Philanthropy has a central role in the transformation of global food systems and forging a new world order built on equity, justice, resilience and hope.
A moment between then and now

We must take the opportunity offered by events to reconfigure the world’s food systems – and that involves seeing them as systems

When we first sat down to conceptualise this issue, we thought about the need to speak to the journey philanthropy has been on when it comes to food systems and where it goes next. 2021 has, in many ways, been the portal, to use Arundhati Roy’s metaphor, between the past, or normal as we knew it, and the opportunity for a new world rooted in equity, justice, resilience and hope. Now what do we do about it?

Each year, philanthropy spends billions on issues which are implicitly connected to food systems – whether that’s environment and nature conservation, or action on climate and planetary health, or human rights, nutrition and sustainable development – but food systems are seldom explicitly addressed in funding strategies.

A work in progress seems like a cliché but it feels right here. 2021 has been a landmark year for awareness and for action on food systems. At the international, national and sub-national process levels, nations and other food system actors gathered at the UN Food Systems Summit 2021, UN Climate Change Conference (COP26), UN Biodiversity Conference (CBD COP15), and the UN Committee on World Food Security. From healthy diets and resilient production practices, to action to stem biodiversity loss and species conservation, to the governance and economics that heavily affect the entire world system, food systems have been at the centre of each of these political agendas.
Unsurprisingly, there have been as many areas of consensus as there have been of deepening schisms and tensions about power, knowledge, representation, corporate influence on government, and all the associated debates about pathways forward. In this context, the clarion call for systems transformation has resounded. And where we go next in this reality has never been more vital.

To help us think critically about the journey so far, evaluation pioneer and systems-thinker Michael Quinn Patton on page 44 provides a historical look at philanthropy and makes a case that we have been entrenched in siloed thinking to our detriment. He raises the case of a major foundation that had significant yet separate programmes in so-called developing countries all operating independently of each other. He asks ‘what would it look like to create an integrated systems transformation programme?’ and sets out 10 food systems transformation trends to guide future philanthropic engagement.

Systems change work is hard; it challenges the status quo and deep-rooted behaviours and societal norms. It requires a shift in thinking as much as in doing. Even so, there’s no doubt in my mind that, in the last 12 months, we’ve witnessed radical shifts in public awareness. The deeply inequitable impacts of the Covid-19 pandemic and climate change have been reflected in the cross-cutting dysfunctions at the heart of the industrialised food system. Whether pandemics, biodiversity loss, rates of obesity, or the toxic loads carried by farm animals and food system workers alike, people are waking up to how food systems are pushing the planet and our collective health to the limit.

Sectors and industries are responding to this situation. For one, impact investors – as outlined in Rex Raimond and Jennifer Astone’s piece on page 57 – are looking to de-risk their portfolios through blended finance, insurance and other risk-reduction mechanisms. Donors and others with money on the line are increasingly realising that they need to accept uncertainty, recognise complexity and embrace both short- and long-term approaches to finance and capital. As Raimond and Astone argue, blended finance (the use of government and/or philanthropic capital to leverage private capital) is one of the most powerful levers of change in the funder’s toolbox.
What else is in that toolbox to support the development of systemic solutions? If the reductionist, silo-oriented approach that has dominated much of modern food production and thinking is insufficient and continues to have negative unintended consequences, how do we support more systems thinking and systems-led action – holding tight to the reality that transformation is dynamic, it takes time, is neither straightforward nor linear, and takes trust.

Surely research sits high on the list. On page 54 Jane Maland Cady of McKnight Foundation’s Collaborative Crop Research Programme (CCRP) agrees and adds that we need a paradigm shift in who we consider ‘experts’, right through to how we conceptualise and validate research and evidence that solves real problems in real contexts. Maland Cady calls for ‘knowledge mutualism’ where every player in the food systems ecology – farmers, scientists, extension programmes, NGOs – brings their skills, strength and experience to create the most useful and innovative solutions. If global crises are interconnected, and solutions are underpinned by knowledge and evidence, should that knowledge and evidence not be as interconnected as the problems they are trying to solve?

When it comes to the survival of humanity and the planet, we all have skin in the game; we and our loved ones are in a world that is under threat. We are not outside looking in. We are part of the global system and there’s a good chance that we are each, in our own way, part of the problem. Lukas Haynes and Omar Sana reflect on page 53 on what this means for philanthropy guided by the notion that foundations have skin in the game and that the philanthropic community has the means to do what others cannot and the public-serving missions that oblige them to do it. They offer a challenge through the example of David Rockefeller Fund’s participation in the UN-convened Net Zero Asset Owner Alliance with a focus on a just transition given that vulnerable and poor people sit at the sharp end of global crises.
The industrialised food system

Andrew Milner writes: Global food systems offer a number of paradoxes. It goes without saying that they are crucial to our survival. Everyone needs to eat. The dominant, industrialised model, however, also threatens both the world’s ecology, its climate and the health of its population. Consider the statistics illustrated below on hunger and obesity and on the share of greenhouse gas emissions produced by agriculture.

In addition, global and predominantly industrialised agriculture is a voracious consumer of water – the OECD suggests that agricultural irrigation accounts for 70 per cent of global water use – and through pesticide use, fertiliser run-off and livestock effluents, is a major source of water pollution. And of biodiversity loss. Between 1980 and 2000, for example, 42 million hectares of tropical forest in Latin America were lost to cattle ranching, while six million hectares were lost to palm oil plantations in South East Asia, according to a report published by Chatham House in February this year.

Three principal changes are needed for a more biodiversity-supporting food system, argues the Chatham House report. Humanity must shift towards more plant-based diets, set aside more land as protected natural habitat, and adopt more sustainable farming methods.

One of the problems with grappling with the challenges we face is that food systems have seldom been viewed as systems, with agronomists, environmentalists, sociologists, economists and health experts each fighting their own corner, often without regard for the rest. Similarly, research and institutions have been focused on ways to boost production and productivity rather than on broader social and environmental food systems issues. This is beginning to change. ‘The Economics of Ecosystems and Biodiversity for Agriculture and Food’, a study launched by UN Environment in 2018, for example, bases its evaluations on entire food value chains and considers metrics beyond simply economic ones to include, for instance, well-being and soil health.

Rising hunger, rising obesity

690 million people were undernourished in 2019, nearly 60 million more than in 2014.

30% of adults in Europe, North America and Oceania are obese

Global greenhouse gas emissions from agriculture


Source: AHDB/IPCC Special Report on Climate Change and Land (2019)
We only really know global crises through how they affect us on the ground: floods, quarantine, lack of pollinators to fertilise waiting trees, access to land, or not, to feed hungry families. Zulfiqar Haider and Vijay Thallam show us on page 48 how these issues are showing up in Andhra Pradesh, India in their reflections on ‘Food security, climate change and pandemia’. They provide a hopeful vision of the future based on food systems that prioritise ecological and social resilience as two sides of the same coin. These context- and community-specific agroecological practices deliver health for all, while restoring the integrity of planetary boundaries and upholding participatory approaches to governance and decision-making, with equity and social justice as the non-negotiables for action. They think in terms of legacies, far beyond tomorrow, to generations ahead.

This is such a critical perspective since we know that global systems change must be contextually sensitive and grounded in the interactions between local and global processes and scales of change. We must take into account how people, information, and resources flow from local to global, and global to local, even local to local. From Andhra Pradesh then to the Yucatán Peninsula, Dulce Magaña and Daniel Moss on page 60 bring us an inspiring example of providing resources to small and agile local grassroots organisations doing essential work on the ground thereby decentralising grantmaking while working in a global context to promote agroecology and food sovereignty.

