

Food System Vision Prize

IWMI, The Soup Bowl, Ananta Sustainables, Robin Hood Army and KIKU

January 31, 2020

### **Colombo, Sri Lanka: An urban ecosystem deeply connected to its rural roots**

Thanks to the tireless efforts of dedicated farmers, activists, researchers, business owners, government officials and more, Colombo has transformed into the beating heart of Sri Lanka's Island-wide circular Economy.

Over the past thirty years, a food movement ignited and swept across the Island, propelled by millions of residents united by the dream of a regenerative, nourishing food future for all. Although faced by many challenges, they treated every obstacle as a catalyst for action, taking the words of Mr. Anura Dissanayake, Secretary, Ministry of Mahaweli Development and Environment, to heart: "Contribute with your fullest capacity to our people and environment." Now, in 2050, Sri Lanka serves as the world's prime example of a zero waste, zero hunger society. Post harvest losses, sky-high food mileage, soup kitchens and untreated wastewater are relics of the unmourned past — preserved only in the memories of elders and school curriculums, so future generations don't make the same mistakes that we once did.

How did this transformation come about? It all started with the 2019 Global Climate Risk Index, which ranked Sri Lanka #2 on its list of countries most at-risk of climate change. The news spread like wildfire, as people felt foreboding settle into their hearts. What would happen to the Island? Climate projections revealed that sea level rise did not discriminate when swallowing up religious sites and touristy beaches alike. Extreme weather events were predicted to plague rural areas, home to some of Sri Lanka's most vulnerable communities; and changes in precipitation and temperature seemed like they would erase endemic species from the Island one by one. In order to cope with the news, people came together. The initial fears and grief eventually transformed into a resolve to protect the Island's Environment and Culture through innovations in Technology and Policy, changes in Diet and a transition to a circular Economy. Residents and researchers worked together on community-led projects to develop new strategies for climate change adaptation — collaborations which laid the foundation of the Colombo that we know and love today.

What does our food system look like, a full thirty years after the Global Climate Risk Index's dire predictions? Let's see. Whereas Colombo once sourced nearly all of its food from other parts of the country, it is now capable of supplying the majority of its population with fresh fruits and vegetables — half of Sri Lanka's entire population. Ever since a new Policy required buildings to meet certain self-sustainability codes, apartment buildings, office buildings, hotels and more have launched countless home and rooftop gardens across the city. Some especially industrious individuals even pioneered the way with hydroponic vertical farming. The government further encouraged urban agriculture by providing space for community gardens and planting

perennials across the city. These edible green spaces have not only reduced food mileage and improved Colombo's resilience to external shocks, but also mitigated the urban heat island effect. A second Policy, which stemmed from the Asian Development Bank and United Nations Development Programme's 2017 "Assessment of Sri Lanka's Power Sector," called for a transition to 100% renewable energy by 2050. Now only electric vehicles cruise the streets of Colombo, which reduces air pollution and the contamination of urban gardens. A third Policy, which passed with unprecedented support, combined the ancient Sri Lankan tradition of "ambalamas" (rest stops where travelers and traders exchanged goods, ideas and information) with an AI-driven advisory app that disseminates market data and optimizes food flows within the system. Offline, urban dwellers promote a sharing Economy while socializing and trading their fresh produce at ambalamas; while online, they share data, learn about best growing practices, access market data and receive recommendations on what crops to grow at a given time. In this way, the revival of traditional knowledge and the integration of new Technologies led to the rise of community-supported agriculture in Colombo.

It is a success in itself that Colombo is now an agricultural hub with incentivized farming. An even bigger success, however, is the fact that Colombo's resident farmers practice climate-smart agriculture. For example, one of the topics that was researched extensively by community science initiatives was how Sri Lanka's agriculture could mitigate and adapt to extreme weather events. In response, farmers have learned to diversify their crops (especially with indigenous fruits and vegetables) and adopt regenerative farming practices to replenish soil health, since it acts as a buffer for climate-related hazards. Similarly, weather forecasting systems and index-based insurance — powered by affordable, accessible Technologies, such as smartphones, remote sensing and on-farm sensors — now help farmers to prepare for and recover from floods and droughts. Lastly, the government, recognizing that climate change has the worst effects on women and those who are resource-poor, passed the Colombo Wetland Protection Act. Since wetlands' ecosystem services boost the incomes of the city's most vulnerable people, the Act not only helped them afford nutritious food for their families, but also preserved the Environment across the region despite rapid urbanization.

