

CIRCULAR ECONOMY BUSINESS CASE STUDIES IN SOUTHEAST ASIA



Kokkoya Organics

- Yangon, Myanmar
- Urban farming
- kokkoyaorganics.com
- Analysis period: 2017-2024

Circular Urban Farming

Business Spotlight

Since 2017 Kokkoya Organics in Myanmar has been pioneering a circular urban farming model in North Yangon that has transformed underutilised city spaces into thriving, productive farms. A zero-waste model is applied, which converts organic waste into nutrient-rich compost, making use of no-dig farming methods and minimising resource use while maximising the ecological benefits.

This model relies on community-supported agriculture (CSA) and not only reduces reliance on synthetic fertilisers, but also deploys eco-friendly packaging and sustainable cultivation practices. The company's main products and services are organic vegetables and salad mixes, vegetable box subscriptions, and wood-fired sourdough bread, in addition to cafe meals, educational programmes and workshops, space hire, and farm-to-table experiences.

Kokkoya Organics demonstrates that urban farming can be more than food production: it can also create a regenerative system that nourishes people, communities, and the ecosystem. The impact of this programme includes expanded CSA memberships, deeper community engagement, and new employment opportunities that collectively

contribute to a resilient local economy. And finally, Kokkoya Organics has earned public recognition for its innovative urban farming model, youth training, and community-supported agriculture in Myanmar.

Keywords

Urban farming, Sustainable agriculture, Organic vegetables, Composting, Farm-to-table

Innovation

Product/service design, Manufacturing, End of life management, Resource circularity, Resource efficiency, Resource substitution



Context and baseline

According to the Climate Index Risk 2026,¹ Myanmar was the world's second most affected country by extreme weather events in the period from 1995 to 2024, with climate extremes severely undermining agricultural productivity.^{2,3} Compounding these challenges are declines in soil fertility and the unsafe use of chemical fertilisers and pesticides, both of which have intensified the risk of food insecurity in both rural and urban areas.⁴ Unless there is an urgent adaptation of Myanmar's farming systems to the realities of climate change, the country's vulnerability to food insecurity will continue to increase. Ensuring stable and resilient food production is the cornerstone for safeguarding livelihoods and strengthening national food security.

Confronted with declining soil fertility, agricultural practices such as the use of unsafe industrial chemicals on farms, and the rising food insecurity in Myanmar's cities, Kokkoya Organics was established in 2017 with a bold vision: they aimed to transform underutilised urban space in Yangon into a circular urban farm for safe, organic food production. With regenerative farming in the heart of the city, Kokkoya Organics promotes food safety, strengthens community connections, and improves environmental health. At its core, the company champions sustainable food systems to help solve urban food challenges and to demonstrate that regenerative agriculture can flourish even in small city plots. Guided by the motto *A world where all farming is regenerative*, Kokkoya Organics grows food while providing meaningful job opportunities for young people in a hands-on farming context and learning regenerative agricultural practices.

Kokkoya's journey began on a sandy, rubbish-strewn plot in the North Dagon township of Yangon in 2017. The company transformed barren ground into fertile soil with a 'no-dig' (zero tilling) method, using charcoal or biochar produced from cardboard and rice husk to improve soil quality. In December 2017, the farm delivered its first boxes of vegetables to 20 friends, and quickly expanded into a community-supported agriculture (CSA) network of 40 members. Over time, Kokkoya Organics has grown into a vibrant hub for sustainable living that hosts permaculture and home gardening workshops, builds hoop houses (poly-tunnels) for year-round cultivation,

and organises farm dinners to connect people with their food sources. When Kokkoya underwent the loss of their original site, the team crowdfunded and relocated to Thingangyun Township, Yangon in December 2019, rebuilding from scratch. The new site has incorporated a café, a farm-to-table model, packing space, and a regenerative market garden.

During the COVID-19 pandemic, Kokkoya became a vital service provider, delivering fresh produce and groceries across Yangon. Their growth has been fuelled by partnerships with community members and local businesses that have supported the development of no-dig farming and circular economy practices.

Innovation

Urban farming is a global trend, and Kokkoya Organics is developing and promoting circular urban farming. The company grows and sells its own organic vegetables, and in addition it offers workshops on sustainable farming and food practices. The company's principal service is the Food Waste Loop Subscription, which transforms household organic waste into nutrient-rich compost that is then used to fertilise the farm's own crops. The subscription is available at a nominal fee of USD 14 (30,000 MMK) for 4 weeks, and includes food waste collection and composting along with a supply of vegetables.

Kokkoya's innovations address the following three aspects of circular farming: design, production, and end-of-life management.