All contributors to this special feature are, ultimately, questioning how to operate in the ‘new normal’, so it’s no surprise to spot the thread weaving its way through the articles: we can shape the future by imagining the future we want to see. The evidence coming from research, practice, experience and traditional knowledge, social movements and policy arenas is manifold and simple. It leads us to a repaired relationship between people and nature and between people and people. The principles underpinning this relationship – diversity, reciprocity, respect, ensuring there is enough for all, doing no harm – have existed for thousands of years in Indigenous foodways and need to be re-centred in efforts to transform food systems. Fortunately, we have Lourdes Inga and Phrang Roy on page 56 to help us understand the relationship between biodiverse rich areas, pockets of high cultural diversity, and the number of languages spoken, and the importance of these areas to the future of food, Indigenous and non-Indigenous alike.

So, readers, where to next? We must confront 2022 with bravery and optimism, avoid the risks inherent in simplistic thinking, and deliberately take a whole-systems approach. What’s at stake is no less than the future of humanity on this beautiful and fragile planet. The remit of philanthropy has its limits but what philanthropy can do within its legitimate role is situate food systems transformation centrally in the climate, biodiversity, hunger and health agendas, uphold the principles that lead us to a sustainable, equitable, and secure future of food, and utilise all the tools in the philanthropy toolbox from impact investing to collaborative research to recentring agroecology and Indigenous foodways in local, regional, national and international agendas.

As Iara Rolnik – a young, Brazilian woman working in philanthropy and looking to the future - of Instituto Ibirapitanga notes on page 61, we must ‘echo critical voices and collaborate in the rebalancing of power. By being open we can blaze new paths. The challenge is great, but the fight is on.’

Above: Discussing seed systems in Kenya.
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In Profile

Food systems philanthropy

From production to distribution and consumption, philanthropy helps to shape global food systems. Here is a snapshot of some of the principal organisations and groups active in the field.

Funders for Regenerative Agriculture (FORA) aims to increase the adoption of regenerative agriculture over the next five years as a means of countering climate change, biodiversity loss, food insecurity and social and economic inequality. Based in the US and launched by Global Alliance for the Future of Food and Transformational Investing in Food Systems, members include individual foundations such as the Walton Family Foundation and the Cedar Tree Foundation, funder collaboratives and advisory groups including Ktisis Capital, Gaia Fund and Fresh Taste, and other groups such as California Foodshed Funders and First Nations Development Institute. FORA works by sharing knowledge among the philanthropic community about regenerative agriculture, connecting and coordinating initiatives with similar groups in other regions and aligning and pooling funds. Its core principles include putting stewards of the land first and respecting and valuing difference.

Transformational Investing in Food Systems (TIFS) is a three-year initiative from 2000-22 to enable foundations to deploy capital to transform food systems in partnership with farmers, entrepreneurs, investors, fund managers and others. Its guiding principles include renewability, resilience, equity, inclusivity and connectedness. TIFS’ aims are to facilitate member and stakeholder investment in transformational food systems, to analyse the landscape of aligned funds in transformational agriculture, to support investors to deploy investments in these funds and in general to influence how the field of aligned capital advances.

EFSAF

Founded in 2016 as a thematic network of the European Foundation Centre (now Philea) European Foundations for Sustainable Agriculture and Food (EFSAF) aims to promote a more sustainable food policy in Europe across policy areas on agriculture, rural areas, food and health. Using the Sustainable Development Goals as a general framework, its activities include raising awareness of the issues and bringing more funders to the field, engaging with public and private stakeholders also working in the field of sustainable agriculture and engaging with funders in other regions also pursuing these general aims. EFSAF is not a pooled fund, instead it brings the different strengths – funding, advocacy, convening and research – of its various members to bear on the issue. Foundations and funds represented on the steering committee include the Daniel and Nina Carasso Foundation, Fondazione Cariplo, Fondation de France and the Agropolis Foundation.
The objective of Sustainable Agriculture and Food Systems Funders (SAFSF) is to amplify the impact of the philanthropic and investment communities’ support for just and sustainable food and agriculture systems. Members, who number around 100, comprise individual investors, regranting organisations, community foundations and corporate and private foundations, operating throughout the US and beyond, who work within the food and farming system, and at the intersections of issues including climate change and resilience, community health, equity and justice, and rural development. Its website includes a funder toolkit on climate health and equity, while in July members launched an Indigenous Food Systems Community of Practice to run until June 2022 to help funders develop relationships with Native American practitioners.

The corporate foundation of US food producer, General Mills Inc, the foundation devotes itself to increasing food security, advancing sustainable agriculture and strengthening hometown communities. Headquartered in Minnesota, which is the focus of its giving (though it also makes grants around the world where the company is active), it gave some $21 million to charitable causes in 2020 across its three thematic areas. This accounts for only part of the company’s overall giving, which it estimates at $92 million. It also includes an active volunteer programme in which, according to the company’s website, 83 per cent of employees volunteered in 2017.

Founded in 2006 as a project of the Schmidt Family Foundation established by former Google chairman Eric Schmidt, the 11th Hour Project supports resilient systems for food, energy, water, health and climate. Through its food and agriculture programme it funds and supports organisations and movements in the US working towards a regenerative and equitable transition of the food and farming system. At the same time, it supports the resilience of regional farming communities and food systems. Grantees include Missouri Rural Crisis Centre, Iowa Citizens for Community Improvement and the Common Market, a non-profit regional food distributor which connects communities with good food from sustainable family farms. The project makes both impact investments and grants, as well as serving as a convenor for organisations in the various sectors it is interested in.

Though it is often forgotten, mega-NGO Oxfam began life in the 1940s as a campaign to end hunger under the name of the Oxford Committee for Famine Relief. It is now active in 67 countries and while its activities have diversified beyond hunger, it still retains its original concern with food issues through its beating hunger initiatives.
The Tata Trusts’ nutrition programme has three strands: system strengthening (supporting the work of local governments and other implementing agencies), fortification (making fortified foods available to rural and impoverished people in India) and policy and advocacy (working with policy-makers and providing the necessary support, infrastructure, information, advice and platforms to assess existing policies and devise new ones). Its work in the area covers 13 Indian states and some 4.8 million people. A key component of its approach is to work in partnership across sectors – for example, it is working with the governments of Maharashtra and Andhra Pradesh to supply fortified rice in those two states as part of a Centrally Sponsored Government Scheme announced in June 2019 to introduce fortified rice across 15 states on a pilot basis. In addition, Tata Trusts is supporting the use of fortified rice in the Integrated Child Development Service and midday meal scheme in three districts of Andhra Pradesh.

tatatrusts.org/our-work/nutrition
High-profile interest
Better known for her association with the Emerson Collective, which she founded in 2006 and which focuses on education, immigration and social justice, Laurene Powell Jobs last year made a donation to America’s Food Fund along with other high-profile donors Apple and Leonardo DiCaprio. Collectively, they contributed $12 million towards the $15 million goal for the initiative being hosted on fundraising platform GoFundMe. The proceeds will go to World Central Kitchen, founded in 2020 by chef José Andrés to provide meals to the hungry in the wake of man-made and natural disasters worldwide, and to Feeding America.

Foodbanks, footballers and lean times in the rich world
Although the developing world has dominated concern about hunger and the food supply question, policies of austerity and growing inequality have contributed to the rise of food shortages in developed countries, too. Figures published by the UK government in July this year suggest that one in 12 people aged 16 and over in England, Wales and Northern Ireland had used a food bank in the previous year. The pandemic has aggravated the issue. The Trussell Trust, which supports a national network of food banks, distributed 33 per cent more food parcels in 2020–21 than in 2019–20.

