

Food system innovation in the context of climate change: Transforming the global food system for improved nutrition, health, and environmental sustainability

October 24, 2019, Washington D.C.

Meeting Summary

INTRODUCTION

The global food system underpins some of the most pressing challenges facing society, with malnutrition recognized as a leading cause of disease and food production driving biodiversity loss and climate change. At the same time, climate change is placing growing pressures on agricultural systems. For the world's most vulnerable populations, an unsustainable global food system is also a threat to livelihoods and development. Yet, this pervasive challenge presents a profound opportunity to demonstrate the power of holistic solutions for people and the planet.



PATH/Claire Suni

In October 2019, [PATH](#), the [Bridge Collaborative](#), and [HarvestPlus](#) hosted a half-day convening to engage key stakeholders to link knowledge to action and amplify the delivery of evidence-based interventions with the potential for impacts across the environment, agriculture, nutrition, and human health. Together, a group of experts and leaders from across sectors worked to identify evidence gaps, policies, and upcoming opportunities to create healthier and more sustainable food systems.

With participation from more than 25 global technical leaders, the meeting opened with a presentation on food systems in the context of climate change from Dr. Jessica Fanzo, Bloomberg Distinguished Associate Professor of Global Food and Agricultural Policy and Ethics at Johns Hopkins University. This presentation was followed by a panel of speakers who highlighted examples of climate-smart food system interventions and innovations:

- Dr. Howarth Bouis PhD, HarvestPlus; Biofortification: Implications in the context of climate change
- Karen Ziffer, MBA, Rare; Sustainable food systems on land and in water: Programmatic solutions for small-scale producers
- Katharine Kreis, MPH, PATH; Alternative proteins: Next generation technologies for protein production

Finally, the majority of the time was reserved for working discussion focused on four key areas to enact change and advance multi-sectoral food system innovations in the context of climate change: (1) data and evidence, (2) policy, (3) changemakers, and (4) venues.

DATA AND EVIDENCE

Data and evidence are critical drivers of change. Several evidence gaps were identified that, if filled, could help to advance climate-smart food system innovations.

1. **More research and development evidence are needed for local, non-staple nutritious crops.** Although substantial resources and efforts have been put toward global research and development for staple crops, highly nutritious local orphan crops are often overlooked. These crops have the potential for significant impact on healthy diets around the world and warrant greater attention.
2. **We know surprisingly little about what people are eating and what drives those choices.** Globally, there is a lack of robust dietary consumption data. This data can be difficult and time consuming to collect directly and is often modeled. Where consumer data does exist, it is often collected by the private sector and is not open access, limiting use by governments, civil society, and academia. Information on what people eat—and why—could serve to inform tailored, high-impact interventions that are responsive to key drivers of food consumption globally. Importantly, this data should be disaggregated by key indicators, such as gender, race, ethnicity, and socioeconomic status. Having access to this information could also support evaluation of the environmental impacts of diets and identify shifts that could be made to promote healthy, sustainable diets, grounded in an understanding of what is culturally acceptable and economically feasible for specific groups.
3. **National statistics on agriculture, nutrition, production, and trade should be strengthened within countries.** This data should be interoperable, interpretable, and accurate. For example, in the nutrition sector, more robust and precise data on the prevalence and geographical distribution of micronutrient deficiencies is needed to inform the design and implementation of effective interventions.
4. **Do nutrients in the planet translate to nutrients in people?** There is much that we still don't know about the pathway of nutrients from soil to plants to humans. When, why, and how nutrients move from the earth to humans through food will be a key area of future inquiry—particularly in the context of climate change, as environmental pressures are affecting both the quantity and quality of the food we grow.

In addition to these four specific evidence gaps, participants also highlighted several overarching themes related to data and evidence. Importantly, to ensure that data generated can be used to create change, it will be critical to increase our understanding of the motivations of key changemakers through behavioral science data. For example, private corporations are key actors in the global food system. Yet, what might motivate large-scale businesses to change their actions, particularly in environments where consumers are not demanding this change?

Finally, the role of data access and use in enacting change was also a resounding theme. In order to accelerate impact, data generated should be widely accessible and used to drive meaningful action and responsive decision-making. In the context of climate change, the speed at which data is generated and reaches decision-makers/users is a key consideration. The generation of robust data can require significant time and resources. But to accelerate the pace of change, we must learn to be more nimble in linking data to action.

