kasturbanagar Association



In a city shaped by rapid urbanization and shifting climate patterns, the Chennai Resilience Centre (CRC) is working toward a future where communities, institutions, and individuals are not just prepared for these challenges but actively shaping solutions.

A key part of this vision is the Chennai Urban Farming Initiative (CUFI), launched in 2020 to rethink how the city grows its food. With rising temperatures, increasing food insecurity, and limited employment opportunities, the need for local, sustainable solutions has never been greater. CUFI aims to address these issues by transforming underutilized rooftops, courtyards, and vacant spaces into flourishing food gardens. These green pockets do more than just provide fresh produce—they cool overheated urban areas, strengthen local food systems, and create meaningful livelihoods, especially for marginalized communities.

To bring this vision to life, CRC launched Urban Thottam, a citywide platform that encourages residents, communities, and institutions to take part in urban farming. From compact kitchen gardens on apartment terraces to larger community plots in shared spaces, this initiative is designed to make fresh, nutritious food more accessible while generating income for women and youth from low-income.

Recognizing the immense potential of the city's vast concrete rooftops, CRC has also launched the Greener and Cooler Cities Mission. This campaign encourages middle- and upper-middle-class households to establish rooftop vegetable gardens, not only for personal benefits but as part of a collective effort to green the city. To ensure sustainability, CRC connects trained women gardeners from self-help groups (SHGs) with residents seeking guidance in maintaining their gardens, turning urban farming into a viable livelihood opportunity.

Beyond food production, these efforts aim to transform Chennai's urban landscape into a network of edible green spaces. By increasing tree cover and rooftop vegetation, the initiative helps lower temperatures, improve air quality, and reduce the urban heat island effect. Meanwhile, targeted skill development programs equip women and youth from disadvantaged backgrounds with the knowledge and tools needed to earn a steady income through urban farming.

The vision is clear: a Chennai where fresh vegetables grow atop high-rises, where neighbours come together to cultivate shared gardens, and where a greener, cooler, and more resilient city emerges one rooftop garden at a time.



Impact

The Chennai Urban Farming Initiative (CUFI) is not just about growing food—it is reshaping communities, fostering sustainability, and improving lives in multiple ways. Since its launch in 2020, the initiative has impacted over 25,000 individuals, including students in government schools, residents of homeless shelters, and families in vulnerable communities.

Strengthening Food Security. Model farms are producing between 15 kg and 100 kg of fresh vegetables within six to eight months, depending on the site and maintenance. In many Integrated Child Development Services (ICDS) centres, these gardens are the only source of greens, directly enhancing mid-day meals and improving nutrition for children.

Cooling the City, One Rooftop at a Time. With support from Earthnomic Engineers, CRC is measuring the thermal benefits of terrace gardens. Initial findings reveal that rooms beneath greened terraces remain 2–3°C cooler than those under exposed rooftops, with temperature differences reaching up to 7°C. This cooling effect reduces indoor heat stress, lowering energy demand and making buildings more liveable.

Education Through Gardening. Kitchen gardens are doubling as outdoor classrooms. At schools and ICDS centres, children are engaging with nature, learning about plants through hands-on activities, and developing early environmental awareness. Teachers use gardens to introduce colours, shapes, and vegetables, making learning interactive and fun.

Cultivating Sustainable Communities. ICDS staff are using gardens as tools for behavioural change, encouraging mothers to compost and segregate waste. This small but powerful shift is fostering a culture of sustainability.

Social and Economic Impact. Green spaces are improving mental health, particularly among homeless shelter residents, offering therapeutic benefits. Meanwhile, the upcoming **Madras Mali** initiative aims to create employment opportunities by connecting trained women gardeners with market demand, ensuring that CUFI's impact extends beyond food security into economic empowerment.

CUFI is proving that urban farming is more than a response to climate change—it is a catalyst for healthier, cooler, and more self-sufficient communities.

Challenge

Chennai, a city of over 12 million people, faces deep-rooted social and environmental challenges. A significant portion of its population struggles with poverty, lacking access to basic resources such as food, housing, and education. Thousands live in vulnerable settlements, while many more are homeless, forced to endure extreme weather conditions without shelter. Government schools, though essential, often lack adequate resources, leaving children from low-income families with limited opportunities for quality education.

Unemployment remains a pressing issue, particularly among women and youth from disadvantaged communities. Without access to skill development or stable job opportunities, many are trapped in cycles of poverty, unable to secure financial independence.

At the same time, Chennai is experiencing the growing impacts of climate change. Rising temperatures, urban heat islands, and erratic rainfall patterns are making the city increasingly unlivable, particularly for those without proper housing or cooling infrastructure.

These interconnected challenges demand urgent action. Addressing food insecurity, economic instability, and climate resilience requires innovative, community-driven solutions that provide sustainable livelihoods, improve living conditions, and create a greener, more inclusive Chennai for all.

Solution Proposed

The Chennai Urban Farming Initiative (CUFI) was developed in alignment with the long-term goals of the Chennai Resilience Strategy, focusing on strengthening food security, improving livelihoods, and fostering self-reliant communities.

The program is designed to enhance food and nutritional security among children and women in low-income communities, create green livelihood opportunities for women and youth through skill development in urban farming and promote climate resilience by introducing rooftop and ground-level vegetable gardens, contributing to a cooler and greener city.

CUFI consists of four interconnected project components:

Greener Schools, school kitchen gardens provide nutritious food while fostering environmental awareness among children.

Greener & Cooler Cities, Patchaimadi Thottams promotes rooftop farming to mitigate heat, improve rainwater management, and increase local food production.

Green Livelihoods, Makkal Thottams facilitates job creation for women and youth in community urban farms.

Gift a Garden, mobile vegetable garden kits are distributed to vulnerable families through fundraising efforts.

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