Meanwhile, footballer Marcus Rashford campaigned – ultimately successfully – for the UK government to extend a scheme to provide free school meals beyond the first Covid-19 lockdown over ensuing school holiday periods. In the US, according to the Food Research and Action Center, the Black-White disparity in food insecurity has increased by 3.5 per cent and the Latinx-White disparity by 2.4 per cent from 2019 to 2020, an increase largely driven by the pandemic.

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Investors often assert admirable targets, aiming to commit their portfolios to net-zero by 2050 or earlier. Yet, they may be unsure and perhaps conflicted about how to practically achieve real-world outcomes.

There is near-universal agreement we must all act now. On our current trajectory, hundreds of millions of people will lose their livelihoods and vast populated areas would become uninhabitable. Social upheaval and mass migration would be inevitable. The World Economic Forum’s The Global Risks Report identified climate change as the root cause of several immediate and long-term risks to business and the economy.

Committing to a long-term net-zero ambition is important, but to be part of the solution, investors need to push in the right direction and be effective.

There is a key question around ‘grey’ investments – those with high carbon intensity and low transition capacity. Reducing a portfolio’s carbon intensity through divestment may help achieve portfolio ambitions, but it leaves emitting companies free to carry on, perhaps with unenlightened shareholders.

We believe divestment is the ultimate sanction but most powerful when kept in reserve. It must remain a credible possibility in case evidence of positive change does not appear. Investors can only demand improvements while invested.

Positive impact also comes by investing in companies delivering ‘green’ transition solutions that may be key to our success. Aside from opportunities in renewable energy, areas including green buildings, electric vehicle manufacturing, and those drawing revenues from sustainable agriculture, forestry and water conservation hold potential.

Portfolio management

Stewardship adds value but pulls on resource frameworks, goal-setting, monitoring progress and taking action. We engage at fund manager level as the most effective way to promote change. Specialist managers have a keen understanding of underlying companies, and their capacity to transition, and have well-established board-level relationships.

Investors often focus on carbon intensity, but it is a backward-looking metric and does not capture the transition capacity of emitting companies or green revenue opportunities. We believe a more holistic approach is appropriate, such as that used by our Analytics for Climate Transition (ACT) assessment tool.

In the last year, the Mercer Sustainable Investment team has been appointed to support over 25 clients across seven countries, representing approx. US$800bn, to set and implement decarbonisation plans across their portfolios through our ACT tool and Climate Transition Framework.

Once the baseline emissions of a portfolio have been established, in both absolute and intensity terms, ACT transition capacity analysis helps identify the possibilities for implementing a full transition by asset class, manager and sector exposure. This enables clients to set measurable emission reduction targets and improve transition capacity, while still meeting investment objectives. The implementation stage then draws on the outputs from each step, combined with our recommended priorities, to establish a comprehensive plan.

Our advice and solutions are helping drive capital towards the low-carbon future COP26 is focused on delivering. We believe investing for the future while stewarding the legacy of the past is the best approach to practically actioning climate ambition.

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Contact us to find out how we can help transform your climate ambitions into investment actions.
Philanthropy’s role past and future

Growing more food has been the global response to food insecurity. It will no longer suffice and philanthropy should be prepared to lend its hand to a more thoroughgoing change.

How did we get to the need for such a dramatic, global transformation? This article looks back over the last two or three decades and into the future. It charts the response of philanthropy to the food question to date and suggests ways it needs to approach that question going forwards.

The charitable approach
Feeding the hungry is a deep-seated impulse of charity and has often been a cornerstone of philanthropy. Such charitable giving helps individuals and families through hard times but hunger persists. The World Food Programme (WFP) estimates that 821 million people in 2020, one in nine, lacked adequate food. A third of the world’s population suffers from some form of malnutrition. The pandemic significantly increased poverty and hunger worldwide, as WFP’s hunger map1 shows.

The Green Revolution
Concern about global hunger in the mid-20th century led to the Green Revolution, which aimed to transform traditional agriculture through the development of high-yielding varieties of major crops, especially wheat, maize and rice and which effectively created a transformation from subsistence to industrialised agriculture. American philanthropy played a major role in this revolution. Norman Borlaug, the plant scientist awarded the Nobel Peace Prize in 1970 for his contributions to increasing agricultural production, was funded by the Rockefeller Foundation. In the 1950s and 1960s, the Ford Foundation supported agricultural...
reform with a particular focus on South Asia. Currently the Bill & Melinda Gates Foundation, in close collaboration with the Rockefeller Foundation, is promoting an Alliance for a Green Revolution in Africa (AGRA). The Green Revolution significantly increased yields per hectare of corn, wheat and rice. More land was cultivated, more food was produced, and food prices declined. Hunger was reduced.

However, not all the effects were beneficial or long-lasting. The changes in management of the processes and the inputs involved were often beyond the reach of small-scale farmers. Moreover, the focus on a few major crops reduced biodiversity, often damaged the local ecology, polluted waterways with chemical run-offs, and depleted organic material in soil. The application of pesticides and herbicides could be hazardous to the health of farmers and their families. Moreover, the cost of external inputs like GMO seeds often put farmers in debt and led to a rise in suicides.

Despite increased agricultural productivity, recent years have seen rising food prices, increases in hunger and malnutrition, and many smallholder family farmers forced off their land by increasing costs and technical requirements. Foundations have responded to the food crisis with a variety of programmes aimed at solving specific problems in particular places, which have produced pockets of success but which don’t get at the root causes.

Programme silos
I conducted an evaluation of a major foundation’s agricultural development programme in an African country. The foundation was funding programmes in agronomy, pest control and strengthening agricultural markets. Each of the three programmes focused on a particular problem, with no collaboration or cross-fertilisation.

I also worked with another major foundation that had large separate programmes in developing countries supporting agricultural intensification, girls’ schooling, reproductive health and population control, and women’s empowerment. Again, these programme areas operated independently of each other. The agricultural intensification grants were targeted entirely to male farmers in cooperatives and farm schools that served young men yet the research showed that a major reason girls weren’t staying in school was because women had the responsibility of growing food while the men grew cash crops. What, I asked, would it look like to create an integrated systems transformation programme which created girls’ agricultural schools that would help them grow more and healthier food, support their empowerment as food producers and participants in the food economy, and could be a source of education about reproductive health?

Similarly, the Sustainable Development Goals (SDGs) have become silos. Halfway to 2030, the vision of leaving no one behind is
faltering. Attention is turning to the interdependence of the SDG goals and indicators and to the transformation of systems at the nexus of those interconnections.

**Transforming food systems**

The dialogues mentioned at the beginning of this article changed the focus from growing more food to transformation of the food systems—meaning major change beyond piecemeal reform and narrowly focused projects and programmes. Participants spotlighted the importance of ensuring sustainability and strengthening resilience. Sustainability entails humanity and nature thriving together, with resilience as the capacity to regenerate and adapt.

Dialogues also provided guidance on transformation processes:

- Apply systems thinking to food systems.
- Recognise complexity as a fundamental principle of food systems engagement.
- Guarantee the right to food. Seeing food as a right, rather than merely a market-based commodity, would provide a unified and universal framework for food systems transformation.
- Contextualise and localise. Local food systems will be needed, with different solutions for different contexts through place-based innovation and adaptation.
- Innovate and integrate what is already working by changing what needs to be changed, innovating and adapting, but also keeping and building on what is working.

Many dialogues supported ‘nature-positive solutions’ including sustainable approaches to agricultural production and human consumption of food such as agroecology, regenerative agriculture, and organic farming.