POLICY

An enabling environment with a strong foundation in policy and leadership is a critical element of advancing systems change at a global scale. Three policy areas were highlighted to increase awareness and action related to food system interventions in the context of climate change: (1) investment and resourcing; (2) government support at multiple scales; and (3) national regulations and guidelines.

Among the group, there was a resounding call for greater investment in agricultural research

among the public sector. To advance global innovation in this area, the public sector plays a critical role in building evidence and de-risking investments that can then be taken up by the private-sector and other actors to scale sustainably. Other financing approaches, such as impact investment, investment funds, and subsidies, also play key roles in driving action toward prioritized outcomes. The projected threats from climate change on agriculture in already vulnerable, food insecure regions amplify the urgency of advocacy efforts to mobilize greater investment.

Scale is an important consideration for integrated approaches. Although policy changes at the national and global levels can bring about broad scale change and impact, there was a strong recognition among the group of the importance of the district and sub-district levels as places where creativity and integration happen in practice. At this smaller scale, the impacts of climate change are felt in real ways and solutions can be specifically tailored to the needs and context of the populations and geographies served.

Solutions with broad appeal across health, environment, and agriculture can leverage the framework of the Sustainable Development Goals to incentivize comprehensive policies and programs that achieve real benefits for both people and the planet. For example, biofortified crops, other crops with high nutritional density, higher yielding crops, and crops that are resistant to weather shocks and pests have broad appeal across sectors.

Finally, national regulations and guidelines play key roles in establishing norms and practices among multiple actors. For example, national dietary guidelines that incorporate both health and the environment, as well as the perspectives of indigenous and marginalized groups, have been receiving growing attention as a potential avenue through which to promote increased sustainability in the food system. However, simply setting guidelines is not sufficient to enact change. Instead, guidelines should be clearly linked to implementation plans and systems (e.g., school meal programs).



PATH/Evelyn Hockstein

CHANGEMAKERS

The group also discussed influential changemakers (both people and institutions) that could help to increase awareness and action related to food system interventions in the context of climate change. Five key groups of changemakers were highlighted:

Multinational organizations and global platforms. Through their reach, influence, and resourcing, multinationals and global platforms are key changemakers who will play a critical role in advancing food system sustainability. Multinationals, including the UN Food and Agriculture Organization, have the ability to establish normative actions and global guidelines. Those with finance mechanisms, such as the World Bank and regional development banks, can directly provide investments to incentivize prioritized approaches, interventions, and innovations. Global platforms such as the Sustainable Development Goals, the Scaling Up Nutrition (SUN) movement, the Planetary Health Alliance, and the Bridge Collaborative are also able to convene multiple actors and set global priorities for change.

Government at all levels. Similarly, national governments at all levels are also key enablers of change. At high levels, national governments play critical roles in providing a mandate to adopt new approaches and establishing an enabling environment. At the same time, district and local governments also play vital roles in the uptake of interventions in specific geographies.

Civil society organizations. Civil society organizations often lead and inform global change. In the context of climate change, civil society is well placed to help shift the dialogue for food systems to better meet nutritional needs of populations by influencing both food supply and demand. Civil society can act as an honest broker, advocate, and thought partner in helping to put research into practice.

Consumers and constituents. In the era of social media and digital communications, the voices of consumers and constituents are louder now more than ever and can play important roles in demanding change from the institutions and corporations that represent and serve them, as well as influence behaviors related to food systems.

Philanthropic foundations. Philanthropy plays a unique role in financing innovation and generating data and evidence to support new approaches to solving complex challenges, often de-risking new initiatives by allocating discretionary funds to higher risk investments. Philanthropic foundations can also build trust with the communities being served and show leadership in their own actions (e.g., by shifting hiring practices to recruit staff representative of the communities served and holding their own organization accountable for more environmentally friendly practices).

Corporations. Corporations—such as retailers, agricultural companies, food companies, and food service providers—play central roles in the global food system. They produce,



HarvestPlus

distribute, and sell much of the food consumed around the world. They have broad global reach, strong foundations in knowledge of consumer demand, and a unique ability to innovate within the context of this complex system. In addition, private corporations also tend to be more nimble and fast paced than public-sector institutions. However, at the same time, corporations are complex and are strongly motivated by market forces. For these reasons, corporations play a critical role with the potential to either amplify or derail climate-smart food system interventions and innovations.

VENUES

Finally, the group also identified specific venues (e.g., conferences, meetings, and events) that could be leveraged to increase awareness of food system interventions in the context of climate change. The identified venues are summarized in the table below.