- Design: Farm layouts are optimised for space and resource efficiency while plastic packaging is eliminated.
- Production: A variety of organic vegetables are cultivated on site.
- End-of-life management: The farm's own waste is transformed into compost which is then used to regenerate soil health.

Kokkoya is continually innovating by integrating both circular economy principles and strong community engagement in Yangon as a model for sustainable living. The company's practices and commitments are strengthening local value chains while they promote effective collaboration with businesses, suppliers, and community members. A local

1 Climate Risk Index (2026), <https://www.germanwatch.org/en/cri>

2 Strengthening Food Security in Myanmar: A roadmap for localized action, Myanmar Developmental Observatory, UNDP (2023); https://www.undp.org/sites/g/files/zskgke326/files/2023-12/undp_mmr_strengthening_food_security_in_myanmar_dec_2023_v2.pdf

3 The Republic of the Union of Myanmar (2019), Myanmar Climate Change Strategy (2018–2030), https://myanmar.un.org/sites/default/files/2019-11/MyanmarClimateChangeStrategy_2019.pdf

4 Win, T.T., Thu, M. & Khaing, A.A., et al. (2020); Degradation of Soil Quality in Mandalay Region of Myanmar Due to Overuse of Pesticides in Agriculture, <https://journals.sagepub.com/doi/10.1177/1018529120977247>

ecosystem for knowledge and resource sharing and co-creation of events has resulted, and the farm has become a symbol of sustainable urban farming and fostered experimentation. Innovations include crate growing and improved drainage systems to create a natural swimming pool from a dugout hollow.

On their 0.6-acre site in Thingangyun Township, Yangon, Kokkoya Organics cultivates leafy greens, herbs, lettuce, kale, Asian greens, eggplants, cucumbers, radishes, and seasonal root vegetables. Their regenerative practices include:

- no-dig permanent beds to protect soil structure and reduce erosion
- biochar application to enhance soil health
- crop rotation and intercropping to sustain diversity and fertility
- on-site seed saving for resilience
- compost production from organic waste
- efficient water use through drip irrigation, mulching, sprinklers, and rainwater harvesting in on-site ponds



Circular Economy impact

Kokkoya Organics demonstrates complementary Circular Economy strategies. Composting organic waste and harvesting rainwater illustrate resource circularity. By switching from chemical fertilisers to using compost and biochar, by adopting organic practices and using solar energy, the company is providing a showcase for resource substitution. The improved soil health minimises the need for irrigation and other farm inputs, and combined with drip irrigation, achieve resource efficiency.

Taken together, all these initiatives are providing eloquent testimony that circular urban farming systems can thrive while minimising waste, eliminating single-use plastics, and encouraging

more responsible food consumption. Furthermore, providing a local food supply eliminates the greenhouse gas emissions associated with transportation over long distances, and a synergistic opportunity to benefit from composting of household and business organic waste is made possible.

Kokkoya composts between 200–400 kg of organic waste monthly, including vegetable trimmings, cafe kitchen scraps, food waste and other biodegradable household waste. It is estimated composting and vermicomposting are eliminating 0.8–1.6 metric tonnes of greenhouse gas (GHG) emissions annually. Compost enriches the soil, minimises the need for synthetic fertilisers, cutting chemical inputs and preserving natural soil quality. Compared to conventional market gardens of similar size, Kokkoya achieves water savings of 25%–30% through drip irrigation and mulching. The solar panel capacity of an 11 kW Solar Inverter System (a 11 kW Single Phase inverter, 51.2 V 300 Ah low voltage battery x 2, and 550 W 4’/8’ Trina solar panels x 20) and a private well were installed to ensure self-sufficiency in energy and water, and the improved drainage from raised beds and mulching enables the farm to withstand flooding.

The impact of Kokkoya Organics extends far beyond waste reduction. The underutilised urban plots have been turned into productive farms that enhance biodiversity and offer green spaces in Yangon, all the while strengthening urban ecosystems. Their commitment to circularity also includes eliminating plastic packaging in favour of biodegradable alternatives, such as cardboard boxes.

Business and market impact

Kokkoya Organics serves Yangon households, restaurants, and schools with locally grown organic food. Most produce is distributed directly through community-supported agriculture (CSA) subscriptions, on-site farm sales, and the farm’s café, ensuring close consumer relationships. In addition to selling their produce, the farm hosts educational visits, workshops, and community events, positioning itself as a producer and a hub for sustainable living. The initial investment of USD 60,000 was primarily self-funded and supported by community crowdfunding. The produce yield from the farm varies from 200–300 kg of vegetables monthly depending on the season. The farm vegetables are sold via CSA subscriptions, supplemented by direct sales in the both the café and the company store. The company’s monthly income of USD 4,000–10,000 fluctuates with harvest cycles. As the company operates as a social enterprise, profits are modest and are reinvested into operations, staff development and community programmes.