**A new response from philanthropy**

In the articles that follow in this special feature it’s encouraging to see how philanthropy is changing its approach. For example, Jane Maland Cady’s piece on page 54 shows how the McKnight Foundation’s Collaborative Crop Research Programme (CCRP) – which I have had the benefit of evaluating – evolved from being a focused crop research programme (plant breeding and agronomy) to a more comprehensive, systems-change-oriented agroecological intensification programme. The scope of research was expanded to take into account the whole farm operation including human labour, gender relations, markets and nutrition. This reconceptualisation led to a decade of innovation, transition, capacity building and shared learning.

Philanthropy is also responding to new challenges by being more aligned, coordinated, and connected. For instance, the Global Alliance for the Future of Food, including some 30 philanthropic organisations from around the world, comes together to explore shared visions for advancing sustainable global agriculture and food systems in the face of climate change, resource destruction and food insecurity.

Current food systems, the Alliance believes, are economically...
dysfunctional, environmentally destructive, and politically manipulated to serve industrial agricultural interests. The problem, in short, is not merely an agricultural and technical one involving only farmers and scientists in increasing the quantity and quality of food by improving existing systems. As Global Alliance executive director Ruth Richardson said on the original version of the Alliance’s website: ‘We believe that transformational change requires that we craft new and better solutions at all scales through a systems-level approach and deep collaboration between philanthropy, researchers, grassroots movements, the private sector, farmers and food systems workers, Indigenous Peoples, government, and policymakers.’

Future directions
This article has traced the evolution of philanthropic engagement with hunger from individual acts of charity to projects aimed at increasing food production to comprehensive initiatives aimed at transforming food systems. Here are 10 food systems transformation trends to guide future philanthropic engagement:

• from siloed programmes to comprehensive systems transformation initiatives
• from working alone to collaboration and partnerships that have the capacity and critical mass to take on systems transformation
• from narrow place-based projects to glocal initiatives that design interventions with attention to global/local interdependencies
• from the dominance of the white male scientists of the Green Revolution to valuing diversity and acting inclusively to ensure equity
• from privileging only western scientific knowledge to honoring and incorporating the knowledge, wisdom and experiences of Indigenous Peoples and smallholder farmers
• from policies designed to support large industrial farmers to those that support the smallholder farmers who, according to the most generous estimates, provide 70-80 per cent of the world’s food
• from one-size-fits-all, top-down globally-scalable ‘best practices’ to agroecological approaches and principles adaptable to local contexts and ecological landscapes
• from simple linear models aimed at increased production to complexity-based conceptualisations appropriate for system transformations
• from isolated sector initiatives to engaging with the interconnections across systems
• from growing more food, farming more land, using more, and more expensive, inputs, to transforming food systems in ways that are regenerative and sustainable

These 10 food systems transformations are the trajectory for a world where the right to healthy, nutritious food is universally recognised and realised, no child dies of starvation and people and planet prosper interdependently.

1 www.wfp.org/publications/hunger-map-2020

2 The 70-80 per cent figure has gained wide acceptance and been cited by the UN FAO, but recent research suggests a more modest percentage. Global Food Security (June 2018) cites 30-34 per cent. An Our World in Data article (August 2021) has a similar figure but argues that while family farms produce 80 per cent of the world’s food they are not always smallholder farms. See ourworldindata.org/smallholder-food-production
Peer dialogue

Food security, climate change and pandemia

Climate change and the pandemic have brought food system deficiencies into stark focus. ‘Natural farming’ offers one possibility for much-needed change. Guest editor Ruth Richardson talks with Vijay Thallam of the Andhra Pradesh Community-managed Natural Farming programme in India and Zulfiquar Haider, head of programmes and strategy at the Azim Premji Foundation.

Ruth Richardson: Food insecurity hasn’t been far from the headlines in 2020 and 2021. How are food production and consumption connected to the big global challenges like climate change, hunger, women’s empowerment and public health?

Vijay Thallam: We have multiple emergencies - livelihoods of farmers, food and nutrition insecurity, food induced ill health, soil health, water availability, biodiversity - all of which are being exacerbated by global warming and extreme weather events. What we are seeing through our work is that natural farming principles and practices enable more production, more nutrient-dense food, and at the same time have a positive impact on soil carbon and water retention. This is really a solution for food security, hunger, public health and climate change.

Zulfiquar Haider: For the poor, which includes large portions of the small and marginal farmers in countries like India, the reality of life today is poor nutrition and precariousness of livelihood. While hunger has been a focus of international and national action over the last two decades or so, true well-being and nutrition continues to remain another story. Just consider how India’s stunting rate is 38 per cent, second highest after Afghanistan at 41 per cent. Also consider how debt, crop failure due to climate, high price fluctuations for produce, and increasing costs of chemical-intensive agricultural inputs have combined to make
agricultural livelihoods very precarious, especially for smallholders who make up 85 per cent of all farmers in India. We are not connecting agendas.

**RR: Zulfi, your foundation works on gender justice, vulnerabilities of marginal farmers, landless workers, pastoral and tribal communities, strengthening civil society and other related issues. How are these connected to food systems transformation?**

**ZH:** It is the landless and small and marginal farmers who comprise a large part of today’s migrant workforce in India’s cities, meaning that wage labour, not farming, is increasingly becoming the main source of livelihoods. At the same time, we know that youth are less inclined to work on farms so we need to develop meaningful livelihoods, on-farm and off-farm, that suit their needs and wants. We need new job opportunities and skill development locally such as entrepreneurship in bio-inputs, supply chain development, water budgeting, groundwater management, and community health.

Similarly – even though there is an increasing number of women farmers in India – government agencies and communities often continue to only see the farmer as a male role; training on farm issues typically ignores women. Women, too, do not refer to themselves as farmers, or see themselves as knowledge bearers.

Local economic development has, by and large, not been a priority of local governments, but our work on strengthening local democracy is resulting in communities asking whether local governments should focus on land and water management and decide on what kind of agriculture happens in their area. All these things show how food systems connect to issues like gender, strengthening civil society, well-being, water quality, health and so on.

**RR: It has taken a pandemic for world leaders to see the interconnectedness between these challenges. What do you think the implications are of the Covid-19 situation both locally and globally?**

**VT:** The pandemic has raised several questions about immunity, health and the nutritional aspects of the food that we are eating. At the same time, the immense loss of livelihoods due to the lockdown has shown how unsustainable and broken food systems are: ‘business as usual’ agriculture has increased farm distress, severed value chains and increased the load on natural resources. If this continues, it will create more catastrophic results. Covid-19 is just the tip of the iceberg and the real threat of climate change is still too low a priority. Women, tribal and Indigenous communities, farmers, and

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300–400m

The estimated number of people in India who have fallen below the poverty-line as a result of the pandemic.
youth are in the front-line of the effects of these changes.

ZH: A 2020 survey found that approximately 70 per cent of rural households were eating less since the pandemic began, meaning that a decade of positive gains in nutrition and in maternal and child health in India may be reversed. Locally, the need for a strong public health system has emerged very starkly. A huge price has been paid by those who fell severely ill and now owe huge hospital bills, while a significant part of the informal economy has been wiped out, with an estimated 300-400 million people being pulled below the poverty line as a result of the pandemic.

Rural local governments and civil society groups were the big responders during Covid-19, whether for emergency relief or helping the millions of migrants walking 300 to 700 miles home. Their contribution, its timeliness, its sensitivity, needs to be recognised along with support for a strong civil society, as well as more devolution of resources and decision-making to local government.

RR: As the world ‘recovers’ is there a risk that the food security issue will be pushed off the international agenda?

ZH: We don’t seem to learn well from history. Sadly, I do not think the food security issue will remain on the table unless institutions such as the media, academia and international cooperation organisations keep it there. We need a story which will move people towards action and this story needs to be told and retold. Academic articles and conferences will not cut it.