When engaging stakeholders at specific venues, several high-level themes emerged from the discussion.

1. **Think outside the box.** Consider attending a conference or event outside of your focal sector. Although you might find yourself outside of your comfort zone, you’ll be prompted to meet new people who might bring unexpected perspectives to advance your work. The value of engaging with diverse stakeholders cannot be understated when tackling multi-sectoral challenges.
2. **Do your homework.** Once you’ve settled on a venue, do some reading. Research the program, review the attendee list, and try to do some pre-networking that might help to get your issue or intervention on the radar—or the agenda.
3. **Have a clear “ask.”** At the event, know your audience. In order to garner commitments, it’s important to be clear and explicit with your “asks” for support that demonstrate how a focal issue (e.g., nutrition) is connected to an audience’s top concerns (e.g., climate).

Rockefeller Foundation Food System Vision Prize

In October 2019, the Rockefeller Foundation announced the launch of its Food System Vision Prize, inviting organizations from around the world to create compelling and progressive visions of the world’s system by 2050. A prize of \$2 million will be distributed among the winners.

Open submissions accepted until January 31, 2020.

Learn more: <https://www.foodsystemvisionprize.org/>

Category	Venue
Global development	G7 summit, 10-12 June, 2020, US G20 summit , 21–22 November 2020, Riyadh, Saudi Arabia World Economic Forum Annual Meeting , 21-24 January, Davos-Klosters, Switzerland United Nations General Assembly , 15-30 September 2020, New York, New York, US United Nations Sustainable Development Summit , New York, New York, US
Private sector	World AgriTech Innovation Summit , March 17-18, 2020, Stanford, California, US World Chambers of Congress , 23-25 February, 2020, Dubai, United Arab Emirates
Environmental	UN Climate Change Conference COP25 , 2-13 December 2019, Madrid, Spain IUCN World Conservation Congress , 11-19 June, 2020, Marseille, France Our Oceans Conference , 2020 Convention on Biological Diversity COP15 , 5-10 October, 2020 (tentative), Kunming, Yunnan, China World Water Forum , March, 2021, Dakar, Senegal

	World Water Week , August 23-28, 2020, Stockholm, Sweden Nature4Climate convenings , multiple (see website)
Health, agriculture, and nutrition	Micronutrient Forum Global Conference , 23-27 March 2020, Bangkok, Thailand Scaling Up Nutrition Global Gathering , 4-7 November 2019, Kathmandu, Nepal World Health Assembly , 18-23 May, 2020, Geneva, Switzerland CORE Group platform , multiple convenings and conferences each year (see website) Food, Nutrition Security, and Sustainable Agriculture conference , 1-3 December, 2019, Cairo, Egypt Conference for Food Protection , March 30-April 3, 2020, Denver, Colorado, US International Congress of Nutrition , September 14-19, 2021, Tokyo, Japan International Conference on Global Food Security , 15-18 June, 2020, Montpellier, France African Green Revolution Forum , 2020, Rwanda EAT Stockholm Food Forum , June 10-11, 2020, Stockholm, Sweden
Philanthropic	Global Philanthropy Forum , September 14-16, 2020, Berkeley, California, US

LOOKING AHEAD

Looking ahead, how can this knowledge be used to advance specific multi-sectoral food system interventions in the context of climate change?

Develop an action plan. To advance climate-smart food system solutions, start by identifying three to five priority actions over the next 12 to 24 months. Be specific: begin by identifying barriers that need to be addressed or other immediate shifts that need to happen in order to move the intervention forward. In doing so, maintain the focus on integration to ensure that improvements in food and nutrition security are linked with climate and broader environmental improvements to minimize tradeoffs.

Understand the audience. Gather data (e.g., through surveys, interviews, focus groups, desk research, etc.) to inform an understanding of what types of messaging might resonate with key actors (e.g., consumers, corporations, or other changemakers) across sectors to help foment change and shift behaviors. Use this data to tailor an action plan and maximize resources for greater impact.

Continue the dialogue. Seek out opportunities to tap into new perspectives and connect with actors from outside a single focal sector. For example, many climate-smart food system interventions are traditionally rooted in the health and nutrition sectors. As such, increasing advocacy efforts among the environmental sector and/or sharing key messages and lessons learned at environmental events and meetings can highlight how interventions connect to that sector’s priorities and interests, leveraging their platform, networks, and resources.