

A close-up photograph of a person's hands holding a large bunch of fresh green beans. The person is wearing a red and white plaid shirt. The background is a blurred blue sky. The text is overlaid on the bottom half of the image.

# Sowing the seeds of sustainability

From grassroots movements crowd-funding carbon farming to the rise of high-tech urban farms, innovative organizations across the Asia-Pacific region are plowing a greener furrow writes Amy Snelling



**T**here's no denying the food industry needs to take a leading role in the fight against climate change. According to a recent UN-backed study, food systems are responsible for producing over a third of human-caused global greenhouse gas emissions. But when it comes to playing their part in reducing the industry's growing carbon footprint, the big question many operators face is how?

Across Asia, which accounts for roughly half of those global emissions, the food industry faces multiple challenges over the coming years: from land degradation and severe effects of climate change to food insecurity exacerbated by growing urban populations and a reliance on inefficient, long-distance supply chains. But innovative players are leading the charge for change.

#### Tackling the carbon crisis

"There's a way for us to solve the [climate] crisis if we pull enough energy around mobilizing people from the bottom up to get things done rather than wait for the system to change," says Hong Kong-based chef-restaurateur and founder of Grassroots Initiatives Consultancy, Peggy Chan. Working with operators across the city to reduce their carbon footprint and implement circular practices, Chan explains: "How we reduce our carbon has been a huge conversation this past year."

By the end of 2020, three of Asia's largest economies had pledged to go carbon neutral, with Japan and South Korea

committing to transition by 2050 and China by 2060. "But for restaurants to reduce carbon emissions we need to know how to get there, and I would say most [operators] don't," says Chan.

"What restaurateurs do know is how to reduce our carbon footprint by applying best practices, such as shifting to more plant-based menus, using LED lights, or removing single-use plastics – these are all good, but they're not at a scale to solve the crisis." A strong advocate for grassroots activism, Chan recently launched the Asia arm of Zero Foodprint – a California-founded nonprofit that connects stakeholders along the food industry chain to support regenerative agricultural solutions that draw down carbon. One of the main objectives is educating around soil carbon sequestration as a large-scale "nature-based solution to capture carbon from the atmosphere."

Zero Foodprint Asia (ZFPA) is kicking off with a tried-and-tested ZFP initiative: the "1% pledge to restore the planet", a crowd-funding program that collaborates with restaurants to donate a 1% surcharge from customers' bills to fund restorative farming practices locally and regionally. "Our goal is to create a renewable food system where we're no longer subsidizing [damaging] industrial agriculture, but directly funding regenerative farming instead," says Chan. We want to give food sovereignty and power back to the farmers to do what they do best: take care of our land and soil, and grow good food." >

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Peggy Chan (above) has set up the Asian arm of Zero Foodprint to encourage a "nature-based solution to capture carbon"



**“Positive steps for the environment do not drive any increased customer support, which makes the extra cost harder for most to assume”**



Matt Reid (top) and Malcolm Wood (above) were early supporters of ZFPA through their restaurant business Maximal Concepts

ZFPA is starting the program with two pilot projects in Hong Kong, a city that relies heavily on eating out with the highest number of restaurants per capita in the world. The program is starting with two pilot projects in Hong Kong, and they’re already eyeing up places like Singapore and Taiwan as well as mainland China – where Chan envisages they’ll really be able to scale up. “With regenerative farming, whether through managed grazing or silvopasture, there’s more impact if the acreage is higher – more land gives a higher surface area for carbon sequestration.”

#### Going full circle

Chan also champions education to redefine our relationship with food and how everything we source and eat links to biodiversity and sustainability. “In cities such as Hong Kong where 90% of food is imported and we rely heavily on convenience, we’ve lost connection to where our food comes from. Hence why we also have a massive food waste problem – we’re one of the most wasteful cities in the world,” Chan continues. Only 60 years ago, two-thirds of the vegetables consumed in Hong Kong were grown locally. “Arable land has been wiped out for property developments, so the population of farmers has decreased. We need to bring that knowledge back.”

In the future, ZFPA will launch the Carbon Neutrality program, working with chefs to carry out life cycle assessments (LCA) to measure, reduce and offset their

carbon emissions. “An LCA examines a restaurant’s past 12 months of inventory, as well as energy, water and waste to ascertain the amount of CO2 its operations emit on average.” Alongside calculating a restaurant’s carbon offset the data can inform and change sourcing habits, for example, swapping out more carbon-intensive ingredients. “If a restaurant is using prawns for a dish, the tool may suggest using mussels instead as they cause 30% less carbon emissions,” says Chan.