RR: At the Global Alliance, we believe that it is food systems transformation that offers us the greatest opportunity to address global challenges – from climate change to rocketing rates of malnutrition. What in your opinion are the biggest barriers to action and systems change?

VT: The biggest barrier is the mindset change required by farmers, government agencies responsible for agriculture, and agricultural scientists. Over the last 50 years, we have been told that it is not possible to grow crops without using synthetic chemicals. Our six years of experience in Andhra Pradesh with natural farming clearly shows that this is mistaken. Also, the de-addiction process involved in moving farmers from industrial agriculture to natural farming means there is a lack of understanding of how transformation can be brought about at scale.

Below: The role of women farmers is often overlooked.
Agroecology offers greater climate resilience, low input costs and soil regeneration, promotes diversity in crops... and creates a much more nutritious food basket for producers and consumers alike.

ZH: One big barrier is the continued focus on ‘food sufficiency’ for the nation as the only measure of food security; we need to incorporate farmer well-being, farm viability, the idea of nutritious food, and not just calorie intake. The citizen, local governance, biodiversity, ecosystems and sustainability need to come back into the picture. A related challenge is that there are no universities in India, or in most developing nations, that focus on agroecology, nutrition and food systems, and, what’s more, there is huge resistance from the traditional agricultural scientists and universities to embrace this systemic focus.

RR: What can be done to overcome these barriers?

VT: We need bold and urgent actions to transform food systems across the value chain. It should not be symptomatic treatment. We need to go into the root causes and fix them. We need to start with land management, as the current business-as-usual agriculture is so destructive. Our experience with natural farming tells us that we can set right land management through natural farming. This transformation would lay the foundation for other transformations in the food system, such as building the agency of grassroots actors and major changes in government policies.

ZH: For one, we need a paradigm shift. The dominant narrative says that we cannot feed the world without chemical-based agriculture. However, agroecology offers greater climate resilience, low input costs and soil regeneration. It promotes diversity in crops and reduces uncertainty in farm production and it creates a much more nutritious food basket for producers and consumers alike. Also, because the soil holds more water, agroecology addresses the huge water crisis we face, especially the depletion of groundwater which makes irrigation and agriculture almost impossible. It also offers one of the easiest and most cost-effective ways for carbon sequestration, through increasing soil carbon.

Second, we need an institutional ecosystem that enables system transition, providing research support and skills-building alongside technical support to farmers and investment away from chemical farming. Similarly, we need systems for farm credit, moves away from fertiliser subsidies which distort the market, and institutions for continued validation and research, certification and curriculum reform in places which will produce the new natural farming agri-graduates and PhDs.

Finally, we need global agreements and greater collaboration, a reduction in barriers to technology and knowledge exchange and the creation of knowledge commons. As Vijay says, interconnected action is urgent!

RR: How is your work in Andhra Pradesh addressing the challenges and barriers to change we’ve just been talking about?

ZH: In Andhra Pradesh, farmers are transitioning away from chemical agriculture which is the big evidence that transformation is possible and that it is desired by the farmers themselves. It has shown us first-hand how to enable the transition, while third party assessment data and evidence are also creating more validation and inspiring further research – exploring, for example, the impacts of natural farming on water use in agriculture or the health benefits that come as a result of farming in this way. We must do more to understand what is happening in Andhra Pradesh – more documentation, more experiments – to draw it into the mainstream of knowledge. We also need robust backward linkages for bio-inputs and technical support for farmers, knowledge building and institutional systems to create the large-scale human resources needed, so there is a long way to go.

VT: The work in Andhra Pradesh is based on the potential to harness the power of nature in such a way that we can harvest agricultural products and at the same time benefit from ecosystem services, while supporting regenerative processes in soils. It rests on the strengthening and mobilisation of social capital – most notably through self-help and peer-to-peer knowledge exchange groups, led by women or farmers. We are also building participant capacity to adapt global agroecological and natural farming principles to their context, encouraging shared innovation and guided activities. The support of the government in all these processes has been a critical factor in enabling us to address these challenges.

RR: Vijay, you have been a strong advocate for the role of agroecology in climate change adaptation and mitigation for a long...
time. How are you seeing the impact of Community Managed Natural Farming play out in India and in other countries?

VT: Seeing our success, many state governments, civil society organisations, philanthropies, research institutes and other international development organisations working in India are in touch with us to understand more about what we have done and how we have been able to do it. We are also seeing interest from many countries in Africa, Asia and South America. In India, we have a strong network of self-help groups and their federations across the country due to the social mobilisation and capacity building work done by National Rural Livelihoods Mission and the state governments. This has played an important role in our work and it would be easy for the national and other state governments to undertake natural farming and integrate it optimally.

RR: Arundhati Roy described the pandemic as ‘a portal’. What should the world do to pass through this portal?

VT: While we will be seeing the impacts of the pandemic for years to come – as people, communities, government and the economy cope – it is an opportunity to mend what is broken. It’s an opportunity to shift towards nature-positive solutions, look at local and smaller value chains, mainstream regenerative agriculture systems, promote profitable employment in agriculture and focus on dietary diversity and immunity locally and globally.

ZH: I fear we are not inclined as a society or as a polity to consider the portal possibility. Cognitive dissonance is uncomfortable for us and we will return to the cocoon of what is familiar. The nature of governments and electoral cycles do not provide governments with the best incentive to think long-term and many are likely to see the pandemic as just an episode which will go away as we return to some equilibrium. I feel for the less privileged where the impacts will go deeper. If we look at the question of ‘should do’, desirable and logical conclusions from the pandemic and its aftermath in India include moving towards sustainable agriculture, ensuring community governance of water and forests, supporting a greater devolution of resources and decision-making, more federalism, a media which provides greater coverage of labour, rural and agrarian issues and a thriving civil society.

RR: What’s the best next thing donors/funders can do to address big global challenges such as climate, Covid, hunger, conflict and migration?

VT: The most important thing for donors is to understand the interconnectedness of all these crises and to have a consensus on the solutions. Donors must learn from the successes and failures of large-scale transformation interventions, like APCNF, in order to have a clear vision of how to intervene to get maximum results.

ZH: First, we need investment in building institutions that engage with the real issues of our times. Second, donors must continue to support the vulnerable who suffer most as a consequence of climate change, conflict and so on. Lastly, we need more ways for more nations and their people to be intertwined on art, culture, business and research to reduce boundaries, allow for greater exchange of ideas, and for people to connect. Can we invest in building alternative narratives for our common future, including those that chip away at hard notions of identities and superiority of race/nationality/ideology, and instead foster collaboration?

RR: Do you have one call to action to philanthropy?

ZH: Invest in long-term challenges while you engage with the here and now.

VT: There are multiple emergencies and there cannot be any delay in tackling them in a holistic manner in partnership across sectors. The time to act on this was 20 years ago. The next best thing is to act today. There is no silver bullet solution. Learning from the successes and failures of large-scale transformation efforts can provide solution pathways.

Above: Collecting groundnuts.

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1 The APCNF programme aims to convert the entire state of Andhra Pradesh to chemical-free, low-input ‘natural farming’ by 2030.
Everyone has skin in the game

Climate change and food systems are intimately connected, leaving philanthropy with an increasingly critical role in the task of mitigating one and changing the other.

The scale of investment required for the economic transformation that we must have if we are to avoid planetary disaster is a staggering $100–$150 trillion. However, there is an increasing understanding in the philanthropic community that this is an opportunity for leadership in many areas, food systems among them.

Philanthropy is already playing an essential role in mobilising capital. Some of the earliest movement away from fossil fuels came in the form of the Divest/Invest movement led by foundations. As stewards of long-term assets set aside for charitable purposes, they are already aligned with the notion of doing good rather than seeking profit above all else. Scaling investments in new technologies and emerging markets through blended finance vehicles is but one example. The David Rockefeller Fund has been working alongside fellow members of the Net Zero Asset Owner Alliance on such ideas.