The CSA members receive vegetables delivered weekly in crates or bags, and these are collected to be cleaned and reused again. Other Kokkoya Organics sales are in biodegradable or paper-based packaging. The organic waste from the farm, the café, and the surrounding community is composted to be used on the farm, which lowers waste disposal costs for both local households and businesses.

Kokkoya Organics has achieved strong loyalty built on their customers' trust in the company's organic, chemical-free produce. Raising environmental awareness and fostering community engagement are Kokkoya's goals, and they have been recognised with a number of awards and grants. A research grant from the Australian Embassy in Myanmar is supporting soil-health projects, including training on composting methods, soil testing, regenerative practices, monthly farmer meet-ups, and digital tools (a soil data app and an online sharing platform). These efforts aim to foster not only a wider adoption of Kokkoya's farming practices but also to expand regenerative agriculture throughout Myanmar.

Stakeholders

From the outset, Kokkoya Organics integrated stakeholders into the development and deployment of circular urban farming. Local businesses and households are engaged –through community-supported agriculture (CSA) memberships, workshops, and awareness events – to foster sustainable practices and strengthen local food systems. A network of 20–30 local producers provide additional produce, depending on the season.

Kokkoya is providing secure jobs for local residents. Around 10 full-time staff (70% women) are employed in farming, baking, café operations, store management, and administration. Young people, who receive training in regenerative agriculture, gain valuable skills in farm management and community interaction. In addition, volunteers and interns are welcomed, which nurtures the next generation of sustainable farmers.

The partnerships with local businesses and non-governmental organisations (NGOs) include businesses and entities such as 3Zero House Myanmar⁵, Girl Determined⁶, Community Partners International/Myanmar (CPI/CPM)⁷, Sampan Travel⁸, and Doh Eain⁹, as well as local community volunteers such as the YNN and¹⁰ YEAH network¹¹, restaurants, and schools supporting sustainable sourcing and activities. The collaboration with the European Union SWITCH-Asia Programme and Prevent Plastics Plus Project¹² focuses on capacity building and awareness events to reduce plastic use and sustainable consumption and production practices. By fostering collaboration, Kokkoya strengthens its own operations, supports local SMEs, encourages resource sharing, and contributes to building a resilient local economy rooted in regenerative agriculture.

Implementation

Kokkoya Organics faces significant challenges from time to time, including flooding and natural disasters, land insecurity, limited access to affordable organic inputs, weak national policy support and infrastructure for urban agriculture, unreliable power and water supply, restricted access to sustainable packaging, and consumer habits that show a preference for convenience.

Nevertheless, Kokkoya Organics has consistently adapted so as to advance principles of circular urban farming. The long-term community-supported agriculture (CSA) relationships that reflect environmental responsibility and community engagement have made possible an agreement on a long-term lease for land security for the company's organic farm. And hundreds of Yangon households have become more conscious of circular living through CSA participation and outreach. The CSA Memberships of 20–60 active members make it possible for them to receive weekly vegetable boxes.

5 <https://www.3zero.org/2399-2/>

6 <https://www.girletermined.org/>

7 <https://cpintl.org/myanmar>

8 <https://www.sampantravel.com/>

9 <https://www.doheain.com/>

10 <https://myanmar.un.org/en/206507-promoting-better-urban-future-myanmar>; YEAH:

11 <https://preventplastics.org/yeah>

12 <https://www.preventplastics.org/>

More than 200 workshops have been hosted since 2018, covering topics such as composting, soil health, urban gardening, vegetarian cooking, and natural dyeing. And since 2021, the Urban Farm Internship Program has trained over 30 youths aged 18–25 in regenerative farming and environmental entrepreneurship.



Takeaways

Kokkoya Organics demonstrates that urban farming can drive both sustainability and community empowerment. By integrating sustainable and regenerative farming methods, such as composting organic waste and using natural materials in local food systems, Kokkoya demonstrates the tangible benefits of circular agricultural practices. The company's model has generated positive effects for employment, community engagement, and environmental sustainability, showing how innovation can deliver meaningful change in urban communities.

Kokkoya Organics stands as a model of resilience and innovation, providing evidence that circular urban farming can regenerate exhausted soils and promote biodiversity, empower communities, and redefine sustainable living. Looking ahead, Kokkoya has plans to:

- strengthen supplier partnerships to further reduce the use of plastics,
- position the farm as a demonstration and learning site for regenerative agriculture,
- support replication in nearby neighbourhoods and nationwide, and
- contribute to local innovation and knowledge sharing.



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Disclaimer

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