An early supporter of ZFPA, Matt Reid and Malcolm Wood’s restaurant group Maximal Concepts has championed sustainability since its founding, prioritizing it with what Reid calls “increasing fervor” over the years, “challenging every aspect of our supply chain and making hard choices.”

Two of the main barriers Reid sees for restaurants to achieve carbon neutrality in Hong Kong are “cost and consumer disinterest”.

“The reality is that positive steps for the environment do not drive any increased customer support, which makes the extra cost harder for most to assume,” he says.

To address the issue the duo is launching a new venture, “targeting zero waste and full circularity by 2025 to incubate learnings and new technologies in this space.” While they’re keeping details under wraps, they explain it will price carbon mitigation costs into their cost of goods sold (COGS). “This is a systemic change to look at our ingredients from a more natural capital cost viewpoint.”



From far left: Serving sustainable food; growing more locally; sourcing cage-free eggs

As for the additional challenges of sustainable sourcing operating somewhere as densely populated as Hong Kong? Reid emphasizes, “It’s hard but let’s not forget Hong Kong used to produce 60% of its consumed produce. The whole system needs to be re-built, re-invested in and supported. New food tech is also making this reality easier to achieve. We now buy all our salad greens from Genius Greens an aeroponic farm in Kowloon. The quality is better than any imported product too.”

### The rise of agri-tech

High-tech agricultural initiatives such as urban indoor farms are making waves across the region as a solution to procurement issues. Matt Kovac, the Singapore-based executive director of Food Industry Asia explains: “The main challenge to sustainable sourcing for foodservice operators is the availability of ingredients where they operate. Take the example of French fries in Singapore – potatoes are not available in Singapore, and perhaps not even in [neighboring] Malaysia. It’s the same issue with meats and seafood.”

This is where controlled-environment farming steps in. “It makes it possible to grow [certain ingredients locally] on a scale to meet commercial needs, regardless of the climate, floods, droughts and other disruptions to the supply chain,” Kovac says. “And being within the same country of consumption means it shortens the supply chain and could reduce transportation

and thereby food waste through damage.”

Considering food security concerns and the rate of urbanization, perhaps it’s unsurprising vertical farms are on the up in cities across the region (it’s already home to over 500 plant factories according to The Asia Food Challenge report), however, they’re not a silver bullet. In Singapore, Kovac continues: “Urban farms can cater to a percentage of our demand for vegetables, but not for other staples such as meats, rice, sugar, etc. To enhance food security, we might have to return to our farming roots and set aside land (perhaps offshore islands) as dedicated farming areas to fulfil our protein needs.”

Challenges aside, these innovative solutions are part of a bigger and smarter push for sustainability: “We’re seeing companies consider how they can minimize and reduce waste and resource use, how they can grow more with less land and water, protecting biodiversity, increasing the use of clean and renewable energy at production, storage and distribution, and making commitments towards helping climate mitigation...” Ultimately, investors, regulators and consumers will increasingly demand sustainability and reduced carbon footprint. “There are opportunities for companies who are first-movers and who recognize this and act fast. Climate adaptation is as important as climate mitigation, and forward-thinking companies are already reaping the benefits of moving fast.” ■



### “Future-proofing supply chains”: Responsible sourcing and animal welfare

Alongside initiatives to draw down carbon, in recent years and intensified by Covid-19 there’s a growing demand for more responsible livestock management. “Consumers are increasingly choosing food that is produced sustainably and ethically,” says Elissa Lane, co-founder and CEO of Singapore-based multinational consultancy Global Food Partners (pictured above).

Working with businesses to implement cage-free egg procurement and production in Asia, Lane believes transitioning to higher animal welfare practices presents opportunities globally. “Not only are food businesses making commitments to sustainable and responsible sourcing, they’re also increasingly publicly communicating progress on their commitments to give credible and transparent information to investors, animal advocacy groups, suppliers and consumers.

“On the other side of the supply chain, improving livestock management is also key to the long-term sustainability of farmers in Asia. Major food businesses in the region have pledged to only source eggs from cage-free farms and are only doing business with farmers who meet this requirement.

By transitioning to higher welfare cage-free housing systems, farmers can take advantage of this growing market opportunity, future proof and remain competitive.”