Accepting a first loss position in order to de-risk vital investments and enable larger capital flows exemplifies the leadership that philanthropy has to offer. Thanks to the leadership of the fund’s investment chair, Nili Gilbert, we have highlighted the concept of a just transition, where the proceeds of certain revenue sources, as well as direct capital itself, are applied to historically disadvantaged communities.

Agriculture is a key element of decarbonisation goals and philanthropy has a critical role to play in its development. According to the European Environment Agency, the sector was responsible for 8.4 gigatons of carbon emissions in 2019 – 16 per cent of the global output – and can expect nearly $2 trillion in investment between now and 2050, according to a Boston Consulting Group analysis. Adaptation to climate change, emissions reduction, and more resilient communities form the trident that society will have to collectively wield in order to effectively combat a much warmer planet. Effective utilisation of science and technology in food systems management impacts all three, but perhaps resilience most of all. Effective management of soil’s organic carbon stocks, for example, would improve the fertility, crop performance, and climate resiliency of our food systems.

And there’s more. In spite of the actions taken by the public and private sector to date, models from the Intergovernmental Panel on Climate Change (IPCC) – which factor in existing national commitments – show us on track for a catastrophic 4°C temperature rise. The IPCC notes that, ‘many vulnerable and poor people are dependent on activities such as agriculture that are highly susceptible to temperature increases and variability in precipitation patterns’. And it’s not only them. Global food systems would be upended and the resultant food insecurity would undermine social cohesion and political stability.

To face these risks means that philanthropic capital must heed an urgent call to action. As the first foundation in the world to join the ~$10 trillion Asset Owner Alliance, the David Rockefeller Fund also formed the Net Zero+ Investment Collaborative and intentionally added the ‘+’ to focus on a just transition. We have also increased our spending rate and adjusted our investment holdings. In doing so we hope to show the proof of concept necessary for more agile, effective and vital capital allocation for decarbonisation.

The philanthropic community has the means to do what others cannot and the public-serving missions that oblige it to do so. We hope to see a sector-wide push for philanthropy to rise to this moment of crisis and opportunity. If we succeed, our children and the producers of their food will thank us. We all have skin in this game.

Inveniam Consulting works with the David Rockefeller Fund on Net Zero+ convening.
Gathering evidence is a broad endeavour

Scientific research is not the only form of inquiry that is valid in assessing the virtues of agricultural practice

In 2006, Bettina Haussmann was researching pearl millet breeding in Niger. With a PhD from Hohenheim University in Stuttgart, Germany, she was an exceptionally well-trained plant breeder. But she soon discovered her experience didn’t help her understand what smallholder farmers in this West African country were looking for in their seeds. Did they want a grain for the traditional harvest season? Or an early variety that could be used during the hungry period?

‘As a breeder in Germany, I would have been trained to go for high yield, but for those smallholder farmers, it’s actually not only about yield,’ says Haussmann who is now an associate professor at Hohenheim University’s Institute of Plant Breeding, Seed Science, and Population Genetics and a West Africa liaison scientist with the Collaborative Crop Research Program (CCRP), which is an initiative of the Minneapolis-based McKnight Foundation. In fact, in addition to yield, the farmers Haussmann collaborates with are keenly interested in the nutritional quality of grains, a crucial factor when you consider the high levels of malnutrition in the region.

Who is the expert?
That realisation upended Haussmann’s idea of her role as an expert. ‘When [CCRP]
started in West Africa, one farmer representative said “all that is done for us, but without involving us, could actually be against us”,’ she says. ‘And this made us think right from the beginning, that we cannot make any advances without collaborating with the people who are actually concerned or affected by the wanted change.’

This paradigm shift is informing food systems thinking across the world, from research, to who we consider ‘experts’, right through to how we conceptualise and validate evidence that solves real problems in real contexts.

‘I don’t believe that the information that comes from science is the only required evidence for us to make decisions,’ says Carlos Barahona, the managing director of Statistics for Sustainable Development (Stats4SD), a social enterprise that provides statistical support for monitoring and evaluating development interventions, including the work of CCRP. He says that the research generated by CCRP initiatives at individual farms is evidence, regardless of whether or not it has been evaluated with strict methodologies.

Among the success stories is the largest collection of quinoa varieties maintained by local research institutes in Bolivia. ‘That is a unique source of genetic material for the world forever,’ says Barahona. ‘You cannot possibly put a monetary value on it, but we know that unless that is done, we may lose important genetic resources.’ Likewise, a collaboration of local farmers, research institutes and NGOs in Peru is working to maintain the diversity of native potatoes in the high Andes. Female farmers in villages in West Africa have successfully tested and selected pearl millet seeds to cross breed so that they can be grown in areas with low soil fertility. Smallholder farmers in East and southern Africa have tested the effectiveness of using dried plant materials for pesticides.

The work of CCRP
At CCRP, a multi-system, multi-outcome, multi-perspective approach is at the core of our research for public good. We believe in both results that can be measured and results that can be seen and observed in ways that may not be taught at universities. In Malawi, farmers evaluate their own Indigenous practices for legume crop rotation. In these projects, the farmers themselves are co-evaluators. Frank Tchuwa, a CCRP grantee partner and lecturer in rural development and extension at Lilongwe University of Agriculture & Natural Resources, says: ‘People start debating and discussing whether the findings are common, if a disease was common in all villages, or if a particular option was done the same way in all the villages, and why is it that some villages have not done well in the particular season? And others have done so well? So different reasons are given, and out of that, we try to construct some conclusions.’

The McKnight Foundation has long been committed to the next generation of leaders. Our collaborative and systems-oriented approach advances both research and practice and organically expands the networks of all participants. CCRP grantees have gone on to positions of influence – further evidence that this collaborative approach works. Julio Kalazich, a potato breeder and early CCRP grantee, went on to become Chile’s director of the National Institute of Agricultural Research (INIA). Robert Mwanga, a Ugandan-based sweet potato breeder and CCRP grantee, was one of four 2016 World Food Prize laureates. Magali Garcia Cardenas, a Bolivian agronomist who collaborates with smallholder farmers to identify weather and climate trends by using traditional forecasting methods as well as weather stations in the Altiplano, serves on the Science Advisory Committee of the Independent Science for Development Council.

Going forward, food systems collaborators will need to develop the kind of ‘knowledge mutualism’ described by botanist Robin Wall Kimmerer, the author of Braiding Sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants. Kimmerer imagines a knowledge generation system modelled on the concept of the Three Sisters Garden, in which scientific inquiry is embedded in an Indigenous worldview: the corn grows tall, the beans climb up the corn, and the squash contains the weeds in a symbiotic relationship that is supportive and productive. Every player in the food systems ecology – farmers, scientists, extension programmes, NGOs – will bring their skills and strength and experience to create the most useful and innovative solutions.
Building on tradition

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Learning from the knowledge of Indigenous Peoples is vital for the transformation of global food systems

In transforming the future of food, funders need to support food sovereignty, agrobiodiversity, and Indigenous Peoples’ food systems that move away from unsustainable agricultural practices and inadequate solutions imposed on them and local communities. Indigenous Peoples’ food knowledge systems have been critical to the preservation of biological diversity. Scientists and many non-Indigenous specialists are progressively understanding the overlap between biodiverse-rich areas, pockets of high cultural diversity and the number of languages spoken. This is leading to the review of conservation and development practices.

The UN Food Systems Summit’s push for member states, philanthropy and the corporate sector to boost nature-positive production and consumption presents a unique opportunity for the philanthropy sector. This is to support the leadership capacity of Indigenous women and youth, develop collaborative and inclusive research and learning platforms for Indigenous Peoples, protect Indigenous Peoples’ food systems, promote their territorial and land rights, support their customary institutions and governance, and improve equity.