Furthermore, now that everyone in Colombo has greater engagement with the food value chain, the public perception of farmers has changed drastically. Farmers used to be well-respected in Sri Lankan society. There was an old saying "ඔබ ඔබේ පාදවලින් මඩ සෝදා ගන්නා විට ගොවියෙකු පවා රජෙකු වීමට සුදුසුය," or, "When you wash the mud off your feet, even a farmer is worthy of being a King." The appreciation for farmers was lost over the course of colonization — first by the Portuguese, then the Dutch, then the British — and the Green Revolution, when farmers were told to forget their traditional knowledge and focus solely on yield, thus developing a dependency on many chemicals and pesticides. As a result, many farmers struggled with a poverty mindset. They were unable to consider the long-term, global consequences of their farming practices because they needed to focus on growing enough to survive. Thankfully, Sri Lanka's food movement has lifted many farmers out of poverty through certifications and restored their status as people who are independent, knowledgeable and life-giving. They now have more agency over setting price points, for instance, and even encourage

their own children to pursue a future on the land. As a recent newspaper headline proudly stated, “In Sri Lanka, Farmer Is King Once More!”

The residents of Colombo’s greater engagement with the food value chain also led to more educated consumer choices regarding Diet. Suddenly, it was common for teenagers to ask one another, “Who grew your gotukola?” just like they asked where someone bought their shirt. With so many consumers paying attention to the quality of their food, the food system adapted accordingly. Wholesale markets like Manning Market flourished, despite historical concerns that they would be out-competed by supermarkets. Many scientists threw their energy into producing lab-grown meat; while Colombo’s top chefs developed recipes that channeled Sri Lankan Culture while promoting seasonal eating and nutrition and combatting past fixations on fast food. In order to encourage these innovations, Colombo boasts a variety of living lab, accelerator and incubator services that help entrepreneurs to validate their agritech ideas, refine their business plans and improve their tech skills, mapping their capacity onto needs across the food value chain.

Perhaps the cornerstone of Colombo’s circular Economy is resource recovery and reuse, which happens across all scales in the city. At the micro-level, buildings generate their own power through solar panels, biogas plants and thermal energy; farms apply regenerative principles; retailers package their produce in woven baskets instead of plastic sacks; and consumers know to use pineapple leaves for fiber and pumpkin powder for soups. At the macro-level, resource recovery hubs are dynamic sites of rural-urban exchange where farmers bring their produce and collect organic fertilizer derived from urban waste, enriching their land and — more importantly — enabling the reclamation of land that had been lost during the time of reckless monoculture practices. Due to these improvements in resource allocation, the countryside is flourishing as well. Colombo thus evolved from the dead end of a production line into a cradle of resources, circumventing the tremendous pressures that urbanization normally places on the rural-urban flows of goods, people, information, finance, waste and information. As we strived for a self-sufficient Island, adopting human-centered approaches and carefully managing our natural resources, we learned the critical lesson that neither the urban nor the rural regions can survive without the other.

As you can imagine, it has been quite a journey for Colombo. Over the past hundred years, Sri Lanka has experienced colonialism, civil war, a constitutional coup, terror attacks, a devastating tsunami and severe effects of climate change. Despite this, however, we have managed to become a world leader in cultivating a sustainable, equitable, healthy food system. Above, we described our food system in terms of what it looks like — but the most important thing we want you to understand is why we believe in it. This food system reflects our values. Once upon a time, farmers would grow organic rice in order to sell their harvest at higher prices, but then go to buy cheap, inorganic rice for themselves to eat. Now, we grow organic, reduce our waste and share our food because these practices embody our collective, Cultural values. Through a lot of hard work and faith, we are happy to say that our food priorities in Colombo have shifted from “yield” and “need” to “sustainability,” “community generosity” and “well-being.”

Looking toward the future, our greatest hope is that we can inspire and support other communities around the world to co-design food systems that works for them. We would be honored to contribute to a global Vision of regenerative, nourishing food futures for all!