One example of an Indigenous-led initiative is The Indigenous Partnership for Agrobiodiversity and Food Sovereignty (TIP) established in Cuzco, Peru in 2010. It received support from The Christensen Fund (TCF) and was encouraged by the International Funders for Indigenous Peoples (IFIP). TCF has been supporting TIP to forge new intercultural solutions based on modern and traditional knowledge. TIP has pioneered Indigenous Peoples Food Festivals in Mongolia, Thailand, India, Kenya and at the UN headquarters, New York. The acclaimed four-day Indigenous Terra Madre 2015 in Shillong, India, included the Slow Food International in which 148 Indigenous communities from 48 countries participated. TIP has raised awareness, corrected misinformation and built solidarity networks through hundreds of workshops, dialogues and other events. It has commissioned research and collated case studies on the principles of intercultural agroecology and Indigenous well-being.

Understanding the importance of intergenerational knowledge transfer, TIP initiated an Indigenous Fellowship Programme in which small groups of Indigenous youth visit an Indigenous Peoples’ territory and develop technical and leadership skills for revitalising their local Indigenous food systems. ITM 2015 represented an unprecedented endorsement for TIP and its local partners of their work on agroecology and Indigenous Peoples’ food systems. However, just as TIP was thus gaining traction, several funders turned their attention to other priorities, depriving TIP of an opportunity to build on the success of ITM 2015.

In supporting Indigenous food systems, funders can promote the continuous refinement of Indigenous Peoples’ knowledge and their governance and territorial management systems in ways that support climate resilience, community health and well-being, inclusion of women, and livelihoods. Current food systems’ approaches do not adequately enhance the capacities of Indigenous youth or recognise the knowledge of elders. As a philanthropic sector, we must rebalance the scale to invest in Indigenous communities who carry the responsibility and burden of protecting the world’s agrobiodiversity and in traditional agroecological knowledge for the benefit of all, funding long-term strategic alliances that support Indigenous organisations and Indigenous-led funds. The way forward for philanthropy is to invest in a horizontal partnership with Indigenous-led funds which support Indigenous organisations and communities in revitalising and maintaining Indigenous food systems. Such a partnership should also provide access to policy-making processes to ensure Indigenous representation in mainstream technical and policy discussions.

IFIP and TIP will work together to connect previously disconnected Indigenous changemakers, Indigenous women and youth, holders of traditional and contemporary knowledge, so that they can lead the revitalisation of Indigenous food systems for livelihoods, well-being and planetary health.
Business as usual is a non-starter

When the Covid-19 pandemic closed down markets, borders, and trucking, it exposed the limitations of global food supply chains. Supply chain disruptions exposed other problems in our food system. Policy-makers and investors launched a new conversation about strengthening access to regional markets for producers, processors and food enterprises, aware of the weaknesses of a food system focused on commodity and export crops. At the same time, academics and activists were highlighting the externalised costs of industrial food production. What these actors often miss is the fact that farmers and their social entrepreneurship allies are already building alternatives based on cooperative models, non-profit ownership, and local consumption models.

These global events and growing understanding illuminate the risks presented by our current food systems. Continuing with business as usual is untenable. The good news is that the transition to a healthy food system is already happening. Farmers, entrepreneurs, non-governmental organisations, and governments are implementing exciting initiatives to increase resilience to external shocks and enhance local control of decision-making, while valuing soils, water, and ecosystems, along with worker and community health. Enterprises are achieving these outcomes at different scales through innovative business models that recognise the value created by farmers and enterprises producing healthy food in harmony with nature and treating producers and workers fairly.

Enterprises changing food systems
Examples include Educe Cooperativa in Mexico. Through family-based honey production for income alongside the traditional milpa (corn, beans and squash) fields, the region’s Indigenous farmers draw social, economic and cultural benefits. Its cooperative structure means that Educe represents the voices and interests of 750 beekeepers in 30 cooperatives. It has secured both organic and Fair Trade certification which facilitates access to working capital and fair prices to member-farmers. The Indigenous communities comprise the general assembly that makes business decisions centred on community well-being, food sovereignty and a vibrant local economy. This worker-owned cooperative has enabled the protection of two million hectares of forest and stemmed out-migration to cities and to the US.

Community Markets for Conservation (COMACO) and its ‘It’s Wild’ food processing company has helped community cooperatives in the Luangwa Valley of Zambia adopt agroforestry and commit to conservation set-asides. The communities – with COMACO – have put an end to wildlife poaching, deforestation and food insecurity. Farmers are reaping many benefits from improving soil health, including access to carbon credit payments. COMACO developed a business model that makes agroecology and nature
conservation techniques less risky for farmers by ensuring the purchase of surplus crops at fair prices. The model incentivises long-term wildlife, soil and forest conservation. Its emphasis on buying local has increased incomes for 225,929 farmers on 168,800 sustainably managed hectares. Alongside tribal authorities, COMACO reinforces local social and economic structures fostering long-term cultural and community sustainability.

These and other regional enterprises use or encourage holistic food systems approaches to land management to optimise biodiversity and ecological systems and strengthen connections between growers and eaters through diverse markets. They look at the external costs of the food system and address them directly. Through their business models, they contribute to knowledge sharing, regional autonomy, food sovereignty, and health and well-being of farmers and their communities, decreasing pesticide and chemical fertiliser use, and increasing water quality and biodiversity.

Capital flows to grow a vibrant food sector
As these enterprises demonstrate and as we have learned at the Transformational Investing in Food Systems Initiative (TIFS), creating a business sector that supports a healthy, equitable food system requires a blend of grants, values-aligned finance and non-financial assistance. It also requires donors and investors to shift their focus to food systems based on the seven principles of the Global Alliance for the Future of Food: renewability, resilience, equity, diversity, healthfulness, inclusion, and interconnectedness. Investments may support these principles in many ways, for instance by investing in businesses that promote shared governance and participation of all stakeholders, apply cost-conscious approaches that work within ecosystem boundaries, and create value by investing in training and dignified work. TIFS is building a network of foundations and impact investors and empowering them with holistic assessment tools, information, and partnerships to enable new approaches to investing in food systems.

The leaders who are creating transformative business models defy current financial and market systems. Their experiences show that donors, philanthropists and investors need

Creating a business sector that supports a healthy, equitable food system requires a blend of grants, values-aligned finance and non-financial assistance.
Donors, philanthropists and investors need to align their investments with each other and, crucially, with the requirements of enterprises and farmers. This requires the philanthropic sector and impact investors to be more strategic about providing the right type of capital in the right form at the right time. The full range of financial tools – including loan loss funds, long-term patient capital, low or no interest rate capital, combined with technical and business assistance – are required. Investors of different stripes also need to furnish not just financial resources and technical assistance, but also to provide networks, to facilitate community organising, governance and other acts of solidarity to make the case for economic and policy reform.

We must all account for the true value of food through agroecology, regenerative agriculture and new forms of collaboration. Transforming our food systems necessitates the participation and leading role of smallholder farmers, local institutions, communities, Indigenous Peoples and women. Conscious consumers worldwide are demanding healthy and responsibly produced food. Investors and funders need to provide significant long-term patient capital and capacity-building support. Only then can we achieve an equitable net zero and nature-positive food system that can nourish all people with a healthy diet.

Current systems falling far short

Food systems should provide food security and nutrition to a growing global population, provide dignified livelihoods to food producers and workers, and contribute to environmental sustainability. Our systems fall far short of these goals. About two billion people do not have regular access to sufficient and nutritious food and more than that number are overweight or obese. Environmental damage from food production is considerable, as illustrated by 1) Some 80 per cent of threatened terrestrial bird and mammal species are at risk due to habitat loss caused by agricultural expansion, and 2) food production accounts for 21–37 per cent of greenhouse gas emissions.

In 2021, the Scientific Group of the UN Food Systems Summit attempted to estimate the annual costs of environmental, health and economic impacts of food systems. It estimated the true annual cost of food at around $29 trillion per year (earlier estimates indicated $12 trillion per year). The current cost of food at current market prices is $9 trillion per year. The true cost of food is disproportionally high.

According to the Food and Land Use Alliance, if we were to realign public and private capital to avoid negative externalities and pursue positive food system outcomes, the world economy would gain $5.7 trillion by 2030. This would require annual investments of between $300 and $350 billion. The global business opportunity of transforming food systems could be as high as $4.5 trillion per year by 2030.

Given the size of the global economy and existing financial flows into the food system, these costs are achievable. Recent estimates show annual financial flows into our food systems (agriculture, forestry, and fishing) that include:

- bank loans: $42 trillion (total stock of outstanding loans)
- impact investments: $60 billion
- development finance: $11.1 billion
- government support: $708 billion

Some portion of stocks and bonds, especially ESG-aligned investments and green and social bonds, could be redirected to investments that support better outcomes for people and the planet.
Strengthening agroecology at the roots

Deepening agroecological practices and finding new ways of funding could both be vital to the planet’s future

With hurricanes evermore ferocious and biodiversity vanishing at alarming rates, farming communities are re-embracing traditional agroecology practices to safeguard resilience and sustenance. At the same time, philanthropic organisations are exploring how to put to rest paternalistic and colonialisng giving practices and directly support community-led processes that are inclusive and participatory. An example of this is emerging in the Yucatán Peninsula among the Mayan Cooperative, T’uumben K’ooben, the Agroecology Fund and the W.K. Kellogg Foundation.

In 2020, Mexico’s Yucatán Peninsula was devastated by an intense drought, followed by floods, hurricanes, and frequent outbreaks of pests - in addition to the Covid-19 crisis. These events have undermined food security and livelihoods, especially among small farmer families. Mayan communities are beginning to wonder whether the high input of chemical pesticides and fertilisers introduced since the Green Revolution of the 1950s helped or hurt.

At this moment of overlapping crises, the Agroecology Fund (AEF), a global initiative comprising over 30 donors, announced the launch of the Yucatán Peninsula Agroecological Fund (FAPY) to support Mexican community organisations leading recovery from the ravages of climate change and Covid. With funding from the W.K. Kellogg Foundation, FAPY is managed by the local partner, T’uumben K’ooben. FAPY’s mission is to support grassroots projects that strengthen agroecological production, deepen locally-led research and learning, improve market access, and build a more just and climate-resilient food system. FAPY advisers guide the funding of projects led by legally constituted community organisations or by community groups affiliated with organisations eligible to receive financing.

As important as the support is the way it is provided. The T’uumben K’ooben organisers/agronomists, comprised principally of Mayan women, administer FAPY’s grantmaking and provide technical assistance and facilitated learning. Most are first-generation professionals; some are graduates of the Tropical Agricultural Research and Teaching Center (CATIE) and ECOSUR’s agroecology programme. Having worked alongside their grandparents in milpas and in animal husbandry, they know agroecology first-hand and have witnessed, with growing concern, dietary and cultural shifts (white bread instead of corn tortillas, high consumption of Coca-Cola) in their communities, alongside massive out-migration. They’ve seen communities hurt by hotel industry land grabs, agrochemical poisoning and development models that undermine local ways of life.

In the Mayan peasant lifestyle, food depends on the crops of the milpa and resources from the jungle. The losses due to the climate emergencies are discouraging; through agroecology, communities seek to reduce environmental impacts and vulnerabilities and better manage the natural resources essential to food sovereignty and rural life. So, it’s only right that they lead the transformation of food systems towards something much more culturally and ecologically appropriate.

Learning from cultural practices that safeguard healthy food systems lies at the heart of a global agroecology movement. By partnering with the Agroecology Fund, T’uumben K’ooben colleagues and FAPY grantees join Indigenous and peasant communities across the globe, exchanging knowledge and experiences with agroecology practitioners and fortifying powerful, grassroots networks and alliances to move policy in critical global institutions like the UN Food and Agriculture Organization.

Closer to home, Mayan Indigenous communities demonstrate to the Mexican government how to scale up agroecology, a policy commitment - not yet implemented - of the López Obrador administration. Scientists in recent Intergovernmental Panel on Climate Change reports underscore that improved landscape stewardship of the sort practised by the Mayan beekeepers and agroforesters is fundamental to cooling the planet. Respecting these communities and their practices thus helps the entire global community. When donors genuinely decentralise philanthropic practices and Indigenous leaders have the resources they need to support their communities and collaborate with their allies, sustainable and equitable food systems will be the rule rather than the exception.
The perspective from Brazil

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Food systems are not just about food. Other forms of inequality are also intimately involved and must be taken into account

Brazil is central to the global debate on food systems. Many describe it as the ‘granary of the world’ though it’s a granary that depends on the industrialised and environmentally unsustainable food production and distribution known as agribusiness. Its predominance has led to the perverse coexistence of worsening hunger and malnutrition – 19 million people in Brazil currently live with hunger, according to a 2020 survey by the Brazilian Research Network on Food and Nutrition Sovereignty – and increased rates of obesity and other chronic diseases (an outcome of the growing consumption of ultra-processed food). Brazil is also a land of enormous inequalities, marked by the persistence of racism, which have been deepened by the economic recession, the pandemic and the rise of political authoritarianism. Too often, these issues have been seen in isolation from each other. This needs to change.

My work in strategic programming at Instituto Ibirapitanga – a Brazilian family foundation – has enabled me to reflect on the role that philanthropy plays in this complex scenario. Since 2017, we have been operating two programmes, Racial Equity and Food Systems. The Food Systems programme aims to contribute to the construction of a healthy, fair and sustainable food system. It is based on the premise that the way society produces, distributes and consumes food has a profound impact on health, social relations and the environment.

Our work with civil society reveals the diversity of approaches to the food issue, and how the fundamental principles underlying them have helped create quality public policies.

Despite clear progress, though, the systemic transformation needed has not been achieved. We have learned that we must support initiatives that consider all the factors involved in the food issue, how they interact with and contradict each other, rather than those that take into account specific angles and, in particular, we need more integration of the food system and racial equity agendas.

Easier said than done. While intensification of the racial debate has clearly expanded philanthropy’s role in tackling structural racism, few foundations, apart from international ones, address the food issue, especially from a systemic perspective. Second, our actions in the Food Systems programme are rarely racialised. When we try to do so, the response tends to centre on the unequal access of Black people to adequate and healthy food, a valid point but one that fails to address the whole issue. This may be because we are asking the wrong questions. We know that food systems also produce culture and value, but we know little about and are not very open to the plans and experiences of Brazil’s Black population (56 per cent) when it comes to building a fair, healthy and sustainable food system based on their history and knowledge.

In order to build a philanthropic and activist agenda that connects food systems and racial equity, we need to ask better questions and make the right alliances with those who already have answers. Experiences such as the Tem gente com Fome (People are Hungry) campaign show that these issues can be coordinated, making the fight against hunger a fundamental aspect in the fight against racism while strengthening communities and encouraging local production.

By spotlighting this issue, philanthropy can and must turn the tide and make non-majority discourses visible and central in the food system as elsewhere, echo critical voices and collaborate in the rebalancing of power. By being open we can blaze new paths. The challenge is great, but the fight is on.